Chapter 3

What knowledge owes to experience: Complexity and first-person epistemology

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Definitions of "complexity" or "complex systems" are numerous, and research concerns both modelling and empirical works. Our proposal is part reflexive in which the complexity sciences question their foundations and their methodologies. We postulate that a complex approach is necessary to better understand knowledge processes as it attempts to integrate and to go beyond the dichotomies that are most often used in cognitive sciences. We also support the idea that such an approach must take into account the experiential dimension of the act of knowing, considered as a starting and an ending point. (Cohen Varela 2017).

1 Introduction

Research in the field of "complex systems" is vast and it concerns as much modelling as empirical studies. Bertin et al. (2011) define the complexity sciences not by their objects but by their way of questioning objects. They associate complexity with the observer's perspective on her object, classifying complexity research in three categories:

- Studies of specific systems within a discipline or at the intersection of several disciplines

- Transverse theoretical studies on the generic characteristics of certain classes of systems

- Reflexive works in which the complexity sciences question their foundations and their methodologies.

Our proposal is part of the third group. In order to integrate and to go beyond the dichotomies most often used in cognitive sciences, we claim a complex approach is necessary to better understand knowledge processes as they unfold. We also support the idea that such an approach must take into account the experiential dimension of the act of knowing, both as

> being where we go from and what we have to bond to in return (Cohen Varela 2017: 26).

2 Ways of knowing and the paradigm of 4-E cognition

Over the last thirty years, research within the cognitive sciences has massively grown in the field of the Ways of Knowing (Suchman 1987, Varela et al. 1992, Hutchins 1995, Clark 1997). In recent years, the paradigm of 4-E cognition (for embodied, embedded, enactive and extended cognition) suggests that cognition involves the whole body, as well as the situation of the body in the environment (Newen et al. 2018). The term "embodied" is actually the most general term, encompassing the other three. Indeed, the idea is to take into account the way the body contributes to cognitive processes, body being always located in a physical, social and cultural environment (embedded), body allowing us to perceive our environment according to its "affordances" (enactive), and body mobilising objects and instruments of the environment (extended). Studies within this paradigm rely on different methodologies but they all reject or radically reconfigure traditional cognitivism considering cognition as a manipulation of representations in the brain. The principle of cognition rooted in an embodied subject, situated into a particular setting, is the foundation of the theory of enaction (Varela et al. 1992). This theory considers cognition as an "embodied action", i.e. as a phenomenon rooted in the constant interactions between the subject and her environment and by which these two realities co-occur. And while the aim of research within the 4-E cognition paradigm is to understand Human "in situation", it mobilises various dualisms (subject vs. object, action vs. cognition, interior vs. exterior, body vs. psyche, innate vs. acquired) – often seen as contradictions and considered by science as antagonisms or aporias – with a view to their integration.

3 Complexity and first-person science

According to Morin (1990a), the non-integration of these contradictions leads to a "blind intelligence", a simplifying scientific thought that disfigures and mutilates reality through disjunctions (separating what is linked), reductions (unifying what is diverse) and abstractions (isolating objects from their environment). According to him, on the contrary, it is necessary to move on to a complex generalised thought – in the etymological sense of *complexus*: "what is woven together" – integrating these contradictions and linking what seems to be opposed. In the same vein, Varela et al. (1992) and Depraz et al. (2003) argue for taking into account these dualities, without seeking to go beyond them by synthesising them, but recognising them the possibility to co-occur. For them, subjective experience, as a research material, is the possible place where these dualities can be integrated because, owing to its "intermediate" nature, experience questions the relevance of these dualities. In this direction, we defend the need for a new paradigm for the study of the Ways of Knowing rehabilitating and reintegrating lived experience at the core of the process (Petitmengin et al. 2015).

Indeed, the irreducible complexity of cognitive processes needs an open interrogation method, considering their phenomenal manifestations, i.e. the way they are from a "first-person" – subjective – perspective. Phenomenological approaches differentiate first-person, second-person and third-person points of view distinguishing the perspective of the subject living the experience from that of another subject, e.g. the researcher (Depraz et al. 2003). The first-person point of view deals with the experience as it is accessed by the subject. In the case where the researcher collects data about her own experience, the "radically first-person" point of view denotes the idea that the data are drawn from the researcher's own lived experience. The second-person perspective implies

> enabling the gathering of "first-person" data, i.e., data that express the viewpoint of the subject herself, in the grammatical form "I...". But since the data have been gathered through another person (a "You"), the method has been dubbed "second-person" (Petitmengin 2006: 230–231).

This perspective suggests a combination of empathic resonance and heterophenomenological observation (Depraz 2012)[1], i.e. an inference from behaviours – language, gestures or other forms of semiosis. The idea is that a second-person

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[1]According to Depraz (2012: 419), the heterophenomenological observation is that of the researcher who studies the experience of another subject without identifying with it.

perspective is an indirect point of view on the subjective perspective. The first-person and second-person points of view rely on a first-person epistemology that considers subjectivity as it is experienced by the subject herself (Varela & Shear 1999, Depraz 2014).[2] Such an epistemology is often undervalued in comparison to third-person approaches, on the assumption that an external point of view offers greater objectivity. The limits of this last statement have however been stressed, and the epistemic validity of first-person approaches has been analysed in detail (Petitmengin & Bitbol 2009). Especially, claims denying subjects' introspective abilities (Nisbett & DeCamp 1977) have been rebutted (Petitmengin & Bitbol 2009, Petitmengin et al. 2013). Moreover, external observations based on third-person epistemology leave aside entire facets of the studied phenomenon, which simply cannot be accessed since they occur "within" individuals, "behind" physical movements and "in front" of patterns from neuronal imagery. These classically inaccessible facets of the subject's activity, her experience, can, however, be reported by her; hence, the benefits of accompanying her to do so with a particular method. As for reducing introspection to solipsism (Zahavi 2017: 10), we contend that gathering authentic descriptions of lived experiences is the first and necessary step to ground our research in the things themselves and access the invariant structure of experience (Bitbol & Petitmengin 2011: 36). As we wrote in Petitmengin et al. (2015), once a corpus of singular descriptions of experiences has been collected, a whole work of reorganisation, analysis and formalisation is necessary in order 1. to identify the possible structure of the described experiences, i.e. a network of relationships between descriptive categories, independently from the experiential content, and 2. to detect any generic structures, progressively extracted from the initial descriptions thanks to a succession of operations of abstraction (Ollagnier-Beldame & Coupé 2019, Petitmengin et al. 2018, Valenzuela-Moguillansky & Vásquez-Rosati 2019).

4 Micro-phenomenology as a way to explore the richness of experience

At the heart of first-person epistemology, micro-phenomenology (Petitmengin 2006, Bitbol & Petitmengin 2016) is based on enaction and neurophenomenology (Varela 1996). It is close to Morin's co-constructivist vision of "human facts"

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[2]They are defined this way as opposed to the third-person point of view that does not allow studying the experience as it focuses on behaviours and examines them according to predefined categories. This point of view implies a third-person epistemology in which subjectivity and lived experience are generally viewed as epiphenomena or as being beyond the reach of science (Vermersch 2000).

(Morin 1990b) for which the subject is constructed by the outer world at the same time as the outer world is constructed by the subject, by a recursive loop. Interested in "what it is like to be" (Nagel 1974), the micro-phenomenology seeks precisely to understand the complexity of the human experience with an emic approach, i.e. using data from the "discourse" of subjects as opposed to an etic approach, i.e. using observational data (Olivier de Sardan 1998).

This discourse is not a narration but relies on what Vermersch (1994) calls the "embodied posture of speech" (EPS), or "evocation", which is the verbalisation of experience in close contact with it. The "level of experiencing" (Hendricks 2002) is the degree of connection between what a person is saying and her experience when she says it. It is a quantifiable first-person process: there are low, medium and high levels of experiencing. The micro-phenomenological interview aims at a high level of experiencing in order to facilitate the experiential description. The experiencing scale (Hendricks 2009), which measures this process, is the third-person evaluation of a first-person process, based on specific linguistic and somatic indicators.

The micro-phenomenological interview relies on the explicitation interview, developed by Vermersch (2012) and Petitmengin (2006).[3] It consists in "guided retrospective introspections", aiming at accompanying an interviewee in recalling a past situation. It does not, however, guide the subject on the content she verbalises, which comes to her consciousness through a movement of letting go. This is possible thanks to a specific posture from the interviewer guiding the interviewee's attention with open and non-inductive questions but never inducing the content of what the latter says. During this movement, the interviewee is accompanied by the interviewer to suspend her judgment – the Husserlian *epoché* (Depraz et al. 2003)[4] –, which allows her to access her past lived experience. The main characteristics of the explicitation interview are:

1. The EPS within the interviewee, allowing her to initiate and to maintain an intimate contact with the evoked past situation;

2. The concept of "satellites of action", to help the interviewer be aware of the area of verbalisation to which the interviewee is referring to and to drive the interviewee's attention according to these areas;

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[3]It has been supplemented by a method of data analysis and validation (Petitmengin et al. 2015, 2018).

[4]According to (Depraz et al. 2003: 25), one accomplishes the *epoché* in three principal phases: A0: Suspending your "realist" prejudice that what appears to you is truly the state of the world; this is the only way you can change the way you pay attention to your own lived experience; in other words, you must break with the "natural attitude." A1: Redirecting your attention from the "exterior" to the "interior." A2: Letting-go or accepting your experience.

3. The contact with a singular past situation (unique in time and space) in order to collect specific descriptions rather than generalisations (such as know-how or habits);

4. The holistic description of the lived experience in the entanglement of its cognitive and bodily dimensions, beyond the division;

5. The precise use of perlocutionary effects (Austin 1962);

6. The consideration of the temporality of the experience, carefully explored by the interviewer who is guiding the fragmentation of the interviewee experience into a series of very detailed phenomena through specific questions.

Like the explicitation interview, the micro-phenomenological interview aims to describe the experience in an intuitive mode (as opposed to a signitive, purely conceptual mode), i.e. based on a presentification of the past moment.

It is important to bear in mind that first-person epistemology is not an epistemology of immediacy since experience, although lived by the subject, is not immediately known by her, despite its apparent transparency and familiarity. Experience is not directly accessible to the subject and the first-person perspective should not be confused with immediate donation, i.e., for the subject, a sudden, clear and distinct illumination (Vermersch 2000).

> Indeed, being epistemically related to facts about oneself is not a sufficient condition for first-person perspective taking: You can also have an objective, third-person view on your headache. [...] What is needed is a difference not in terms of the epistemic object but, rather, in terms of epistemic access – even if it may turn out to be necessary to refer to specific epistemic objects in order to clarify what the specific kind of access is. The decisive point seems to be that there are certain features of oneself that do require a specific kind of epistemic access (Pauen 2012: 37–38).

It is precisely an epistemic access to experience that is both unusual and privileged that the micro-phenomenological interview offers.

5 Towards a dialogical integration of emic and etic data

Micro-phenomenological descriptions can be enriched with third-person data, for instance as Depraz et al. (2017) did, crossing micro-phenomenological data

with third-person physiological data, in their study about the experience of surprise and depression. Precisely, it seems that a science questionning the cognitive processes with a complex approach must consider the relation between etic and emic data according to a dialogic mode. This is what Cohen Varela (2017) proposes when he distinguishes two main classes of scientific invariants. First, he specifies objective invariants (derived from third-person or etic research), which can be treated as if they were separable from the variety of experiences of which they are the focus[5]. He also characterises intersubjective invariants (coming from first-person or emic research), which are different from objective invariants, by the fact that it is generally impossible to separate them from the situations and concrete people they coordinate (Cohen Varela 2017). The project of neurophenomenology (ibid.), which micro-phenomenology joins, is precisely to define "generative mutual constraints" between objective and intersubjective invariants. From these two classes of invariants, the idea is to go back and forth between third and first person-person approaches, experience being from where one leaves and to which everything must be connected in return. This project is based on methods of guiding research towards invariants belonging to one of the two classes, relying on the invariants of the other class.

6 Conclusion

A first-person approach as described above aims to enrich the understanding of the Ways of Knowing in their complexity – particularly by seeking to re-question classical dichotomies – through the reintegration of subjective experience. It is in line with Berthoz & Petit (2014) for whom the modelling of reality complexity is always far from the complexity as it is lived in flesh and bone, and for whom

> the Living will always have the priority by to all models because it is the one who lives in the immanence of this real complexity (ibid.: 37).

Combined with a third-person approach, it can allow for the construction of new models of cognitive processes, more operative than models made solely from third-person data, which can not grasp the phenomenological dimension in which the living "dwells" and "decides" within the concret and embodied complexity.

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[5]Regarding this point, Varela warns about the widespread temptation to forget the status of scientific objects, which is that of inter-situational invariants, as well as their origin, which is part of a situated experience. In a 1996 article, he had already stressed this temptation and the need to preserve it by recalling that third-person researches, as much as first-person ones, are made by people who are embodied in their social and natural world.

Finally, we claim a holistic approach to cognitive processes fully considering human subjectivity through experience, beyond the normativity of subjectivity. To achieve this goal, it seems essential to broaden our conception of the subject and the world and to accept to be obedient to the authority of the Living in its dynamic and processual dimensions, and in its contradictions. The challenge of such a proposal is not only epistemological, but also ethical and societal. Indeed, what gives the person the feeling of being the person she is, if not her experience? Is not experience "the only tangible reality of the person, at the forefront of the living being alive" (Lamboy 2003)? Leaving aside lived experience, does not that mean depriving oneself of a considerable source of knowledge?[6] Reintegrating the Living into the study of cognitive processes would help develop an ecosystemic vision of the person as a complex unit that shapes in the relationship between her organism and the environment. This vision also fosters an understanding of the relationship between humans and nature, allowing for both non-dissociation and differentiation, thus bringing together the seemingly contradictory notions of belonging and autonomy. Could we consider that the rehabilitation of subjective experience, as a material for research, could be a form of simplexity (Perrier 2014, Berthoz & Petit 2014)?[7]

Acknowledgements

References

Austin, John Langshaw. 1962. *How to do things with words*. Cambridge, MA: Harvard University Press.

Berthoz, Alain & Jean-Luc Petit. 2014. *Complexité-simplexité*. Paris: Collège de France.

Bertin, Éric, Olivier Gandrillon, Guillaume Beslon, Sebastian Grauwin, Pablo Jensen & Nicolas Schabanel. 2011. Les complexités: point de vue d'un institut des systèmes complèxes. *Hermès, La Revue* 2(60). 145–150. DOI: 10.4267/2042/45459.

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[6]"Indeed nothing is as debilitating as a confused and distant functioning of experiencing" (Gendlin 1997: 15–16).

[7]Inasmuch as it is one of the fundamental properties of the Living to be able to invent simple answers to problems that the complexity of reality poses for its survival.

Bitbol, Michel & Claire Petitmengin. 2011. On pure reflection: A reply to Zahavi. *Journal of Consciousness Studies* 18(2). 24–37.

Bitbol, Michel & Claire Petitmengin. 2016. On the possibility and reality of introspection. *Mind and Matter* 14(1). 51–75.

Clark, Andy. 1997. *Being there: Putting brain, body, and world together again.* Cambridge: MIT Press.

Cohen Varela, Amy. 2017. *Le cercle créateur: Écrits (1976–2001).* An anthology of works by Francisco J. Varela. Paris: Seuil.

Depraz, Natalie. 2012. Empathy and second-person methodology. *Continental Philosophy Review* 45(3). 447–459. DOI: 10.1007/s11007-012-9223-z.

Depraz, Natalie. 2014. *Première, deuxième, troisième personne.* Bucharest: Zeta Books.

Depraz, Natalie, Maria Gyemant & Thomas Desmidt. 2017. A first-person analysis using third-person data as a generative method: A case study of surprise in depression. *Constructivist Foundations* 12(2). 190–203.

Depraz, Natalie, Francisco J. Varela & Pierre Vermersch. 2003. *On becoming aware: An experiential pragmatics.* Amsterdam: John Benjamins.

Gendlin, Eugene T. 1997. *Experiencing and the creation of meaning: A philosophical and psychological approach to the subjective.* Evanston, IL: Northwestern University Press.

Hendricks, Marion. 2002. Focusing-oriented/experiential psychotherapy. In David Cain & Jules Seeman (eds.), *Humanistic psychotherapy: Handbook of research and practice*, 1st edn., 221–251. Washington, D.C.: American Psychological Association. DOI: 10.1037/10439-007.

Hendricks, Marion. 2009. Experiencing level: An instance of developing a variable from a first person process so it can be reliably measured and taught. *Journal of Consciousness Studies* 16(10–12). 129–155.

Hutchins, Edwin. 1995. *Cognition in the wild.* Cambridge, MA: The MIT Press.

Lamboy, Bernadette. 2003. *Devenir qui je suis.* Paris: Desclée De Brouwer.

Morin, Edgar. 1990a. *Introduction à la pensée complexe.* Paris: Seuil.

Morin, Edgar. 1990b. *Science avec conscience.* Paris: Seuil.

Nagel, Thomas. 1974. What is it like to be a bat? *Philosophical Review* 83(4). 435–450. DOI: 10.2307/2183914.

Newen, Albert, Leon de Bruin & Shaun Gallagher. 2018. *The Oxford handbook of 4E cognition.* Oxford: Oxford University Press. DOI: 10.1093/oxfordhb/35410.001.0001.

Nisbett, Richard & Timothy D. DeCamp. 1977. Telling more than we can know: Verbal reports on mental processes. *Psychological Review* 84(3). 231–259. DOI: 10.1037/0033-295X.84.3.231.

Olivier de Sardan, Jean-Pierre. 1998. Émique. *L'Homme* 38(147). 151–166. DOI: 10. 3406/hom.1998.370510.

Ollagnier-Beldame, Magali & Christophe Coupé. 2019. Meeting you for the first time: Descriptive categories of an intersubjective experience. *Constructivist Foundations* 14(2). 167–180.

Pauen, Michael. 2012. The second-person perspective. *Inquiry* 55(1). 33–49. DOI: 10.1080/0020174X.2012.643623.

Perrier, Edith. 2014. De la simplexité et des systèmes complexes. In Alain Berthoz & Jean-Luc Petit (eds.), *Complexité-simplexité.* Paris: Collège de France. DOI: 10.4000/books.cdf.3359.

Petitmengin, Claire. 2006. Describing one's subjective experience in the second person: An interview method for the science of consciousness. *Phenomenology and the Cognitive Sciences* 5. 229–269. DOI: 10.1007/s11097-006-9022-2.

Petitmengin, Claire & Michel Bitbol. 2009. The validity of first-person descriptions as authenticity and coherence. *Journal of Consciousness Studies* 16(10-12). 363–404.

Petitmengin, Claire, Michel Bitbol & Magali Ollagnier-Beldame. 2015. Vers une science de l'expérience vécue. *Intellectica* 64. 53–76. DOI: 10.3406/intel.2015. 1012.

Petitmengin, Claire, Anne Remillieux, Béatrice Cahour & Shirley Carter-Thomas. 2013. A gap in Nisbett and Wilson's findings? A first-person access to our cognitive processes. *Consciousness and Cognition* 22(2). 654–669. DOI: 10.1016/j. concog.2013.02.004.

Petitmengin, Claire, Anne Remillieux & Camila Valenzuela-Moguillansky. 2018. Discovering the structures of lived experience: Towards a micro-phenomenological analysis method. *Phenomenology and the Cognitive Sciences* 18. 691–730. DOI: 10.1007/s11097-018-9597-4.

Suchman, Lucy A. 1987. *Plans and situated actions: The problem of human/machine communication.* Cambridge: Cambridge University Press.

Valenzuela-Moguillansky, Camila & Alejandra Vásquez-Rosati. 2019. An analysis procedure for the micro-phenomenological interview. *Constructivist Foundations* 14(2). 123–145.

Varela, Francisco J. 1996. Neurophenomenology: A methodological remedy for the hard problem. *Journal of Consciousness Studies* 3(4). 330–349.

Varela, Francisco J., Eleanor Rosch & Evan Thompson. 1992. *The embodied mind: Cognitive science and human experience.* Cambridge, MA: The MIT Press.

Varela, Francisco J. & Jonathan Shear. 1999. First-person methodologies: What, why, how? *Journal of Consciousness Studies* 6(2-3). 1–14.

Vermersch, Pierre. 1994. *L'entretien d'explicitation en formation initiale et en formation continue.* Paris: Editions Sociales Françaises.

Vermersch, Pierre. 2000. Conscience directe et conscience réfléchie. *Intellectica* 31. 269–311. DOI: 10.3406/intel.2000.1609.

Vermersch, Pierre. 2012. *Explicitation et phénoménologie.* Paris: Presses Universitaires de France.

Zahavi, Dan. 2017. *Husserl's legacy: Phenomenology, metaphysics, and transcendental philosophy.* Oxford: Oxford University Press.