UNIVERSITÉ DE GENÈVE
CENTRE INTERFACULTAIRE EN SCIENCES AFFECTIVES

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Workshop on emotional expression production and recognition

Invited discussant: Prof. Carlos Crivelli

19th September 2017 - 2:15 to 4:30 pm - Room 144.165 – Campus Biotech

(30 minutes talk + discussion per speaker)

14:15 – 14:45

Thibaud Gruber - A way out of the "hard-wired vocalizations" conundrum: combining emotion and intention in animal vocalizations

Different approaches from different research domains have crystallized debate over primate emotional processing and vocalizations in recent decades. On one side, researchers disagree about whether emotional states or processes in animals truly compare to those in humans. On the other, a long-held assumption is that primate vocalizations are innate communicative signals over which nonhuman primates have limited control and a mirror of the emotional state of the individuals producing them, despite growing evidence of intentional production for some vocalizations. Recent empirical research and theoretical work suggests that the emotional content of most primate signals, including in their referential signaling, does not prevent them from being characterized as intentional signals. Our goal is to connect both sides of the discussion in deciphering how the emotional content of primate calls compares with emotional vocal signals in humans. We focus particularly on neural bases of primate emotions and vocalizations to identify cerebral structures underlying emotion, vocal production, and comprehension in primates, and discuss whether particular structures or neuronal networks solely evolved for specific functions in the human brain. Finally, we propose a model to classify emotional vocalizations in primates according to four dimensions (learning, control, emotional, meaning) to allow comparing calls across primates.

14:45 – 15:15

Marcello Mortillaro - Emotion perception from multimodal dynamic stimuli

The ability to recognize emotions from nonverbal behavior is critical for effective social interactions. Emotions are typically expressed through multiple nonverbal modalities and in this talk we will present three studies that investigated the relative contribution of each modality to the effective communication of several positive and negative emotions as well as the role of dynamics. Results show that expressive modalities have a selective ability to convey emotions although facial expressions seem to have a predominant role, and that dynamics plays a major role for emotion perception especially in the case of positive emotions.

15:15 – 15:30

COFFEE BREAK

15:30 – 16:00

Danny Dukes - Emotion Appreciation: a Relational Account of Emotion Recognition

Emotions are commonly held to be object-related: we are scared of something, we are disgusted by something and interested in something, for example. And yet, research of emotion recognition processes is primarily limited to analysing the (facial, vocal, bodily...) expression of the individual, rather than to more directly appreciating the relation that the individual has with the object, given the particular circumstances.
In this presentation I will outline a more relational, third-person account of emotion recognition which, rather than treating the naming of individuals' emotional expressions (in all their forms) as the end-point of emotion recognition, treats the expressions as pieces of evidence to be used when inferring how someone relates to the objects in their environment and how they are likely to act as a consequence. This will be illustrated by pointing out how some supposedly 'affect-free' classic developmental psychology experiments can be re-interpreted using this emotion appreciation account.

16:00 – 16:30

David Rudrauf - How the projective consciousness model explains and predicts emotions

We recently introduced an integrative mathematical model of embodied consciousness (Rudrauf et al, 2017), which offers a computational framework to study normal and pathological psychology and behaviors. The model combines active inference, projective geometry and free energy minimisation to control perception, imagination and action of agents, and optimises the satisfaction of their preferences encoded as fields of conditional probabilities in memory. Agents generate fields of consciousness, combining prior beliefs and sensory evidence, that put in perspective information about preferences in order to motivate action. We will show how the multivariate dynamics of free energy across layers of appraisal (e.g. hedonic pleasure, safety and norm compatibility), in relation to past, present and anticipated fields of consciousness, and their motivational role in active inference, contain principles for understanding, modeling and predicting a variety of emotions and emotion expressions.