Hunt (1974) to provide good estimates of the number of episodes in a year for all patients but the very old and the very young. The negative binomial distribution enjoys three clear advantages over the geometric.

First, as Dr Kilpatrick points out, the geometric distribution is merely a special case of the negative binomial (in much the same way as, for example, the square may be regarded as a special case of the rectangle). Consequently, however well the geometric distribution fits the data, the negative binomial will fit them at least as well (and often very much better, as demonstrated by Ashford and Hunt).

Secondly, it may be argued that the negative binomial distribution has more intuitive appeal as a model for episodes of illness in general practice. For it is equivalent to a compound form of the Poisson distribution known as the Poisson-gamma distribution (Johnson and Kotz, 1969). The relevance of such an apparently obscure distribution becomes clear when one realises that, if all patients were equally likely to fall ill, the resulting distribution of episodes of illness would be the more familiar (simple) Poisson distribution. However, as every general practitioner knows, patients vary widely in their susceptibility to illness. Hence the intuitive appeal of the Poisson-gamma distribution, which adapts the (simple) Poisson distribution by making explicit allowance for 'illness-proneness' (Greenwood and Yule, 1920).

By the same token, Dr Kilpatrick might argue that his geometric distribution is also equivalent to a compound Poisson distribution—the Poisson-exponential distribution—and therefore also allows for 'illness-proneness.' However, the references already quoted provide convincing evidence that the Poisson-exponential distribution is a poor substitute in this respect, as in almost all others, for the Poisson-gamma. This point may be illustrated by recalling one of the basic definitions of the geometric distribution—the distribution of the number of 'trials' (e.g. tosses of a coin or throws of a dice) required to obtain the first 'success' (e.g. the first head or the first six, respectively) in a sequence of repeated trials; this is not a distribution whose relevance to general practice is at all easy to visualise!

Thirdly, the geometric distribution lacks the flexibility which it seems reasonable to ask of a 'research tool.' For example, if we accept Dr Kilpatrick's finding that the number of episodes in *one* year is geometrically-distributed, then the number of episodes in *two* years has, not a geometric distribution as one might expect, but a negative binomial distribution!

To summarise, Dr Kilpatrick has had the good fortune to discover that his square hole (the geometric distribution) provides a tolerable fit for one particular member of a family of pegs whose general shape, previous work suggests, is rectangular (i.e. distributed in a negative binomial fashion). However, the fact that all squares are rectangles does not imply that all rectangles are squares. Thus it would be wrong to deduce from this single chance occurrence that the frequency of episodes of illness is not best represented *in general* by the more flexible (and therefore more useful) negative binomial distribution.

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JARGON

Sir,

How much longer must general practice be exposed to the propaganda and brainwashing of sociological concepts, and such jargon as "The Team", "Care-givers", "Rôle-play", and "Decision-making abilities"?

The condescending tone of much of this exposure seems to be part of a contrived conflict between doctors and social workers, where the merit of the latter is often obtained at the expense of the former. Perhaps when social workers have their own lists of clients and open-ended contracts, real conflict might begin, but by then general practitioners might willingly exchange "roles". Meanwhile, each of these humane professions should co-operate when it is in the interest of the patient, without betraying the principles of their respective disciplines.

There seemed little evidence in the article that the psychotherapy and introspective jargon were any more beneficial than insulin coma therapy was once considered to be in the treatment of schizophrenia. Indeed at times I wondered who really was the patient—the patient, the social worker, or the general practitioner?

Our aim surely is to develop a robust sensitivity and an informed professional detachment, which all professionals hope to realise in their maturity. This maturity will be a long time coming if your contributors' attitudes prevail.

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