Authors' Response

Enacting the Micro-Phenomenological Method

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- > **Abstract** We discuss the epistemological background of micro-phenomenology, we clarify some aspects of the proposed procedure, and we expand our reflections on some of the challenges facing micro-phenomenology.
- «1» First of all, we would like to extend our thanks for all the comments received. María Isabel Gaete, Urban Kordeš, Terje Sparby and Christian Tewes invited us to share our thoughts on the framework within which micro-phenomenology is situated. The comments of Jin Hyun Kim, Kordeš, Sparby and Tewes allowed us to clarify some aspects of the proposed procedure, and those of Christophe Coupé & Magali Ollagnier-Beldame to expand our reflections on some of the challenges facing micro-phenomenology.

Clarifying the epistemological background

"2" Several of the points made in the comments request, in a more or less explicit manner, a definition of the frame of reference in which micro-phenomenology is situated and, consequently, of the criteria underlying the validation of its results. Responding to this request is not trivial, since micro-phenomenology originates from one of the research programs that developed from the enactive approach to cognition, neurophenomenology, which was born at the crossroads of two explanatory frameworks: that of the natural sciences and that of the human sciences. If we hastily adhere to either of these two frameworks, we are

likely to lose sight of the innovative character of micro-phenomenology, i.e., its understanding of cognition as a doing, and its rethinking of the dualist position of modern Western science and philosophy with regard to cognition.

- « 3 » In this section we briefly review the line of thought leading to micro-phenomenology in order to clarify its epistemological and ontological assumptions.
- "4" The enactive approach to cognition (Varela, Thompson & Rosch 1991) has one of its roots in biology of cognition, the development of a systemic view of living beings. On this view, a commitment is made to address the problem of cognition, from its self-referential nature: we can only understand cognition through our ability to know, that is, through our experience as "observers." Consequently, it is then intended to examine cognition by considering the emergence of the observer, investigating its biological origin.
- « 5 » Like second-order cybernetics, biology of cognition points to the autonomy and self-referential character of living beings, whose organization is distinguished by its autopoiesis, which makes them capable of specifying their own operational domain (Maturana & Varela 1973). In this way, living beings are structurally determined systems, which means that it is the structure of the organism that determines the type of change triggered by the perturbations of the environment. The recurrent interaction between an organism and its environment structurally couples them, where the history of mutual perturbations results in effective actions of the organism in its environment that allow the living being to continue its existence. Thus, cognition is understood as an active and embodied process that occurs in the relationship between the organism and its environment (Maturana 1983; Varela 1992). In this way, the assumption of an "objective world," pre-existing and independent of the subject, is replaced by an objectivity "in brackets" or "constituted objectivity" (Maturana 1978, 1988) where the structure of the organism (its body) and the history of interactions with the environment play a central role in the constitution of its world. This epistemological stance implies an ontological turn resulting in what Maturana calls "constitutive ontologies":

- 66 [...] everything that the observer distinguishes is constituted in its distinction [...] each domain of explanations, as a domain of reality, is a domain in which entities arise through the operational coherences of the observer that constitutes it, and as such it is an ontological domain. Finally, in the domain of constitutive ontologies there are as many different legitimate domains of reality as domains of explanations an observer can bring forth through the operational coherences of his or her praxis of living, and everything that an observer says pertains to one. Due to this, every statement that an observer makes is valid in some domain of reality, and none is intrinsically false. (Maturana 1988: 33)
- "6" Therefore, what validates the explanations of an observer are the operative coherences that constitute such explanations and not a correspondence with an objective reality. We propose this to be the epistemological framework for micro-phenomenology against which we should address questions such as whether we should consider micro-phenomenology a qualitative methodology. With this proposal we follow Gaete's (§1) suggestion that before starting any methodological comparison it is necessary to determine the epistemological framework of the micro-phenomenological interview.
- "7" We have difficulties with Kordeš's (§3) view of micro-phenomenology as being qualitative data analysis. The latter does not clarify central aspects of its methodology, nor of the epistemological and ontological framework in which it is situated, since the field of qualitative methodologies is very heterogeneous and full of divergent epistemological claims, as Gaete points out in §2.
- « 8 » Starting with the epistemological framework outlined above, we can identify two central issues in micro-phenomenology as an emerging discipline (and no longer only as a methodology) that could guide any methodological comparison.
- a Since micro-phenomenology recognizes that it is through experience that we know and that we bring forth a world, the development of a practice of the study of lived experience is of great relevance.
- b In order to enable (a) it is necessary to suspend the assumption of the objective

world as we experience it in our every-day life.

«9» As pointed out by Kordeš (§2), contrary to most qualitative methodologies, micro-phenomenology has put great emphasis on techniques for data collection. This is precisely because of the significance of guiding the interviewee in the suspension of their assumptions about the world as they experience it in our everyday life. According to Gaete (§4), this could be considered a "double bracketing" since it is not only the analyst who should try to suspend her assumptions and beliefs - as it is in the case of most qualitative methods inspired by phenomenology - but also, in particular, the interviewee who has to suspend her assumptions and beliefs about her own experience. We could consider even a "triple bracketing," since the interviewer (who is not always the analyst) should also try to suspend her beliefs about the interviewee's experience.

« 10 » The way in which we understand such bracketing aligns with the second option in Gaete's \$6, "a manner of looking at the lens," i.e., our experience, to see how a particular object appears to us. Similarly, the analysis procedure proposed in our article results from an attempt to look at how, in our experience, we identified the categories and the structure of a given experience. As illustrated by Figure 1 in Gaete's commentary, this attempt involves applying the analysis procedure to the process of analysis. Coherent with the epistemological framework presented above, such an endeavor is required because that which validates the results of a micro-phenomenological investigation are the operative coherences that constitute the results rather than correspondence with an objective reality (Petitmengin & Bitbol 2009; Bitbol and &2013). Therefore, in order to validate the results of our analysis, we cannot appeal to a correspondence with some "true structure" but should rather appeal to the coherence of the operations that led to proposing that structure (see our article §9 and Petitmengin, Remillieux & Valenzuela-Moguillansky 2018). In order to evaluate this coherence, it is necessary to share with a community of researchers the conditions that led us to distinguish our results - hence the relevance of the proposed procedure.

Clarifying the analysis procedure

The linearity of the processes of analysis and the concertina metaphor

"11" We appreciate Sparby's comment on the linearity of the analysis process (§3) and the concertina metaphor (§2), as it will allow us to clarify our view on the dynamics of the proposed process.

« 12 » The task of making the procedure of the analysis process explicit poses a challenge: What is the optimal order in which the different steps and elements that make up this procedure should be narrated in order to understand it? Like the narration of an experience, the order of the description of a procedure is not the same as the order of the procedure itself. Our key decision was to describe the micro-phenomenological analysis procedure based on a concrete example. This option imposes a specific order on some of the procedure's stages and steps. However, in our article we wanted to specify that throughout the analysis there are other possibilities. For example, in §48, we point out that diachronic and synchronic analyses can be performed independently of each

"13" Addressing Sparby's Q1, Figure 1 of this response is an attempt to graphically represent the dynamics of the analysis process, which far from being linear, is recursive in several of its phases. A first recursion appears already in the investigative process in which the micro-phenomenological analysis is framed: the analyses of the interviews allow us to specify the research question, which in turn allows us to specify the experiential protocol, from which we can carry out new interviews, which are subject to new analysis, and so on, until the research question and the experiential protocol are stabilized.

"14" As Sparby (§4) points out, another recursion can occur between synchronic and diachronic analysis: synchronic analysis can reveal diachronic aspects of experience, which causes the diachronic structure to change, which in turn can generate the need for new synchronic analysis, and vice versa. Generic analysis will also generate questions in the specific structures and probably modify them, as we pointed out in §82 of our article.

"15" In the final section of our article, "The refinement of the structures" (§98), we again emphasized this circular dynamic: We postulated the need to permanently contrast the emerging structures with the description of the experience and with the understanding that we have gained from it through the analysis that we have carried out up to that moment. This contrasting is necessarily done by repeating certain steps of the analysis, which may even include revising the audio recordings of the interviews again, as was the case in the example described in §§100f.

« 16 » Although we emphasized the circular dynamic only at the end of the article, this does not mean that the contrasting is something that is done only at the end of the analysis. This is also why it does not appear as a step in the analysis. We mentioned it at the end because it is only after exposing all the stages, steps and elements of the analysis procedure that the reader will be able to better understand what we mean by the refinement of the structures.

"17" This contrasting movement of coming closer and moving away, or of going *in* and *out* as Gaete (\$1) describes the relationship of a painter with her art work, is one of the aspects of the proposed procedure that we wanted to illustrate with the metaphor of the concertina.

«18» We agree with Sparby (§2) that a closed (or open) concertina does not produce any sound. The same happens with the analysis procedure, if this is understood simply as a chronological succession of fixed steps. Only when the concertina is being closed and opened does it produce sound. The same happens with the proposed procedure: it is by contrasting and dialoguing its different stages and steps that the structures appear. So, to correct Gaete's (§1) reading of our metaphor: it is not when the concertina is closed that there is a dialogue between the different phases of the analysis, or when the concertina is open that a new structure emerges. Rather, it is in the movement of opening and closing the concertina that the different phases of the analysis are in dialogue among themselves and with the data, which in turn allows the structure of the experience to appear.

"19" Another element that led us to choose the concertina as a metaphor was

our intention to emphasize the participation of the criteria used in the decision-making involved in the different stages of the analysis. The folded structure of the concertina's bellows allows the movement of opening and closing the concertina, which in turn makes sound possible. Each fold of this structure (i.e., each stage of the analysis) has a surface that is seen and another that is not seen. In our metaphor, the surface we see corresponds to the result of a particular stage of analysis and the surface we do not see corresponds to the dilemmas the analyst is facing at that stage and to the criteria used to solve them (or not!). As pointed out, for example, in §90 of our article, it is the recording of these criteria that allows the researcher to go back and forth from one stage of analysis to another in a recursive movement without making categories and structures appear to be "arbitrary."

« 20 » In response to Kordeš's Q1, the virtue of proposing a step-by-step analysis procedure is that it allows us to trace the path leading to the results. This makes it possible for the researcher to return again and again to the different steps of analysis, addressing the questions that arise along the way and recursively nurturing diachronic, synchronic, generic and specific analyses. In addition, it allows the results to be shared and discussed with other groups of researchers, establishing a common language at the base of the analysis process. This in no way excludes the possibility of carrying out this process in a curious and intuitive way: In order to allow the unfolding of curiosity and intuition, what we propose in our article is a procedure that allows us to observe, in an attentive way, the implicit, pre-reflective criteria that operate in the analyst's categorization process rather than fixed categorization criteria. As pointed out by Juliana Alvarenga (2016) in her comparison of artistic and alchemic processes, the repetition and the inclusion of error are devices that can be used to freely choose the research path that stimulates other types of knowledge, such as intuitive insights, which deepens our understanding of the phenomena under study.

The categorization process

« 21 » With regard to the alleged categorization problem raised by Kim's Q1, we would like to offer some clarifications. Ac-

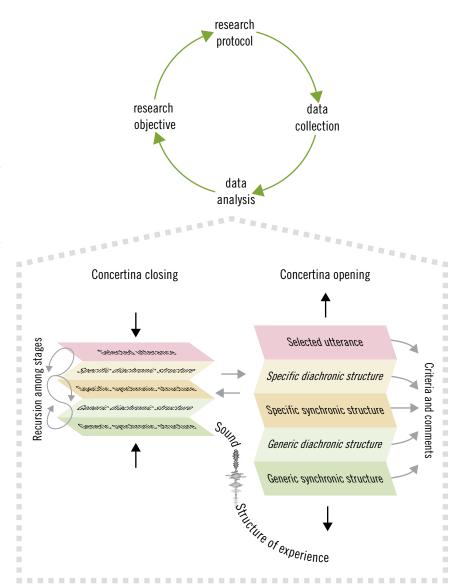


Figure 1 • Graphic representation of the dynamics of the analysis process. Each stage consists of three steps as described in our article. The name of each surface of the concertina is the final product of each stage of the analysis. Along with the result of each stage are recorded the criteria and comments represented by the non-visible side of the concertina, as shown on the open concertina. In addition, there is feedback between the stages of the analysis, as shown on the closed concertina. It is in the opening and closing of the concertina that the concertina emits its sound and where the structure of the experience emerges.

cording to our proposal, the mechanism that allows the appearance of categories is *iterative interrogation*. It consists of iteratively questioning (a) the grouped utterances, and (b) the incipient units that are in the process of stabilization. Therefore, answering Kim's

question, the operation of abstraction that operates in the appearance of a category is *grouping*.

« 22 » Then, the synchronic and diachronic units are organized and often tuned through the operations of abstraction, i.e., classification/instantiation, generalization/specialization, and aggregation/fragmentation.

- "23" In this way, the incipient character of a category is defined "contextually" or "relationally" by the state of progress of the analysis and the stability of the structure in question. Thus, diachronic or synchronic units can be redefined or refined during their organization and during the definition of the diachronic and synchronic structure through the operations of abstraction.
- "24" This takes us to Kim's Q2. We would like to emphasize that in our proposal, semantic networks are *not* the basis of the categorization system. As pointed out by John Sowa (1987), semantic networks are a way of *representing* knowledge through interconnected patterns that graph the relations (abstraction operations) among categories. In other words, semantic networks are not a mechanism to generate a category but a way to organize categories once they have been identified.
- « 25 » In our reading, Kim (§8) proposes intermediate steps in the process of generating categories that result in "types" or "classes," i.e., stages that would be prior to the definition of a category. However, the "general to specific" hierarchy that traditionally relates the categories proposed by Kim (type, class, subcategory and category) does not necessarily account for the emergence process of these categories. For example, according to prototype theory (Rosch et al. 1976), humans first identify categories that are cognitively more "natural." This "natural" (or "basic") character is supposed to be given by variables that have to do with the relation between the observer and that which is being categorized, such as usage (sensorimotor affordances), familiarity, context, ease of perception and memory. As explained by George Lakoff (1987), the level at which we learn object categories and name objects is neither the most general ("category" in Kim's example) nor the most specific level ("character" in Kim's example) but is commonly positioned in the center of a "general to specific" hierarchy.

« 26 » With this reflection we can address Tewes's Q2. There is indeed an implicit criterion to select and combine the extensional properties in the first grouping operations. These properties have to do with

the variables mentioned above, such as usage, familiarity, and context, i.e., with the cognitive and sociocultural background of the researcher in her relation to what she is analyzing. The context in which the research takes place and, particularly, the objective of the research, are also part of these criteria. Considering the epistemological framework specified in the first section of this response, the impact of the analyst's individual and cultural background on the distinction of the diachronic and synchronic units is not a mere bias, as warned by Tewes (§7), but a constitutive dimension of the "observer" as such. What we can do so that the synchronic and diachronic units are not arbitrary is to specify the conditions for the observation of these units, allowing their validation. We agree with Tewes (§7) that to get controlled access to the pre-reflective level in which those intentional properties operate remains a challenge and we hope that the proposed procedure is a step in that direction.

The "independence claim"

- « 27 » Addressing Tewes's Q1, the "independent" character of the diachronic and synchronic units is defined by the distinctions made by the analyst through the iterative interrogation process, in which the analyst tries to establish the common features of a group of utterances. In other words, she abstracts an attribute, a characteristic or an element that, throughout the interrogations, remains independent of the utterances themselves.
- "28 " To illustrate what we mean by "independent," let us assume the analyst has collected descriptions from a task in which participants have been asked to mentally spell the word "chrysanthemum." The analyst's objective is to find categories that allow the characterizing of the visualization of the word "chrysanthemum" from utterances such as:
- "I visualize the letters, in print. Black letters on a white background."
- "The letters are red, they appear syllable by syllable."
- "I see the letters in front of me, white letters."
- "First the whole word appears and then I go letter by letter, and as I spell it, the letter gets highlighted, but not in a specific color."

- "29" Depending on her (often implicit) grouping criteria, she will have formed different incipient units. For the sake of the example, let us refer to a synchronic unit we have identified that refers to a characteristic of the letters as "seen" by the participants: "color."
- "30" "Color" is a notion that we abstract from the descriptions and that also allows us to refer to some experiences in which the letters appear without any specific color. This abstract notion of color is independent of whether the individual instances are blue, green, etc. It is in this sense that we understand the notion of "independence." At the same time, the category "color" arises from these instances, without which we would not have reached this abstract category. But the abstract category no longer requires the instance to specify its meaning, hence we can also define it by intension.
- "31» In line with the epistemological framework described in the first section of this response, we do not claim that the categories or the distinguished structures exist in a reality independent of the observer and of the process that distinguishes them. Connecting to Maturana (1978), through the operation of distinction an entity is specified by operationally separating it from a background. This results in "a thing with the properties that the operation of distinction specifies, and which exists in the space that these properties establish" (Maturana 1978: 34).

Challenges for microphenomenology

The issue of language

- "32" We agree with Coupé & Ollagnier-Beldame (\$5) about the challenges microphenomenology faces regarding the issue of language. We share the commentators' concerns regarding the use of words in the analysis process and would like to add further issues regarding the use of words when conducting the interviews.
- « 33 » Anyone who has done research using the micro-phenomenological interview will probably be aware that the richness of the description of an experience does not depend solely on whether the interview was conducted properly. Often, we have subjects displaying difficulties when putting their

experience into words. It is hard to know whether it is because

- a of their difficulties coming into contact with a given experience,
- b of their general difficulties putting the experience into words, or
- there may be aspects of the experience or even experiences that are unspeakable or ineffable, as pointed out by Coupé & Ollagnier-Beldame (§7).
- « 34 » Considering that the level of evocation is one of the criteria for assessing the quality of our data, difficulties such as the ones described above pose quite a few practical challenges:
- Should we discard from the analysis descriptions that do not fulfill the expected level of evocation and richness?
- What if the "difficulty" in evoking or describing a given experience is reflecting a specific personality trait?
- How to study the structure of experience of those persons?
- Would it be appropriate to consider, within the same group, descriptions that fulfill the expected level of evocation and richness along with those that do not, in order to identify the generic structure of a given type of experience?
- « 35 » While we cannot offer general answers to these questions yet, we can at least suggest ways of addressing them.
 - Refine the indicators of the evocation and expand them to account for the diversity in the ability – and maybe in the modes – of coming into contact with one's experience.
 - Reflect on ways of distinguishing between the three types of difficulties pointed out in §33, for example, by using specific questionnaires that assess the ability to describe felt experience, including an alexithymia questionnaire, and interoceptive awareness.
- « 36 » Regarding the unspeakable and ineffable aspect of experience, we consider it necessary to integrate other tools and languages (including various expressive, non-verbal and artistic languages) that can enable a different type of access to the preconceptual dimension of lived experience, as pointed out in our article (§§108f). The importance of such tools and languages for gaining a better understanding of human experience informs us about central aspects

of the structure of experience. For example, the use of somatic techniques for the treatment of trauma reveals that certain experiences have a bodily inscribed "meaning," which we cannot access through traditional narrative psychotherapy (Payne, Levine & Crane-Godreau 2015).

The number of interviews and the generic analysis

- "37" We agree with Coupé & Ollagnier-Beldame (§10) that an increase in the number of interviews non-linearly increases the complexity of the analysis, and that analyzing more interviews is not necessarily better. Addressing their Q1, to determine the appropriate size of a corpus of microphenomenological interviews, we must reflect, as a community of researchers using this approach, on the particularities of this approach and of the analysis process in order to identify ad hoc criteria, as Coupé & Ollagnier-Beldame were doing. Among the variables we consider relevant for evaluating the appropriate number of interviews
- a the objective of the research (whether it has to do with the diversity of possible experiences or a structure that unifies a type of experience);
- b the type of phenomenon (whether it is scarce or not);
- the stability of the structure found (saturation principle).

Conclusion

- « 38 » Placing the process of microphenomenological analysis within the epistemological framework of the enactive approach to cognition allows us to broaden our gaze and consider micro-phenomenology not only as an interview method but also as a developing discipline. As pointed out in §8 of this response, in our view the focus of this emerging discipline is on
 - developing a practice of the study of lived experience, and
 - suspending the assumption of the objective world as we experience it in our everyday life.

This focus makes it possible to:

 Situate our endeavor within an ontological framework, which in turn allow us to specify validation mechanisms and procedures for it.

- Assume the limitations a specific tool may have – such as the issues related to the use of words following a propositional logic, pointed out by Coupé & Ollagnier-Beldame and referred to in §§34f of our response – and look for different tools, languages and means that can help us to overcome these limitations.
- Within the epistemological framework of the enactive approach to cognition, address other open questions. For example, micro-phenomenology, like any approach studying experience, has to face the challenge that experience is always described in retrospect. That is to say that in order to connect with a particular experience and to describe it, we need to rely on memory. One of the criticisms made towards first-person approaches is that we cannot access our past experiences accurately and reliably because it is very likely that we have created "false" memories. However, the notion of memory subject to this criticism assumes a representational approach, i.e., the recalling of events as they "objectively happened." Would this also apply to the enactive understanding of memory? How can this understanding of memory shed light on the evocation process of getting in contact with and describing a past experience? Addressing these questions will contribute to the refinement of the indicators of the evocation process.
- "39 " Continuous application of the analysis procedure for the micro-phenomenological interview will reveal aspects that need to be further developed and improved. To stress again what we said in our article (§110): the procedure is open to being completed, deepened and improved to contribute to the establishment of standards in micro-phenomenological research, consolidating the intersubjective validation procedures that allow us to evaluate the quality of its results.
- " 40 " In this response we have tried to clarify the dynamic character of the proposed analysis procedure and the relevance of tracing the path leading to the results. The concertina only makes music if it is played. Similarly, the procedure only allows the appearance of meaningful structures if performed with a curious and attentive attitude,

incorporating the recursive and embodied features of our categorization patterns. So, let us play the concertina and see where it takes us!

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