

1 **LETTER TO THE EDITOR**

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3 **Response to: Metacognition in functional cognitive disorder: contradictory**
4 **or convergent experimental results?**

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2 Dr Larner¹ highlights the findings of a recent paper by Pennington et al² in which the authors
3 “did not find metacognitive deficits in groups of well characterized patients with FCD” and
4 suggests that this is both contradictory to our findings and places our proposed Bayesian
5 account in jeopardy.³ In fact (as Dr. Larner later admits), the findings from the two studies
6 are convergent. In both our³ and Pennington et al’s² studies, local metacognition – the extent
7 to which trial by trial ratings of confidence covary with task performance – was measured in
8 people with FCD. In both studies, across both perceptual and memory tasks, local
9 metacognitive efficiency ($\text{meta-d}'/d'$) was unimpaired relative to controls. As Dr. Larner
10 points out, it is difficult to place too much reliability on null results with small samples,
11 which might reflect a consequence of type 2 errors. Replication of intact local metacognition
12 in FCD across two distinct samples is therefore noteworthy, and we were pleased to see
13 Pennington et al.’s data.²

14 As Dr Larner further highlights, we found that people with FCD had deficits in global
15 metacognition, which was not investigated by Pennington et al.² The reasons for this
16 dissociation remain unclear, and understanding this linkage will benefit from novel tasks that
17 allow the relationship between local and global metacognition to be quantified.^{4,5} However,
18 the Bayesian model we proposed in our paper sought to accommodate the observed null
19 findings with respect to local metacognition – and is therefore supported, rather than
20 contradicted, by Pennington et al.’s convergent findings.² There are no doubt alternative
21 possibilities, and the suggestion that neural networks might overfit to experience due to
22 impaired sleep and dreaming, leading to selective impairment in global metacognition, is
23 certainly interesting and warrants further investigation.

24 **Data availability**

25 Data sharing is not applicable to this article as no new data were created or analysed.

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1 **Competing interests**

2 The authors report no competing interests.

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