As chess is to warfare, lexicostatistics is not an attempt to represent all details of language change, but rather only lexical replacement. Unlike chess lexicostatistics is statistical rather than deterministic.

1. Counting loanwords as non-cognates

Guy takes the position that loanwords should be ignored, i.e. treated as if we didn’t know that once cognate vocabulary had been replaced. He defends his position by an example involving circular argument, since his analysis assumes that loanwords are not treated as non-cognates. As he himself notes, if loanwords are treated as non-cognates, then his languages A and C would only share 32% cognates after a thousand years. By the same token, however, this would violate his initial assumption that the retention rate was 80%; it would have to be about 56.6% (since 0.32 is the square of 0.5656).

Guy’s comments on the treatment of loanwords are not really relevant to my paper, since the latter is concerned with the common problem of not being able to distinguish loanwords from true cognates. More generally, however, counting loanwords as non-cognates is the most common practice in lexicostatistics, and it is the practice followed in the largely successful lexicostatistical classification of Indo-European languages by Dyen, Kruskal and Black (1992: 20). If Guy’s approach is superior, one might expect him to demonstrate how it improves the performance of lexicostatistics, and yet he takes the position that lexicostatistics does not work.

2. As if languages evolved at the same rate

It has long been known that the rate of lexical change varies; even Swadesh (1955: 127-128), the founder of the most common lexical approach, recognised this; see also Embleton (2000: 150-151). The assumption of a constant rate of change is what is called a ‘simplifying assumption’, adopted not because it is true but in the hope that it does not matter. Such studies as my present paper and Dyen, Kruskal and Black’s (1992) classification of Indo-European suggest that even with such an assumption, lexicostatistics can perform reasonably well.

Nowadays it is increasingly possible to avoid this simplifying assumption by relying on computerised approaches to phylogeny. For example, Gray and Atkinson (2003) drew largely on the same lexicostatistical data for Indo-European as Dyen, Kruskal and Black (1992) but used software that did not depend on assumptions of constant rates across time or among languages, although their purpose was estimating the antiquity of Proto-Indo-European rather than producing a classification.
3. As if sampling errors did not exist

While lexicostatistical percentages are subject to some random variation — Guy’s ‘sampling errors’ — in practice they do not seem as serious as Guy’s discussion may suggest, perhaps because the fact that not all pairs of percentages are independent inhibits variation. For discussion of actual cases in Indo-European, see Dyen, Kruskal and Black (1992: 60-69). The fact that lexicostatistics is a statistical approach means it can nonetheless lead to incorrect results: Dyen, Kruskal and Black (1992: 47-49) failed to confirm the well established Indo-Iranian branch of Indo-European, for example, although they confirm the generally accepted classification in most other respects.

While lexicostatistics is imperfect, it is not clear that any other approach does any better. As Embleton (2000: 157) may suggest, the traditional approach using shared innovations is particularly prone to what statisticians refer to as Type I errors, i.e. rejecting hypotheses when they are in fact true. As Black (1974, 2004, forthcoming) has demonstrated, it may simply fail to find any evidence for subgrouping at all, and when it does find evidence it may be difficult to distinguish shared innovations from parallel developments.

My present paper is interesting in this regard. There has been no evidence of shared innovations to establish the generally accepted classification of Jingulu and Mudburra. Instead it is essentially based on considerations of gross similarity, a sort of informal, uncontrolled ‘statistics’ of grammar as well as lexicon.

Summing up

Whatever the merits of Guy’s proposal about the treatment of loanwords, as a lexicostatistician I can accept Guy’s critique to the extent that I employ the simplifying assumption that retention rates are constant and realise that statistical variation can sometimes result in errors. Even so, since such other approaches to classification as the use of shared innovations seem no more reliable, I prefer to take advantage of the evidence of both types of approaches.

References

Embleton, Shiela 2000, Lexicostatistics/glottochronology: From Swadesh to Sankoff to Starostin to future horizons, in Time depth in historical linguistics, eds Colin Renfrew,