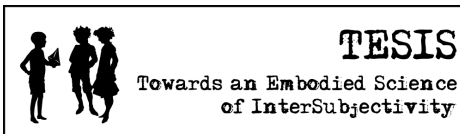
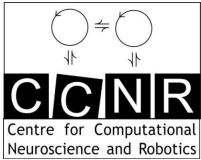


Digital Bubbles

Plenary Commentary

Hanne De Jaegher



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Spectrums!

Enactivism

Cognitivism



2

Spectrums!

Enactivism:

Assumptions

- Self-organization and self-maintenance
 - “Embodiment”, sensitivities, movement coordination
 - Sense-making (relevance, meaning)
 - Participatory sense-making (social understanding)
- Experience

3

Spectrums!

Enactivism:

Because of these assumptions, perhaps the most basic research question in enaction, and certainly in relation to autism, is:

What is relevant, what makes sense to this person, in this (social!) context, at this moment?

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Spectrums!

Neurotypicals

People with ASD



experience

What is relevant, what makes sense to this person, in this (social!) context, at this moment?

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Spectrums!

“Brain controls”

Embodiment,
Engagement



medication
cognitive
therapies

Implications for
remediation:

also the context

What is relevant, what makes sense to this person, in this (social!) context, at this moment?

6

Spectrums!

individual

engagement



train
“mindreading”:
scripts

Implications for
remediation:

interactional
capacity:
rhythm, get
involved,...

What is relevant, what makes sense to this person, in this (social!) context, at this moment?

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Spectrums!

Practicioners

Academics



What is relevant, what makes sense to this person, in this (social!) context, at this moment?

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The spectrums are not as clear-cut as they may seem.
Every person with autism is different (just like every NT!).

It is possible to better understand each other's experience, and to not be in such "alien lands" from each other. This requires "thinking in autistic": putting ourselves in the place of an autistic person (think of a time when you have felt sensorially overwhelmed, for instance). This means: to try and understand the behaviour of a person with autism from their situation and context.

We can use our research methodologies for finding out what is relevant to them (e.g. eye tracking, video recordings, experiments), but we can (sometimes) also simply *ask* the person with autism about their experience and what is important. For this, it is also necessary to speak with the people closest to them, their family and carers.

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The question *What is meaningful or relevant for the person with autism?* came back in some of the following ways in the talks, I think:

- Ouriel Grynszpan's work allows to find out what is relevant for the person with autism, by using the eye-tracking to see where the person with autism looks, and how this impacts on what they can see and do in the situation.
- In Antonia Hamilton's lunchbox experiment, while the neurotypical children connected with the experimenter by over-imitating, perhaps the children with autism connected with the experimenter by doing the task exactly as directed: "do it as quickly as possible". (I think I noticed some pride in the child with autism too, in the video, in doing the task as fast as he could?)

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- In Mark Bushby's experience, neurotypicals (NTs) and autistics live in "alien lands". It may be possible, however, to visit each other's "lands", and use our own experience for knowing what it is like over there. For example, in a busy airport, NTs can also feel sensorially overwhelmed. And Mark showed a lot of insight into NT experience, not only in the satirical final part of his talk!

- Vasu Reddy's presentation embodied her conviction that engagement is relevant and transformative. Engagement implies a 2-way connection and a being present in the moment. Embrace mutuality, and get involved! This, of course, is precisely difficult for people with autism. In Vasu's view, the best way to learn to be social with others is not through scripts, but by learning to "tune in", to interact, by highlighting actions, adjusting your rhythm, emphasizing appropriate responses, being mutual.

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The background to my plenary comments is the enactive theory of cognition, and more in particular, the enactive theory of social cognition: participatory sense-making.

Some enactive work on autism:

- De Jaegher, H. (2013). Embodiment and sense-making in autism. *Frontiers in Integrative Neuroscience*, 7, 15. doi: 10.3389/fnint.2013.00015
- Fantasia, V., De Jaegher, H., & Fasulo, A. (2014). We can work it out: An enactive look at cooperation. *Frontiers in Psychology: Cognitive Science*, 5(874). doi: 10.3389/fpsyg.2014.00874 (In the standard literature, it is often assumed that people with autism cannot cooperate. In this paper, we present a view that shows that people with autism *can* also cooperate, and we give examples to illustrate it.)

Some related work:

- Trevarthen, C., & Delafield-Butt, J. T. (2014). Autism as a developmental disorder in intentional movement and affective engagement. *Frontiers in Integrative Neuroscience*, 7. doi: 10.3389/fnint.2013.00049
- Donnellan, A., Hill, D. A., & Leary, M. R. (2013). Rethinking autism: implications of sensory and movement differences for understanding and support. *Frontiers in Integrative Neuroscience*, 6(124). doi: 10.3389/fnint.2012.00124
- Torres, E. B., et al. (2014). Autism: The Micro-Movement Perspective. *Frontiers in Integrative Neuroscience*, 7. doi: 10.3389/fnint.2013.00032
- ...

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What is participatory sense-making?

Researching intersubjectivity based on:

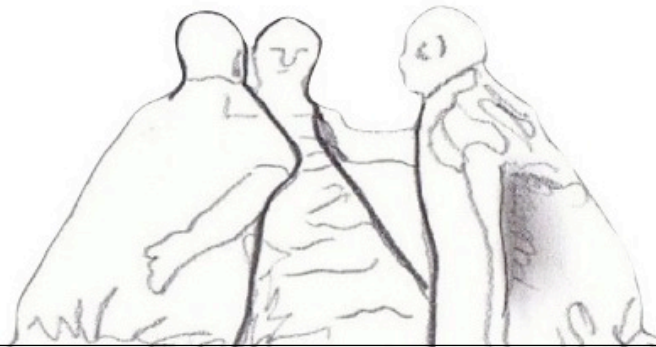
The definition and operationalization of the role of the **interaction process** (the *in-between*)

The conception of the **individuals** involved.

With support from current **research tools**, e.g. dynamical systems theory, dual-scanning neuroscience, etc.

(De Jaegher and Di Paolo 2007)

(De Jaegher et al. 2010, *TICS*)



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<https://hannedejaegher.wordpress.com/publications/>

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