Reviewer’s report

Title: Event-related potentials when identifying or color-naming threatening schematic stimuli in spider phobic and non-phobic individuals

Version: 2 Date: 28 July 2006

Reviewer: Dominique Lamy

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General
I found the manuscript improved relative to the initial version. Mention of the Page and Line in which each comment was addressed in the body of the manuscript would have made it easier to keep track of the changes. Perhaps for this reason, I did not find the part of the manuscript in which Comment #2 (concerning the interpretation in terms of hypervigilance) was addressed, despite the response of the authors mentioning that they addressed it.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. Comment #2 of the previous round should be addressed.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. The authors convinced me as to why the present study still includes the emotional Stroop task. However, I don't think it is appropriate to justify the present study by pointing to the advantages of the Stroop paradigm (as allowing measurement of the interference by irrelevant threat stimuli, Page 4, para. 3), after the previous study and its null results with regard to the Stroop were published. There should also be some justification for the use of the categorization task and how the processes underlying it differ from those underlying the Stroop task.
2. Summary of the findings at the beginning of the discussion
   a. The first part of the discussion surveys the main findings yet omits the P100 finding. Why is that?
   b. The opening part of the discussion should include only a complete survey of the results without interpretations, because the way they are presented now, they somewhat distort the image that arises from the findings. For instance, saying that the faster RTs are consistent with hypervigilance in phobics when in fact social phobics did not show the effect is misleading.
3. In the Discussion, the speculation of a threat advantage for schematic pictures relative to veridical pictures is very unlikely, as the effect appeared to me much larger with veridical pictures (about 78 ms for spiders vs. flowers in the previous study) than with schematic pictures (about 30 ms). I think this hypothesis should be omitted. Perhaps the data were simply less noisy in the present experiment than in the previous one, thus allowing small effects to reach significance. RTs were generally faster and the numerical trend for faster RTs in response to spiders than to flowers was in fact similar in the two studies.
4. Because the present study is closely related to the previous one, the data should be presented in such a way that facilitates comparison. Thus, presenting the behavioral data in a table would be better.
5. The explanation as to why contrary to the previous study, enhanced LPPs were found only in the object identification task not in the color identification task is not convincing. On the one hand, the authors propose that the schematic pictures produced stronger orienting than the veridical pictures (hence, the behavioral effect in controls), but on the other hand they propose that the schematic pictures are easier to ignore.

Discretionary Revisions (which the author can choose to ignore)
1. The justification of the present study put forward in the abstract "This study investigated whether schematic spider images are sufficient to evoke differential behavioral..." strikes me as rather tenuous. Emphasis on "search for the basic features" or "control for low-level features" might be more convincing.
2. Within the summary part of the discussion as well as in the more detailed discussion that follows, I think reporting the behavioral data first and then the ERP data would be more appropriate.
3. There lacks an integration of the ERP data into a coherent story beginning with the enhanced early components and followed by the stimulus-specific differences later on. This could perhaps be achieved by presenting the ERP data in chronological order and by adding transitions that explain how processing unfolds.