assumed "that correlation implies causation". Our use of partial correlations to test the ability of attributional scores to predict later symptoms, controlling for the effect of prior symptoms, is a well validated technique of causal modelling. We did report first-order Pearson correlations since the partial correlations were based on these, but readers will be reassured to learn that the pattern of findings with non-parametric correlations was essentially identical.

Dr Plummer then complains that we "started with *nominal* data (e.g. the categories 'internal', 'external' and 'both internal and external'), which they arbitrarily convert to *ordinal* data (e.g. categories '1', '2' and '1.5'). This is then processed to give discrete (discontinuous) numerical data". But the 'internal' and 'external' categories are at opposite ends of a prespecified attributional dimension and represent one of the commonest oppositions in social psychology. It is inappropriate to describe them simply as 'nominal data', a term more commonly used to refer to such variables as religious affiliation (Catholic, Protestant, etc.) which do not stand in any recognised relationship to each other.

He points out, correctly, that the scores subjects can obtain are constrained by the number of attributional statements they make. But it does not follow from this that the data cannot be analysed by methods appropriate to continuous numerical data, provided that the distribution *approximates* to a continuous distribution and the basic assumptions of interval scaling are met. Another important point is that each subject can *in principle* obtain any score in the range 1–2, to at least one place of decimals. *In practice* the possible scores are limited to some extent by the number of event statements. But there is no reason to think that the number of event statements is systematically related to our outcome variables.

Dr Plummer next tries to argue, using the binomial theorem, that when the average internality or controllability rating is near to one of its extreme values, subjects with larger numbers of event statements have a vanishingly small probability of obtaining certain scores compared with subjects with few event statements. But this claim is based on a misapplication of the binomial theorem. To begin with, subjects in our study could obtain one of three possible scores, not one of two as required by the theorem. Secondly, the theorem assumes that all the outcomes are independent events. In fact the attributional statements were not at all independent and the use of the binomial theorem is therefore invalidated. We have nevertheless calculated the correlations between the number of event statements on which subjects' scores were based and their score on the two attributional dimensions. The correlation with controllability was −0.18 and with internality 0.31 – neither correlation was significant.

We do not wish to suggest that this particular piece of research is beyond criticism – far from it. We are well aware of the limitations of what is essentially a pilot study and did our best to draw attention to its limitations in our report. Dr Plummer's criticisms, however, do not seem to us likely to improve understanding of the difficulties of doing research in this particular area. We hope he and other readers will be reassured by the fact that our basic findings have now been partially replicated in another sample (Joseph *et al*, 1992).

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JOSEPH, S. A., BREWIN, C. R., YULE, W., *et al* (1992) Causal attributions and post-traumatic stress in children. *Journal of Child Psychology and Psychiatry* (in press).

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Adrenocortical suppression presenting with agitated depression, morbid jealousy, and a dementia-like state

SIR: In response to Professor Cohen's letter (*Journal*, April 1992, **160,** 566), blood sugar measures were carried out during our patient's illness, on three occasions, and were reported as being in the normal reference range (3.3 to 5.5 mmol/l).

At a clinical level, our patient's symptoms were also not consistent with a hypoglycaemic state: they were constant rather than episodic and were unrelated to meals.

With regard to restoration of endocrine function in place of lifelong treatment with prednisolone, advice from an endocrinological colleague was that as our patient (now aged 69 years) benefited from prednisolone both for her asthmatic disorder and her neuropsychiatric state, maintenance treatment with prednisolone was justified on a long-term basis.

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