

## Correspondence

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### THE CORPUS CALLOSUM AND BRAIN FUNCTION IN SCHIZOPHRENIA

DEAR SIR,

We would like to reply to comments concerning our original paper (*Journal*, December, 1981, 139, 553-7). As suggested by Shaw (1982) we have tested three normal left-handers, who varied between 8 and 12 on a scale of left-handedness (Annett, 1970). All had evoked potentials similar to normal right-handers.

Dr Connolly (1982) commented that our evoked potentials differed in form from Salamy's. This is perhaps to be expected since our electromagnetic transducer elicits a sudden finger displacement of 3 mm as well as vibration of 0.5 mm amplitude. Systematic investigation showed that the sudden displacement without vibration gave similar evoked potentials, so that our stimulus is without doubt different from Salamy's. Even longer contralateral-ipsilateral differences have been recorded from both scalp and brain by Papakostopoulos *et al* (1974) in response to very slow index finger displacement.

In schizophrenics, some of the ipsilateral responses seemed to be earlier than the contralateral. This was probably due to the large scatter of results, since the average transmission time did not differ significantly from zero, but may well reinforce our hypothesis of the ipsilateral schizophrenic response being produced by ipsilateral pathways from the brain-stem, which would be marginally shorter than the contralateral pathways.

Our important finding is one of virtually synchronous responses in schizophrenics, as opposed to the asynchronous ones in normals. On the advice of Dr A. Brookes, Department of Physics, University College, Cardiff, we recorded potentials on a micro-processor-based system (donated by the Wellcome Trust), and looked for time differences by means of cross-correlation analysis over the first 50 ms. This normally includes P1, N1 and P2 contralaterally, but only P1 on the ipsilateral side in normals (mistakenly drawn in our Fig 1 as just after 50 ms, whereas it should have been just before). Such analysis uses all points on the evoked potentials and avoids the insurmountably subjective judgement of peaks and troughs, and as a result has confirmed little or no

time difference in schizophrenic patients, and 10 ms or more in normals.

We agree with Dr Connolly that this technique only assesses a minority of fibres in the corpus callosum, but intend to test other fibres, using different stimulus modalities.

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### PSYCHIATRIC ASPECTS OF AMPUTATION

DEAR SIR,

In their two papers, Shukla *et al* (*Journal*, July 1982, **141**, 50-53 and 54-58) described psychiatric symptoms in over 60 per cent of their patients, and phantom pain in 70 per cent. These results, from a group of young traumatic amputees, form an interesting contrast with those obtained in a recent study carried out in this unit, under the direction of Professor R. C. B. Aitken.

Fifty-five patients with lower limb amputation were studied prospectively, using a series of questionnaires, during their in-patient stay in the Rehabilitation Medicine Unit. They were admitted at a median of three weeks post-amputation, and the median length