

# Introduction

Atelier No 4

Chairperson : Ion Copoeru



# Titles

11. BOTAN Vanessa, Université de Lincoln, IONESCU Thea, Université de Cluj-Napoca, Roumanie, Fernando, The University of South Australia, Lidia Grigoriu, Université de Cluj-Napoca, Roumanie, *Embodied learning: The role of gesture-based interactions in language acquisition*
12. PETRISOR Mihai-Alexandru, Faculty of Philosophy, University of Bucharest, Romania, *Is interaction just a dynamical process?*
13. MAIRE Hélène, Laboratoire Lorrain de Psychologie et Neurosciences de la dynamique des comportements (2LPN, UR 7489), Université de Lorraine, France, CHARAFEDDINE Rawan, Laboratoire Lorrain de Psychologie et Neurosciences de la dynamique des comportements (2LPN, UR 7489) et Equipe TRAJECTOIRES, Centre de Recherche en Neurosciences de Lyon, CNRS (UMR 5292), INSERM (UMR-S 1028), Université Lyon 1, Lyon, France & VAN DER HEST Jean-Baptiste Equipe TRAJECTOIRES, Centre de Recherche en Neurosciences de Lyon, CNRS (UMR 5292), INSERM (UMR-S 1028), Université Lyon 1, Lyon, France., *L'interaction et ses ratés : une approche par l'embarras et la honte*

# Domains

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- **gesture-based interactions in language acquisition (Botan et al.) - POST-COGNITIVIST (Embodied cognition) PSYCHOLOGY OF DEVELOPMENT**
- mental states (emotions do not figure in this) as being a finite set of coherent beliefs that each agent co-engaged in interaction processes (Petrișor) – ANALITIC PHILOSOPHY / COGNITIVE SCIENCES
- le champ de la psychologie sociale du développement; deux émotions émergentes en situation (i.e., honte et embarras) - comment leurs mesures respectives peuvent constituer d'astucieux outils pour mettre en lumière des normes sociales à l'oeuvre lors d'interactions (Maire et al.) – SOCIAL PSYCHOLOGY / INTERACTION ANALYSE

# The concept of interaction

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Botan et al:

Interactions are at the core of human interpersonal relationships and social life, and, within the grounded account of language acquisition, they also play an essential role. Interactive human communication is often accompanied by gestures which support the verbal meaning through visual and bodily representations. (p. 124)

Gestures are motor, visual, and spatial illustrations that complement verbal communication, adding conceptual and emotional nuances to speech (Roth, 2001). (p. 124)

When gestures are employed as mutual representations in human communication, their visual recognition activates motor and somatosensory cortical regions. As such, gestures can be perceived as promoters of embodied sensorimotor interactions between individuals (Bavelas & Chovil, 2000; Koschmann & LeBaron, 2001). These sensorimotor interactions play a central role in embodied language acquisition and enhance word learning and memory (Andrä et al., 2020; Macedonia & Knösche, 2011). (p. 124)

Embodied interactions favour the acquisition of language by reinforcing the sensorimotor representation of a word or a phrase in both children and adults (Andrä et al., 2020; Macedonia, 2014) and their use in educational settings should be promoted. (p. 124)

# The concept of interaction

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## **Petrişor:**

Gallagher account: for most cases, the relational-dynamics approach exhausts the cognitive performance, meaning that there is no need for postulating propositional contents, mental states, or beliefs, that exist inside the head of the interlocutor. In addition, de Jaegher et al. posit that social interaction, as defined above, puts “social cognition back where it belongs: between individuals and not inside their heads” (de Jaegher et al., 2010, p. 446). According to what Gallagher calls Interactive Theory, “instances of theoretical inference or simulation that target mental states per se are rare relative to the majority of our interactions.” (Gallagher, 2020, p, 98). While I agree that some of our interactions can be captured by relational-dynamics approach, I argue that **mental states should not be taking a secondary role in explaining interactions. Rather, different levels of explanation relative to a concrete situation should be employed in studying interaction. On this account, explanations that differ in level will vary in specificity and appropriateness.** (132)

**social interaction, as defined by Gallagher, is to be viewed as a low-level process that corresponds to concrete, know-how situations, whilst the theory of mind account of interaction is to be viewed as describing a high-level process complementary to or interwoven with social interaction, corresponding to abstract, theoretical, know-that situations.** (133)

# The concept of interaction

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## **Maire et al.:**

L'interaction renvoie à l'« influence réciproque que les partenaires exercent sur leurs actions respectives lorsqu'ils sont en présence physique immédiate les uns des autres » (Goffman, 1973a, p.23). Loin d'être aléatoires ou arbitraires, **l'interaction et son déploiement sont orientés par des normes sociales**, autrement dit des règles de comportements ou d'attitudes socialement valorisés ou non, propres à une unité sociale dans un contexte donné (par exemple, des façons de parler, de s'habiller, etc.). Les normes, ou conventions, jouent un rôle non seulement descriptif (i.e., en tant que simples reflets de ce qui se fait, ce qui va de soi) mais aussi prescriptif, à la manière de boussoles pour l'action (i.e., en encourageant certains comportements et attitudes socialement désirables, et en décourageant d'autres jugés indésirables) (e.g., Rakoczy & Schmidt, 2013 ; Schmidt et al., 2016). (p. 147)

# Methods of analysis

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## **Botan et al.**

the present study aims at investigating the role of gesture-based interaction (gesture enactment) in learning a new language in adults. Most importantly, it will consider the role of the different types of gestures and individual differences in language acquisition. It will explore

- a) if the enactment of gestures facilitates learning new words;
- b) if the type of gesture (iconic congruent gesture versus incongruent gesture) influences the learning;
- c) if individual differences **in bodily awareness** and **visual and sensorimotor mental imagery** are linked to the influence that gestures have on learning.

# Methods of analysis

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## **Petrişor:**

**it is not clear how are we supposed to grasp the meaning of affordances before grasping the meaning of a sentence:** “we cannot conceive of any language comprehension system that would allow a person to appreciate the affordances of a sunset as a precondition to understanding a sentence about that sunset.” (Goldinger et al., 2016, p. 973). The core idea is that “explaining sentence perception without internal representation appears hopeless” (Goldinger et al., 2016, p. 973). If affordances are to be perceived, without prior interpretation, than it seems like we have reversed the cart and the horse, at least for interactions where the two agents communicate using articulated language ( not only through speech acts ). We can now see why, even if we were to accept that the dynamical systems approach affords meaning, that there is a fundamental problem with Gallagher’s view. Granted, **when it comes to more low-level processes, such as dancing tango, the affordance claim seems to be unproblematic.** And a dynamical description seems like the better explanation of this kind of interaction. Paralleling the attack on the notion of representation in cognitive science (Markman & Dietrich, 2000, p. 475), we can think of **IT as extending, rather than replacing standard approaches to social cognition and, by extension, to the study of interaction.** (p. 144)



# Methods of analysis

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## **Maire et al.:**

le dispositif expérimental d'une étude en cours auprès d'enfants de 8-9 ans, et s'inscrivant dans un projet plus large visant à mieux comprendre la manière dont les jeunes enfants se représentent les liens entre le genre et les relations de pouvoir.

L'intériorisation des normes de genre et l'association entre pouvoir et masculinité sont susceptibles d'apparaître dès la petite enfance. Dans un contexte culturel porteur d'une norme genrée associant le pouvoir à la masculinité (M>F), filles et garçons réagissent-ils de la même manière quand on leur présente une interaction porteuse de la norme inverse (F>M) et où ils doivent s'identifier à l'un des personnages ? Quelles sont les émotions, notamment sociales réflexives, à la fois exprimées et autorapportées, qui peuvent émerger en pareil cas ? L'estime de soi varie-t-elle ? Telles sont nos principales questions de recherche. (p. 1522

# Methods of analysis

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Maire et al.: (cont.)

Notre hypothèse principale est que contrairement à la situation normative ( $M > F$ ), la situation contre-normative ( $F > M$ ) suscitera de la honte chez les garçons qui y verront une perte de statut, et seulement de l'embarras (pas de fierté) chez les filles, chez qui ce statut élevé sera contre-normatif, les rendant gênées mais pas fières. Une hypothèse secondaire est que les variations d'état émotionnel et d'estime de soi seront plus importantes dans la condition mixte que dans la condition non mixte. Enfin, on s'attend à ce que la timidité soit associée à davantage de honte et d'embarras, et ce particulièrement dans la situation contre-normative, et à ce que le comportement compétitif soit associé à davantage de fierté. De plus, les garçons pourraient manifester plus d'émotions négatives que les filles (e.g., Davis, 1995 ; LoBue et al., 2011 ; Saarni, 1984).

# The controversy

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	Embodiment	Interface theory	What it is actually going there? Where? (in the head/brain/brain and body/between the interlocutors/between the agents/in the social interaction... ...???)
Botan et al.	Moderate	Simulation theory	
Petrișor	Weak	???	
Maire et al.	Moderate?	Internalisation	
<u>(Gallagher)</u>	<u>Strong (Interaction Theory)</u>	<u>Contra Simulation theory; pro affordances (Gibson)</u>	