

Boycott of South Africa

SIR—As academics born and bred in South Africa, we are distressed that eight pages of *Nature* (327, 269–276; 1987) have been dedicated to opposing the boycott of apartheid science and technology.

There are two fundamental flaws in Maddox's arguments for continued support for South African science and technology. The first is that he appears to see the privileged white minority, rather than the oppressed black majority, as the principal agents of change. The second is that he fails to make the crucial link between scientific and technological education and research and the maintenance of apartheid.

Symptomatic of the first error is that he seems to have met only representatives of the white scientific and academic community and directors of corporations with a vested interest in the system, with the single exception of the University of the Western Cape, which has 10,000 students, mostly coloured. Significantly he reports that this university "happens to be in favour of an academic boycott of South Africa but selectively". It is, perhaps, not surprising that he did not meet more black scientists, given that the very essence of apartheid is to deny opportunity for educational advancement to the black majority.

Maddox acknowledges that the boycotts are "biting hard" on whites, and that they are making the "technological community in South Africa reflect more carefully about its domestic political environment". What he misses is that the principal objective of sanctions is to give the maximum possible reinforcement to domestic anti-apartheid forces. They are, in fact, the principal agents of change.

Curiously, he acknowledges the tenacity with which the white population clings to apartheid (as demonstrated again in the recent election) yet he believes that after decades of failure to bring down apartheid by scientific contracts, science can now be some kind of "Trojan horse".

Maddox also claims that it is the view of "liberal South African critics of apartheid" that "one person, one vote, tomorrow would indeed be a recipe for disaster". That is certainly not the view of the overwhelming majority of black South Africans, nor of progressive whites, for whom universal adult suffrage in a unitary and democratic state is their fundamental goal.

The second point is even more serious. Foreign science and technology have been crucial in South African economic development, in fact even more important than foreign capital. This is implicitly acknowledged so far as military technology is concerned, in the statement that "conferences with a military significance

might be closed to South Africans". South Africa is nowhere near to scientific and technical self-reliance. Maddox appears to agree with a ban on the sale of microchips and other technology, but illogically draws the line at sanctions against the transfer of technical information and the training of skilled personnel. It is clear that he wants to give every assistance to "help to bridge the emerging shortage of skilled people".

The answer to this is given by Richard Moorsom, an independent researcher, in his recent book *The Scope for Sanctions* (Catholic Institute for International Relations, 1986), who points out that

"the racism of apartheid makes it peculiarly vulnerable in this crucial area: the talent pool is restricted to the white minority, who must also staff the large state apparatus of civil and military repression as well as the big parastatal corporations. Consequently, skilled expatriate staff are an essential link in the transfer of technology by the transnational corporations. Regulations applied to companies could discourage them from servicing or collaborating with South African companies, parastatals or state agencies. Included would be any support for the build-up of local research and developmental capacity....

"Easier to restrict would be South African access to research and training programmes in the industrial countries themselves...."

It is also misleading to say that the scientists affected by sanctions "merely live" in South Africa as if it were some kind of planet from which they could not escape, or in which they could not actively join the struggle against apartheid. We know several South Africans who could have had distinguished scientific careers but have chosen instead to face imprisonment and hardship. Many others have emigrated. Those who remain and, at best, limit themselves to tepid condemnations of apartheid, pay lip-service to democracy but in fact contribute to the survival of apartheid.

Maddox argues that "the exclusion of South African scientists [from a conference] ... was absurd because those concerned were bound to have particularly interesting things to say". Pursuing his analogy with the boycott of South African rugby, which he admits has had noticeable effects, one could argue that one should not boycott the Springboks because they play so well. It is because they have something to say, and something to learn, that sanctions hurt those scientists and technologists whose work sustains apartheid. The argument for sanctions is utilitarian: the relatively small costs to the world scientific community of forfeiting white South African participation are far outweighed by the enormous benefits that will accrue to South Africa and the rest of

the world by hastening the process of change.

The ending of links with South African science and technology is a vital part of the wider movement for the total economic, military and cultural isolation of the apartheid system. The Commonwealth Eminent Persons Group said that concerted action of this kind "may offer the last opportunity to avert what could be the worst bloodbath since the Second World War". Academics have a special responsibility to distance the tenets of international science from the self-interest of those who enjoy the privileges of white minority "science".

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Better refereeing

SIR—Gideon Gilat recently proposed an interesting scheme for improving scientific refereeing (*Physics Today* 40, 147; 1987), based on the publication of controversial papers with an optional right for a referee to have his or her signed comments published alongside. I have an even simpler suggestion which will not result in increased correspondence for the editors. When the manuscript is sent for review, the cover letter should say that "the referee is asked to review the paper on the understanding that the editors reserve the right to publish the submitted paper in its original form and the full signed texts of some or all reports of the referees".

This option, which in practice may not be exercised too often, will undoubtedly not discourage the main body of referees from giving an honest and objective critique. At the same time, it will create an effective defence against reports driven by, for example, jealousy or fear of competition. As a first step, the editorial boards of major journals could consider the adoption of such a policy (or that proposed by Gilat) on a trial (term) basis.

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