

# PUTTING THE BUDDHISM/SCIENCE DIALOGUE ON A NEW FOOTING

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## WHAT IS IT LIKE TO MEDITATE? METHODS AND ISSUES FOR A MICRO- PHENOMENOLOGICAL DESCRIPTION OF MEDITATIVE EXPERIENCE



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*Towards a Science of Meditative Experience?*  
**Claire Petitmengin, PhD**

As a philosophy student at the Sorbonne, Petitmengin was disappointed by the abstract, disembodied approach, but fascinated by a course in Buddhist philosophy and its emphasis on invisible processes that create appearances. She wrote her thesis on the evolution of the concept of emptiness in Indian Buddhism, studied Sanskrit, and had children, which led to her studying computer science to support herself but also to an interest in implicit and embodied information. Inspired by Francisco Varela's crediting Madhyamaka thought for the ideas in his book *The Embodied Mind*, she sought him out to begin working on a PhD thesis. Around the same time she began studying with Gendune Rinpoche.

At Varela's suggestion, she studied intuition, defining it as knowledge that occurs without the intermediary of a deductive mechanism. She focused on the experience of intuition and collected descriptions through micro-phenomenological interviews. She soon discovered that an intuition is not an instantaneous surge but emerges over time in the ripening of an initial feeling into a clear idea. This feeling is generally immediately preceded by a particular quality of attention that is panoramic, holistic, and diffuse but also very finely sensitive to subtle discontinuities, receptive, unintentional, effortless, centered in the body rather than the head, and fostered by inner gestures of letting go. The pattern is consistent regardless of the content of the intuition (Petitmengin 1999).

After her PhD thesis she worked with Varela to determine whether the neuro-electric activity that preceded epileptic seizures corresponded to any felt experience that might be helpful in predicting seizures. Again using micro-phenomenological interviews, she discovered patterns in the micro-dynamics of the experience, the awareness of which was key to new therapies that have often proved more effective than pharmacological treatment (Petitmengin *et al.* 2007).

The emergence of an intuition and the anticipation of an epileptic seizure are both examples of micro-genesis usually hidden by the focus of attention on the final result. Other types of micro-genesis have also been studied, and all reveal generic structures that are reproducible and thus verifiable by the methods of experiential science, even if the content of the experience is unique and cannot be reproduced.

Petitmengin then explained the micro-phenomenological interview method (Petitmengin 2006) and illustrated it with video extracts from interviews (<https://www.microphenomenology.com/home>). Inspired by Pierre Vermersch's techniques for facilitating expertise transfer by helping experts become aware of their implicit practices, the interview method starts from the observation that a large part of our experience usually remains unnoticed. It aims to reorient attention away from the content, which usually holds focus, and to become aware of unrecognized parts of experience. This reorientation is supposed to retrieve and evoke the precise spatio-temporal context, and then the visual, auditory, tactile, and kinesthetic sensations associated with the experience being described. An interview has an iterative structure resulting in progressively finer levels of description by asking questions that are very precisely focused but non-inductive, for example interrogating the verbs used by the interviewee ("When you loosened the tension, what did you do?") and any abstractions

used, as well as gestures and body language. An hour-long interview usually covers a few seconds of experience.

The video of the interviews sparked a discussion, where participants questioned the veridicality of the evoked, reenacted experience relative to the original experience, given the likely distortions and fallibility of memory. Ken Paller noted that the repeated process of evocation and reenactment was a form of simulation that creates new memories—the same mechanism that is believed to implant false memories. Thus the claim that the micro-phenomenological process is reproducible and verifiable does not necessarily imply that it is veridical.

Kalina Christoff responded that the veridicality of the memory of the original few seconds of experience is a red herring; the repetition of the evoked experience will still reveal reliable and reproducible structures of process, which is the real focus of interest, separate from the content. This is similar, she observed to techniques used in psychotherapy, where the process of inquiry is more important than the specific content, and also similar to meditation, where focused awareness leads to de-automatization.

Petitmengin proceeded to explain how the interviews are analyzed to yield common structures of experience (Petitmengin *et al.* 2013). She described the Phenopilot project, which was designed to assess whether micro-phenomenological techniques could facilitate accurate descriptions of meditative experiences that might be useful for meditation practitioners and instructors (Petitmengin *et al.* 2017). The project also provided a window on the structures of processes involved in meditation practice.

One example was the awareness that one's attention has drifted, which occurs as a two-fold process of loss of contact with the current situation and generation of a virtual one. Five structural parameters were identified:

1. The virtual scene seems to emerge from a spatial location, for example, “a bubble which starts from my head, at the front, top and left.”
2. The virtual scene involves sensory modalities, including auditory, visual, and bodily sensations.
3. There is a partial awareness of the sensations elicited by the virtual scene, adequate to describe the scene, but not so fully aware as to recognize that one's attention has drifted.
4. The subject can identify a perceptual position in the scene, that might be experienced, for example, as a first-person point of view in the visual modality, but a disembodied position in the interoceptive modality.
5. The virtual scene is sustained by a particular mode inner discourse or inner micro-gestures.

Returning to the micro-phenomenological interview method, Petitmengin described the exploration of very early stages of the micro-genesis of an idea, looking at moments of experience where the structures vanish that we usually consider essential to experience (Petitmengin 2007, 2017a). In these early stages, the qualitative difference that we usually perceive between abstract thought and bodily sensations is reduced. When a new idea first emerges, the experience arises in a felt dimension where the rigid separation between body and thought becomes more permeable. It is felt as a direction of thought moving within the space of an inner landscape, with a specific texture, density, and contrasts of rhythms and intensities. In this felt, pre-reflective dimension, the

boundaries between sensorial registers become permeable: these feelings are neither images, nor kinesthetic sensations, nor tactile sensations, nor sounds. They do not have the precision of synesthesia. They have specific sensory sub-modalities, such as intensity, direction, and rhythm, which are trans-modal, not specific to a particular sense, but applicable to all. This trans-modality is accompanied by a permeability of the border usually felt between inner and exterior space, creating a sense of heightened receptivity to perceptual experience.

The sense of dissolution of bodily boundaries is associated with an absence of feeling of individual identity, control, or agency. It becomes less and less obvious how to distinguish between subject and object. The gap usually felt between the two orders becomes increasingly narrow and may even disappear. Petitmengin drew a parallel between this process and what Varela, Rosch, and Thompson called “enaction” in *The Embodied Mind*—the process of co-constitution of self and the world. She also compared it to the process of mutual solidification of object and subject that the Buddhist tradition identifies as the root of suffering. Understanding this process of co-constitution of the subjective and objective poles is the aim of a research program she calls “radical micro-phenomenology,” which involves gathering descriptions from skilled meditators and designing “experiential protocols” to make this process more accessible to awareness.

Taking a meta-view of researching this process of co-constitution also opens a way of reorienting attention from the scientific results towards the scientific process (Petitmengin 2017b). Little is known about the emergence of scientific ideas. Attention is usually focused on the content of ideas, not on the processes that allowed scientists to discover them. She hypothesized that a rigorous experiential study of the scientific process would transform our understanding of it. Instead of an exploration of a pre-given world by pre-given minds, we might see it as co-constitution of the objective and subjective poles as intersubjective.

Francisca Cho observed that the earlier discussion questioning the veridicality of the evocation of a remembered experience presumed the objective existence of an original mental event, which assumes the normal subject-object paradigm of doing scientific research. This might instead be a scientific program that demands a new way of thinking about what research entails. However, Kalina Christoff disagreed that scientists would frame the original experience as an object of study separate from the subject. The scientific stance, she claimed, lies in the possibility that the repeated re-instantiation of the experience affords some relative constancy or essential replicability, rather than an object separable from the subject. Michael Sheehy noted how the discussion echoed early Buddhist phenomenological debates that debunked the Sautrantika claim that a distinct image or concept—a retrievable moment of experience—can persist through time.

David McMahan raised the question of whether the implicit taxonomies Petitmengin had described as deeply structuring experience would translate across cultures, and whether it was valid to assume they were universal. In response, she hypothesized that different cultures might “live at different levels of this micro-genetic process” with different degrees of delineation between subject and object.

Clifford Saron focused on the transmodal descriptions of the reports as an example of how scientific knowledge can be brought to bear on the micro-phenomenological process, as part of the background that informs experience. From the point of view of neuroscience, our sense of an integrated world perceived through



separate senses is an illusion. There is enormous interplay between the sensory modalities. He noted too the creative, dreamlike nature of the accounts rendered by the interview process.

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