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# Signaux viscéraux, dynamique cérébrale et subjectivité

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## Résumé

The dominant paradigm in cognitive neuroscience is of an agent collecting information from the external environment via the senses, and reacting by producing actions. Here, I will present a revision of this paradigm that includes the interplay between the brain and the internal bodily environment, and more specifically, the heart and gastro-intestinal (GI) tract. Both the heart and GI tract intrinsically generate their own oscillatory electrical activity, even when disconnected from the brain, from the first weeks of gestation until death. Ascending cardiac and GI tract signals reach numerous subcortical and cortical targets. We recently showed that cardiac and GI tract signals directly contribute to the organization of spontaneous brain activity, using fMRI, MEG, iEEG and MUA data recorded in humans. I will also propose and discuss the hypothesis that the neural monitoring of cardiac and GI inputs plays a key role in the generation of first-person perspective, or the unique bodily-centered viewpoint that we have on the environment, by creating a subject-centered coordinate system involved in subjective perception and decision as well as in spontaneous cognition.

**Mots-Clés:** GI

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