Commentary on "The self-organizing consciousness," by Pierre Perruchet and Annie Vinter

Varieties of consciousness

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Abstract: In agreement with some of the ideas expressed by Perruchet and Vinter, we believe that some phenomena hitherto attributed to "unconscious" processing may in fact reflect a fundamental distinction between direct and reflexive forms of consciousness. This dichotomy, developed by the phenomenological tradition, is substantiated by examples coming form experimental psychology and lesion neuropsychology.

Perruchet and Vinter made a convincing case for a role of consciousness in phenomena hitherto supposed to be examples of unconscious processing, such as implicit learning or semantic priming. However, in some of these cases people are not willing to acknowledge that they had experienced the relevant stimuli (e.g., rules or primes), thus suggesting "unconscious" processing of these items. But does a lack of verbal report necessarily indicate unconscious processing? Whereas an appropriate verbalization can be considered as a reliable indicator of conscious processing (Merikle et al. 2001), the converse is not necessarily true; lack of verbalization cannot be conclusively considered to indicate lack of consciousness. For example, it might simply indicate lack of memory (Allport 1988). The phenomenological tradition has often distinguished between direct and reflexive forms of consciousness (review in Vermersch 2000; see Marcel [1988] and Dulany [1997] for more recent proposals of similar dichotomies). This distinction may help explain why people observing an array of letters for a very short time may be aware of having seen letters but able to name only a subset of them (Sperling 1960). In the same vein, studying the so-called endogenous mode of orienting of spatial attention, usually attributed to voluntary processes (Jonides 1981; Posner & Snyder 1975), Decaix, Siéroff, and Bartolomeo (in press) recently found that participants were able to develop effective strategies despite the absence of explicit instructions. About half of participants, however, were later unable to correctly describe the strategy they used, even when this description was proposed in a postexperiment questionnaire. These examples may represent forms of direct consciousness that, for various reasons, cannot translate in more reflexive forms of consciousness. To borrow the terms used by Merleau-Ponty (1942), one can "live" forms

of perception that one cannot speak about. Merleau-Ponty uses the example of someone who enters a room and feels an impression of disorder, only to later discover that this impression came from a crooked picture on the wall. Before discovering that, this person's consciousness was "living things that it could not spell out." This would by no means imply that the first impression on entering the room was *unconscious*! Rather, it was a form of consciousness not immediately amenable to verbal description.

Neuropsychological evidence from brain-damaged patients offers instances of the opposite dissociation, with defective direct consciousness and preserved reflexive consciousness. Patients with left unilateral neglect typically lack phenomenal awareness for events occurring in the neglected part of space, perhaps because these events fail to capture their attention (see Bartolomeo & Chokron 2002 for a recent review). Although in general these patients are reluctant to acknowledge their disorder, some eventually become cognizant of their neglect, but continue nevertheless to show the symptom. The celebrated film director F.F. jokingly asked to include his new condition of neglect in his calling card, but persisted in producing funny drawings lacking their left part (Cantagallo & Della Sala 1998). In another cognitive domain, we described a patient with a severe deficit of so-called frontal cognitive abilities (such as planning and memory-related activities) (Dalla Barba et al. 1999). Despite his unawareness of the deficits, this patient was surprisingly aware of his incapacity to appreciate his disorder. The following excerpt from an interview with the patient describes well the dissociation between impaired direct consciousness and preserved reflexive consciousness.

Q. How is your memory?

A. Good.

Q. How do you think other people judge your memory?

A. Bad.

Q. Do you think they are right or wrong?

A. Right.

Q. Why?

A. Because they see what I don't see. Yes, it's precisely that. I don't see what they see. They see a problem I don't see.

Q. So, at the same time, you are conscious of your memory being good and bad. Isn't this quite a bizarre situation?

A. Well, it is, but it's just like that. When I think about my memory, or simply of my ability to do things, I think I am completely normal. But then, when I think how my wife

or my eight year old kid looks at me and reacts to my behavior, I realize that I am not aware of something in my behavior that is wrong, that I can't see and that they see.

Q. And you think they are right?

A. Yes, they are right.

Q. Why are you so sure? They could be wrong.

A. Well, it's me who had a head trauma, not them.

Also in this case, unfortunately, this reflexive awareness was ineffective to palliate the patient's cognitive problems.

These examples suggest the opportunity of considering that different varieties of consciousness may be involved in human behavior, before invoking unconscious processes as a default explanation for dissociations between what in fact may be direct and reflexive forms of consciousness. We believe that these consideration may inspire promising new avenues of research in cognitive neuroscience, which integrate the methods of experimental psychology with the insights about the taxonomy and the operations of consciousness coming from the phenomenological tradition (Dalla Barba 2002).

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