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CORRESPONDENCE

To the Editor:
We read with considerable interest the recent paper by Kéri *et al*. (**31**, 915–922) in which they observed that siblings of schizophrenia patients could be distinguished from siblings of bipolar patients on the basis of dysfunctions of visual backward masking and spatial working memory.

Working memory deficits may well be a trait characteristic of schizophrenia and schizophrenia-spectrum disorders. In their seminal study of spatial working memory performance, Park & Holzman (1992) revealed that schizophrenia patients and bipolar patients could be distinguished in terms of their performance. More recently, we have observed that schizophrenia patients as well as schizoaffective patients (Gooding & Tallent, 2002), but not bipolar patients (Gooding & Tallent, 2001) display abnormal spatial working memory, relative to controls. The observation that first-degree relatives of schizophrenia patients also display spatial working memory task deficits is consistent with the hypothesis that dysfunctional working memory may be a heritable marker of liability for schizophrenia.

However, we question the authors' assertion that the siblings of schizophrenia patients display a differential deficit in spatial working memory. The authors observed that the siblings of schizophrenia patients displayed spatial working memory anomalies, but not verbal working memory deficits. However, attributing this finding to a differential deficit is premature unless there is also evidence that the two tasks are matched in terms of level of difficulty, reliability, and true-score variance (c.f. Chapman & Chapman, 1978). If, as they assert, the spatial task is more difficult than the verbal task, then they have not demonstrated a differential deficit. Rather, the spatial task may have been a more sensitive measure (i.e. the spatial task had greater psychometric discriminating power) than the verbal task, and thus was better able to tap underlying information processing and/or cognitive abnormalities.

The investigation by Kéri *et al*. (2001) provides further insights which bear relevance to the ongoing controversy regarding the unitary psychosis concept.

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DIANE C. GOODING AND
KATHLEEN A. TALLENT

Address correspondence to:
Dr D. C. Gooding
Department of Psychiatry,
University of Wisconsin-Madison,
2102 West Johnson Street,
Madison, *WI 53706*, *USA*.

The Authors reply:
We thank Drs Gooding and Tallent for their insightful comments. It was interesting to read about their novel data, supporting the view that certain domains of working memory are really able to distinguish between patients with schizophrenia-spectrum disorders and patients with mood disorders. The main point raised by Drs Gooding and Tallent was whether there is a real differential deficit between spatial and verbal working memory or this finding is due to the different psychometric properties of the spatial and verbal tests. As we stressed in the Discussion of our paper, this question must be clarified by studies using psychometrically matched paradigms. Thus, in this regard we express a view which is highly consistent with the suggestions of Drs Gooding and Tallent. However, there are two facts that must be considered. First, the deficit of spatial processing was also present in a

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speeded perceptual test in which the position of letters must have been detected, suggesting that this type of abnormality is not restricted to narrowly defined working memory tests. Secondly, we administered four verbal working memory tasks with different levels of difficulty, and the siblings of patients with schizophrenia showed no significant deficit in these procedures in contrast with the spatial working memory task.

An important issue that must be systematically investigated is the effect of symptoms on these test performances. Although our subjects were highly functioning, and cognitive dysfunctions are partially independent of the clinical symptoms, it may be, for example, that relatives with mild formal thought disorder will display abnormal verbal working memory functions. In a similar vein, patients with depressive disorders who show psychomotor retardation, affective flattening, and alogia may be impaired in spatial working memory tasks. Therefore, further studies including subjects with different clinical symptoms must specifically target these questions, regardless of the diagnostic labels used.

SZABOLCS KÉRI, OGUZ KELEMEN,
GYÖRGY BENEDEK AND ZOLTÁN JANKA

University of Szeged,
Department of Psychiatry,
Semmelweis u 6,
Szeged,
Hungary H-6725.

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