Psychological Early Intervention

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MOOC 2 – Unit 2
EMPATHY : psychologist's keystone in early intervention

Chapter 1
EMPATHY and its forms

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Chapter 1 : EMPATHY and its Forms

INTRODUCTION : GENERAL DEFINTION OF EMPATHY

According to *Feshbach (1987), ‘empathy is conceived to be the outcome of cognitive and affective processes that operate conjointly’. But with **David Freedberg, Vittorio Gallese (2007) and ***Rizzolati (2005, 2006), empathy starts in the sensory-motor cortex or from a body comprehension before (or in parallel with) the cognitive knowledge.

Empathy, which can be defined as the ability to identify with the moods and thoughts of other people, also through the understanding and sharing of their emotions and feelings, has also been studied in the field of developmental psychopathology.

The close relationship between empathy, emotion, cognition and social skills makes this issue of particular importance both in the fields of basic and clinical research. For this same reason, it is even more important when working in psychological early intervention because of the crisis context.

§ 1.1 The three types of empathy

The three types of empathy are

(1) '**motor**' **empathy**' where the individual's brain mirrors the motor responses of the observed actor;
as Rizzolati describes it with the mirror neurons in the motor cortex.

(2) '**cognitive**' **empathy'** where the individual represents the Internal Mental State of the other (effectively Theory of Mind);

Theory of Mind refers to the ability to represent the mental states of others, i.e. their thoughts, desires, beliefs, intentions and knowledge (Frith, 1989). Theory of Mind allows the attribution of mental states to self and others in order to explain and predict behaviour. (note 1, page 5).

(3) '**emotional**' **empathy**' as emotional response to another individual that is congruent with the other's emotional reaction. Emotional empathy can be considered the results of the translation of the non-verbal communications that are the emotional expressions of others. It is potentially reliant on both cortical and sub-cortical face processing routes. These routes convey the communication to regions of the brain involved in emotional processing (the amygdala, insula and orbital and ventrolateral frontal cortex). [R. J. Blair, 2005 and 2007, note 1, page 13]

§ 1.2 Phases of empathy process in autistic studies

The study of empathy in the psychological development and in the autistic people underline the heuristic 4-steps breakdown of the empathic process that links empathic competence to social aspects both as social rules and culture and belonging.

1. Notice the feelings of another
2. Interpret them correctly
3. Feel empathy
4. Respond by taking into account social norms

« The first requisition to understand the manifestation and experience of empathy in autism is to recognize the processes of social attention, the elaboration of the emotions and norms that regulate behavior, that surround the phenomenon. If we don't separate feelings of empathy from these social and cognitive factors, then we will undercut empathy in autistic people, while also failing to develop and test a complete theory of empathy. »*

*Maurizio Arduino, Empathy and neurodevelopment disorders, Webinair "Lessons on Empathy. Care relationships" , 17 April 2021, PSICOLOGIA.IO

§ 1.3 **Neurological** basis of empathy

Figure 1. Brain regions associated with Empathy and Theory of Mind.
The separable brain regions associated with Empathy for negative emotion (red), Empathy for positive emotion (yellow), and Theory of Mind (blue) are presented. AI, anterior insula; aMCC, anterior middle cingulate cortex; dlPFC, dorsolateral prefrontal cortex; mOFC, medial orbitofrontal cortex; mPFC, medial prefrontal cortex; PCC, posterior cingulate cortex; PCUN, Precuneus; SMG, supramarginal gyrus; STS, superior temporal sulcus; TP, temporal poles; TPJ, temporoparietal junction; VS, ventral striatum. SMG and dlPFC are listed, as well as they have been associated with regulating empathic emotion (7).

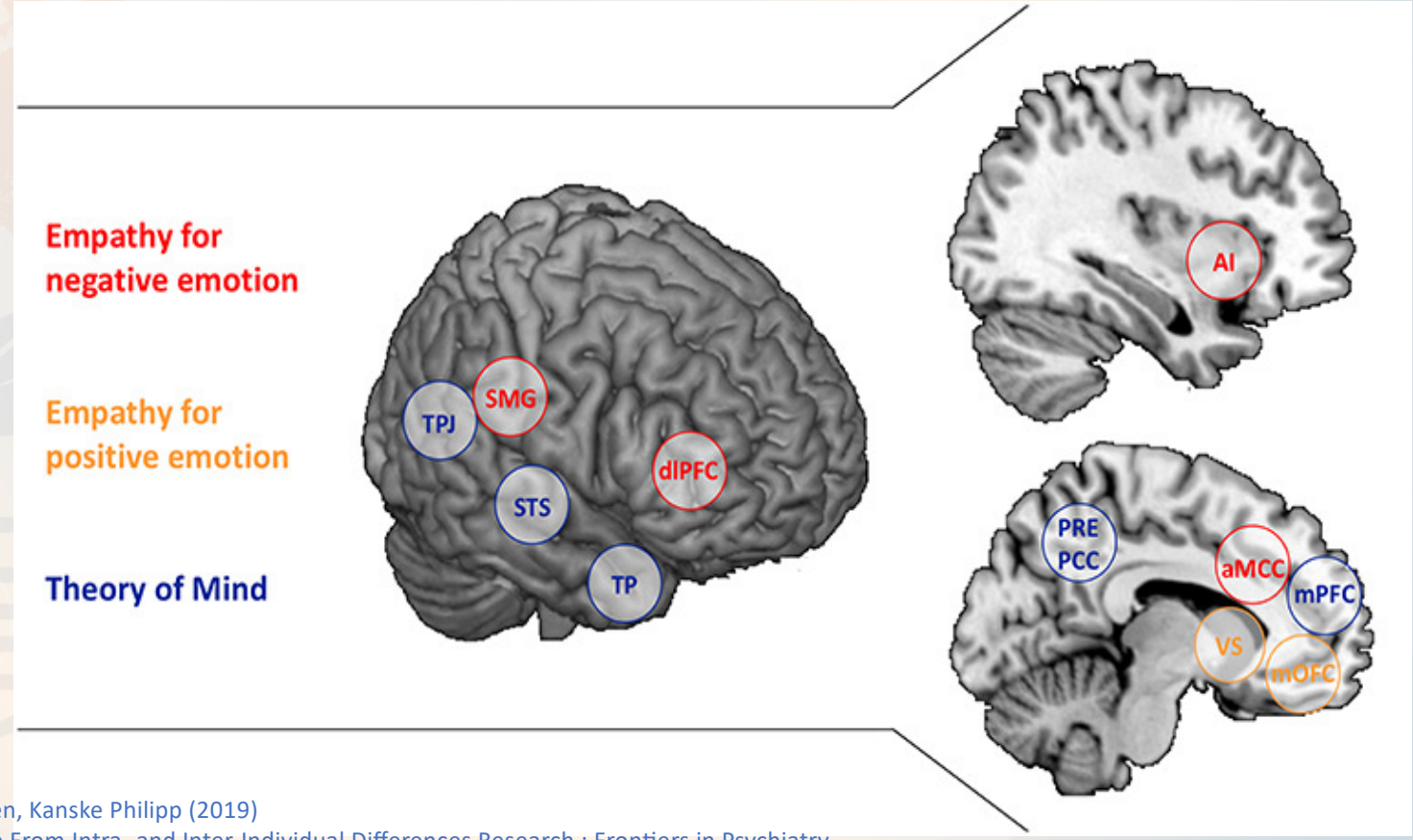


Image and note by Stietz Julia, Jauk Emanuel, Krach Sören, Kanske Philipp (2019)
Dissociating Empathy From Perspective-Taking: Evidence From Intra- and Inter-Individual Differences Research ; Frontiers in Psychiatry

§ 1.3 Neurological basis of empathy

- As we witness someone experiencing an emotional state, the brain networks that are involved in the first-hand experience of the same state are activated. Reading, hearing a statement or a recording, seeing pictures or movies can elicit a similar effect.
- Empathy is a dissociable process as different emotional states are singularly processed by the brain.
- The brain structures involved are mainly subcortical (such as amygdala, basal ganglia). Cortical regions such as mid and anterior cingulate cortex, hippocampus and prefrontal cortex would be implicated in cognitive empathy.
- This phenomenon can be observed across social species. Empathy is a pivotal evolutionary skill as it would promote pro-social behavior, social learning, caring for offspring… (Meyza et al, 2018).

Marsh, AA (2018). The neuroscience of empathy. Current Opinion in Behavioral Sciences, 19:110-115.
Meyza, KZ, Ben-Ami Bartal, I, Monfils, MH, Panksepp, JB, and Knapska, E (2018). The roots of empathy : through the lens of rodent models. Neurosci Biobehav Rev. 76(Pt B):216-234.

Photo by engin akyurt on Unsplash

§ 1.3 Neurological basis of empathy: a focus on fear

- Most of the neuroscientific literature on empathy addresses negative emotional states such as pain and fear.
- Emotional empathy differs from mentalizing (cognitive empathy). The same brain regions are involved for a given emotion. However, the patterns of activation are different. (Marsh, 2018; Tusche et al., 2016)
- Vicarious fear, anguish, anger, hate, depression (…) are at first a neurological problem: you'll find below that as the early intervention psychologist you have to protect the victims (II-VI type), the rescuers, colleagues and yourself from this sly and contagious syndrome.

Marsh, AA (2018). The neuroscience of empathy. Current Opinion in Behavioral Sciences, 19:110-115.
Meyza, KZ, Ben-Ami Bartal, I, Monfils, MH, Panksepp, JB, and Knapska, E (2018). The roots of empathy : through the lens of rodent models. Neurosci Biobehav Rev. 76(Pt B):216-234.
Tusche, A et al (2016). Decoding the charitable brain : empathy, persepective taking, and attention shifts differentially predict altruistic giving. J Neurosci. 36:4719-4732.

§ 1.3 Neurological basis of Empathy: modulation and learning

- Empathy may be increased during acute stress, behavioural synchrony and similarities between the target and the observer. (Marsh, 2018; Levy et al., 2016)
- The brain is strongly activated by socially transferred emotions. The same brain regions are activated but the patterns of activation seem to differ depending on the social context. (Meyza et al.,2018)
- Gender and phases of the estrous cycle affect empathy in rodents using a model of socially transferred fear. (Meyza et al.,2018)
- Psychopathological states that are characterized by a lack of empathy present malformation, decreased volume and/or hypoactivation of some brain structures; notably the amygdala (alexithymia, psychopathy) or the medial prefrontal cortex (autism) … (Marsh, 2018; Meyza et al., 2018)
- Empathy may be considered as a skill. It can improve with practice. (Marsh, 2018 for review; Hein et al., 2016)
  - Increasing positive contact between different social groups;
  - Compassion-based meditation;
  - Reading literature...

Bernhardt, BC, and Singer T (2012). The neural basis of empathy. Annu Rev Neurosci. 35:1-23.
Hein, G et al. (2016). How learning shapes the empatic brain. Proc Natl Acad Sci USA. 113:80-85.
Levy, J et al. (2016). Adolescent growing up amidst intractable conflict attenuate brain response to pain of outgroup. Proc Natl Acad Sci USA. 113:13696-13701.
Marsh, AA (2018). The neuroscience of empathy. Current Opinion in Behavioral Sciences, 19:110-115.
Meyza, KZ, Ben-Ami Bartal, I, Monfils, MH, Panksepp, JB, and Knapska, E (2018). The roots of empathy : through the lens of rodent models. Neurosci Biobehav Rev. 76(Pt B):216-234.
Thompson, NM, Uusberg, A, Gross, JJ, and Chakrabarti, B (2019). Empathy and emotion regulation: An integrative account, Prog Brain Res. 247:273-304.

§ 1.4 Can we teach empathy?

The autistic studies of empathy answer “absolutely yes!”, because it is a complex process and not only a neurological path or competence. But it is not an easy process. We need to use a specific and empathic methodology ensuring the internal involvement of the Individual.
«Over the years, however, the research evidence keeps piling up, and it points strongly to the conclusion that a high degree of empathy in a relationship is possibly the most potent and certainly one of the most potent factors in bringing about change and learning. »*

Autistic people need behavioural descriptions of the empathy phases in order to understand the impairment of the social sharing skills underlying the reduction of empathic capacity. This is the first domain where teaching and learning *empathy* can make this fundamental ability evolve positively, knowing how to interact with people in institutions and as professionals towards patients.

*Carl Rogers (1975), Empathic : An Unappreciated Way of Being. The Counseling Psychologist, Vol 5, 2-10. [Note 4]

§ 1.4 Can we teach empathy?

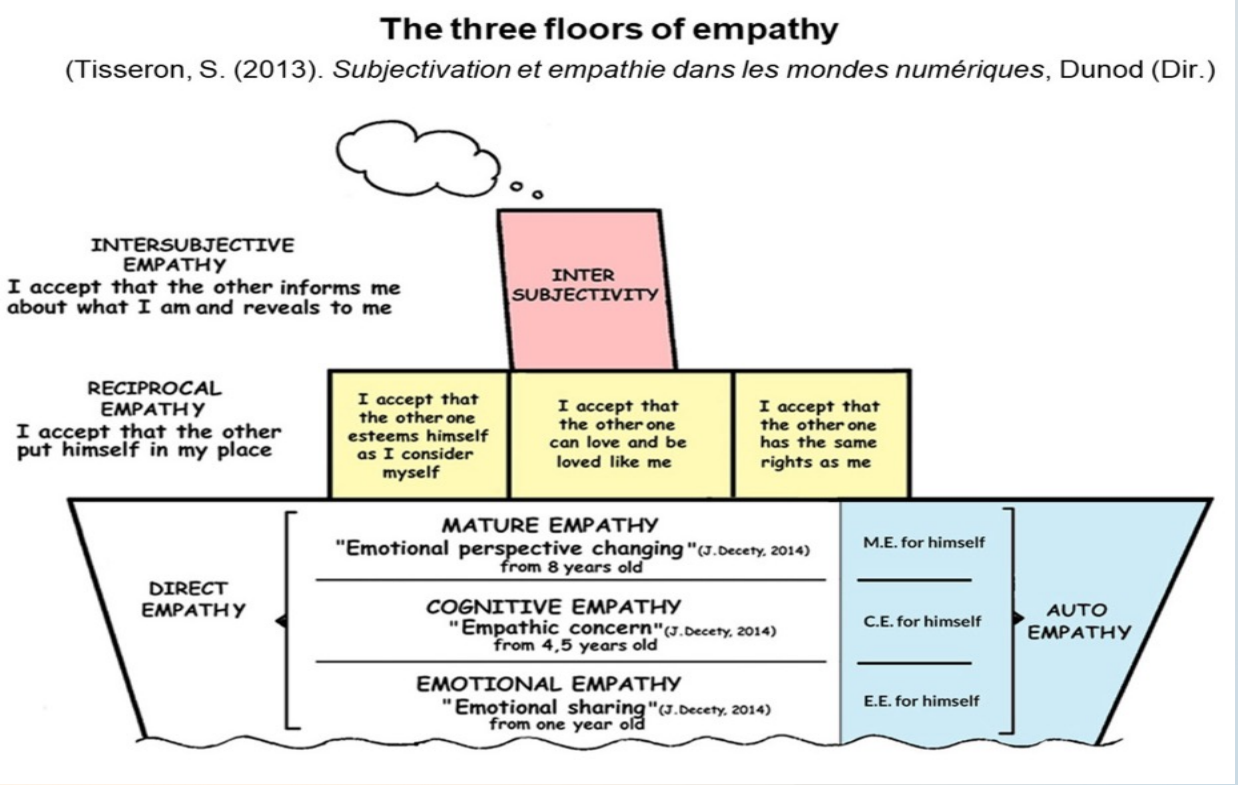
Anything that increases psychological insecurity tends to reduce empathy, by making everyone feel it only for those close to them, their families or those who resemble them, by appearance, language or religion.

3 Steps of empathy for others:

1. Emotional Empathy
2. Cognitive Empathy
3. Mature Empathy

Other kinds of empathy :

- Auto Empathy
- Reciprocal Empathy
- Intersubjective Empathy



§ 1.4 Can we teach empathy?

You know that it takes practice to develop a sensitivity and a perceptual ability, as in sport.

So it is necessary that as a teacher of emergency psychology you can create practical situations in which you lead your students to feel their emotional limits with respect to the understanding of others, situations and themselves. Making them experience simple and multiple conflict situations, and inducing them to look for a solution together, will allow you feel with them the emotions that block empathy and lead them to integrate these emotions precisely through empathic capacity.

You should be able to make them understand that at some point the very diversification of empathies towards others, towards cultures, towards oneself, can create conflict if one is not able to follow the concept of systemic or relational truth, rather than that of absolute truth that is accompanied by a binary thought of orthodoxy-heresy.** [Dietrich Bonhoeffer, *Ethik*,(1949)]

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