and stratigraphy of Atlantic-type continental margins, that the fracturing of continental plates which precedes their dispersal or drift is expressed by rift formation and that rifting and the onset of drift are rarely, if ever, synchronous. The onset of rift formation (rifting) and the onset of drift (rupture) should thus be carefully distinguished.

In the judgment of Veevers *et al.*[1] the geology of the floor of the south-west Indian Ocean and the adjoining eastern continental margin of Africa, as known at present, is consistent with the inception of that continental margin (that is, the onset of dispersal or rupture of Africa and Antarctica) in the Cretaceous. The new stratigraphic information of Dingle and Klinger[2], though significant, cannot negate that conclusion. The marine Upper Jurassic rocks to which they refer "occur as shallow water, sandy clays in association with terrestrial fluviatile conglomerates and sandstones, which were deposited in an . . . intermontane basin" and can hardly be taken as incontrovertible evidence for the existence at that time of the present continental margin of southern Africa. They might well record, however, a marine incursion along the course of a rift system which prefigured the present continental outline. Paralic sediments are characteristic of the rift which prefigured the present southern continental margin of Australia and which came into existence 100 m.y. before the rupture of Australia and Antarctica[3].

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1 Veevers, J. J., Jones, J. G., and Talent, J. A., *Nature*, **229**, 383 (1971).
2 Dingle, R. V., and Klinger, H. C., *Nature Physical Science*, **232**, 37 (1971).
3 Jones, J. G., *Nature*, **230**, 237 (1971).

DR DINGLE replies: Dr Jones's stressing of whether the commencement of the formation of the eastern Agulhas Bank dates from the time of rifting or drifting between East and West Gondwana is something of a red herring. As the Agulhas Bank consists of a thick Mesozoic sediment wedge built onto a block-faulted Palaeozoic basement, the age of initiation of the construction of this wedge dates from the first sediments deposited onto the down-faulted basement. These sediments are at least as old as lower Upper Jurassic. The fact that the sediments deposited in the Knysna area during Upper Jurassic times were paralic in nature is also not significant, as it happens. Knysna lay at the northern limit of the Jurassic–Lower Cretaceous sea—it lies in a similar position today—and shallow marine sediments with interfingering lagoonal/terrestrial beds are precisely what one would expect from the establishment of an ocean adjacent to the area.

As far as the wider question of the split between East and West Gondwana is concerned, Dr Jones's arguments are somewhat self-defeating. Bearing in mind that the rifting phase is represented by the Stormberg/Lebombo volcanic outpourings in South Africa, which are of Rhaetic age, it must be realized that the Neocomian marine sediments (which occur at the top Algoa Basin sequence) quoted by Veevers *et al.*[1] as part of their evidence for a Cretaceous age for the commencement of the Agulhas Bank and the East/West Gondwana split, are of a similar facies to our Knysna sequence, that is, paralic. If at the time of writing their communication these Neocomian sediments (which were then the oldest known Mesozoic deposits from the South African coast) indicated that "the geology of the . . . continental margin (of South Africa) favours a Cretaceous age" for the inception of the south-west Indian Ocean, the geology of the continental margin of South Africa as now known favours an Upper Jurassic (at the latest) age for such an event.

All we have done is to take the line of reasoning of Veevers *et al.* and apply it to the latest stratigraphical data from South Africa.

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1 Veevers, J. J., Jones, J. G., and Talent, J. A., *Nature*, **229**, 383 (1971).

Distance between Sets

SINCE the publication of our communication on the metric properties of the one-complement of Jaccard's similarity coefficient[1], we have learned that this result was shown earlier by Marczewski and Steinhaus[2]. We regret the consequent redundancy of our paper. We tried to ensure its novelty by searching standard references and enquiring among mathematicians and statisticians, but apparently the earlier work, more extensive than ours, is not well known. We hope publication of our paper will have the positive effect of making it more well known. It is interesting that the earlier work also occurred in an ecological context[3]. A discussion of these and other properties of this useful function occurs in a recent contribution by Holgate[4], who refers to it as the Marczewski–Steinhaus coefficient of similarity.

In our communication the expression for the simple matching function should read:

$$r' = \frac{|X \cap Y| + |A - X \cup Y|}{|A|}$$

for subsets X, Y of a finite set A.

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