CORRESPONDENCE

Science in India

SIR,—In your comments on Dr V. H. Shah's suicide in Delhi and the running of research councils (*Nature*, **237**, 131; 1972) you have rightly pointed out two significant factors in the maladministration of scientific institutions in India: direct control by the ministers, and undue domination of younger scientists by senior colleagues. However, these are not all, and possibly not even the major ones. I believe most of the scientists who return to India, sometimes with very productive careers abroad, would be quite satisfied to work in India, monetary hardships notwithstanding, if they had access to equipment, literature, computational aids and the possibility of scientific exchange and travel and just appraisal for advancement. The major obstacles here are not the senior colleagues or the ministers, but the civil services and kindred administrators and excessive administrative procedures, necessary in principle but which make the scarcity in all above aspects, otherwise natural in India, grave indeed. Science having been rendered virtually impossible and its habits and temper forgotten, scientists turn to "regionalism", "linguism" and considerations of personal contacts at the time of personnel selection, committee appointments, facility allocation, and so on. They do this for the sake of their own survival and advancement. Justice and objectivity in decision-making are not easy under such conditions.

I am, however, puzzled by your support for the denial of an enquiry. Democracy is government by voice. One cannot take one and discard the other. The administration of science is already "politicalized"; why then should not Parliament or other suitable body enquire when things are wrong? Surely, there should be room in a democracy to evaluate failures and suggest improvements. Dr Swaminathan's application of some methods successful elsewhere has nothing to do with the questions involved.

Lastly, I knew Dr Shah personally and I regarded him as one of the most promising Indian scientists in India. This sacrifice, as he possibly meant it to be, should not go in vain and scientists hope and expect that the new leadership will ensure a fair deal to science.

Yours faithfully,

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Seismology

SIR,—This is in response to the letter from G. Ranalli (*Nature*, **236**, 413; 1972). Readers might have concluded from the wording of Dr Ranalli's letter that in our work on steep-incidence reflexions from the Earth's inner core (*Nature*, **228**, 852; 1970) we were unaware of the earlier observations pub-

lished by Caloi (*Geophys. J. Roy. Astron. Soc.*, **4**, 139; 1961). This was not the case. We made explicit reference to Caloi's work both in our published paper and in the oral presentation before the Seismological Society of America.

Many seismologists have been sceptical of Caloi's identifications of PKiKP, especially since subsequent theoretical calculations by Bolt and O'Neill (*Geophys. J. Roy. Astron. Soc.*, **9**, 223; 1965) showed that the phase in question should be well below the level of detectability in normal observational circumstances. In our work we were fortunate to have available the Large Aperture Seismic Array in Montana, and found that it required the full beam-forming capability of this array to bring PKiKP up out of the noise and identify it with confidence. Additionally, we were able to measure directly the apparent surface velocity of the phase across the large array, verifying that it was PKiKP, and not just a random noise pulse at the predicted time.

Yours faithfully,

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Obituary

Arthur Wilson Stelfox

ARTHUR WILSON STELFOX, ALS, MRIA, died on May 19 at the age of 88.

In 1920 he abandoned his profession as an architect to devote all his time to natural history joining the staff of the National Museum in Dublin and working there until his retirement in 1948. In 1956 he moved to Newcastle, Co Down, bringing with him the wonderful collection of plants that had made his garden in Harolds Cross so interesting, and at the age of 73 commenced to create from a rough field the garden that became a research plot, a refuge for rare plants and a delight to the eye. In it could be found plants which are now extinct in their wild habitats in Britain and Ireland. The native plant beds at the Botanic Gardens, Glasnevin, contain many important specimens from his collection and his friends also were generously supplied.

He was interested in botany from childhood and for many years was the recognized authority on plant distribution in Ireland. While a young man he became a European authority on land and freshwater snails, particularly in distributional problems. He embarked on experimental genetics with the descendants of a pair of snails found in his garden in Harolds Cross and by selective breeding produced a variant of such interest to geneticists that his "line" of snails is now being bred in both hemispheres.

In 1920 he started to study Hymenoptera—the bees, wasps and ants—and from them he progressed to the minute parasitic Hymenoptera, restoring to order the pioneer collection of A. H. Haliday which had been reduced to chaos about a century earlier, and finally deciphering much of the "shorthand"