correspondence

In support of a boycott

SIR,—We read with great interest the letter by Richard Peto and Richard Doll (1 December, page 384) concerning the congress of the International Union Against Cancer which is scheduled to take place in Buenos Aires, Argentina October 1978 and the advisability of conducting a boycott in view of the violations of human rights in that country. It is stated that "advice and comments from other scientists, especially those who, unlike ourselves, have worked under repressive regimes, would be timely, both about the general advisability or inadvisability of such boycotts" in a country where there is conclusive evidence of widespread repression, torture and systematic violations of human rights.

The Association Solidarité Franco Argentine (a non-profit making, humanitarian organisation based in France) has contacted many Argentinian scientists regarding this problem. Although they asked not to be identified by name for fear of the consequences to their families still living in Argentina, the general opinion is that whatever measures are taken to show concern for the fate of the many scientists that have simply "disappeared" at the hands of the military government, there is one thing which should not be permitted: that the Argentinian government should use the success of the congress to claim to the world that the scientific community condones its present policies, by being present at the meeting and keeping silent about the plight of Argentinian scientists.

Unfortunately this is what seems to be happening in Argentina right now. A recent article from the strictly censored local press says that in spite of the efforts of some scientists, who pretend to be motivated for humanitarian reasons but in fact echo slogans of international terrorism, the congress will be a success. To prove this, the article mentions that only 500 participants had registered for the previous Florence meeting, compared to the 3,000 for the Buenos Aires event. Dr Humberto Veronessi, President of the International Union Against Cancer, is quoted as having said "I believe that to choose Buenos Aires for this meeting is one of the most

intelligent actions taken by the Union". This type of article suggests that the Argentinian generals have already invested high hopes in a "business as usual" congress as a measure of international acquiescence.

Among the many well known scientists to have publicly protested against the terrorising policies of the military Junta are Nobel prize winners Louis Néel, Alfred Kastler, Tsung Dao Lee and Hans Bethe (*New York Times*, 27 November, 1977). Concerned scientists attending the Buenos Aires meeting can take similar action by openly voicing their concern about the many Argentinian scientists who have vanished. This could be done by organising a petition to be read at the meeting or a press conference to be held in the presence of foreign journalists.

What has happened to Drs Federico Alvarez Rojas, Antonio Misetich, Gabriela Carabeli, Eduardo Pasquini, Julia Huarque, Federico Ludden, Manuel Tarchitsky and Juan Carlos Gallardo, all of them physicists, and the many others kidnapped, in many cases, with their families? Why aren't the numerous concentration camps open to Red Cross personnel? There is every reason to suspect that the worst is happening, just as it did in Nazi Germany, where similar questions puzzled many scientists, and massacres were taking place not far from the place where scientific meetings were being held.

Exiled Argentinian scientists beg the rest of the scientific community to stand up, whether by boycotts or in other ways. "Anti-science" sentiments will certainly not be aggravated by a public stance against torture and death. Many lives may instead be spared.

Yours faithfully,

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Soft energy paths

SIR,—Peter Chapman is right to say (10 November, page 128) that my US calculations in *Soft Energy Paths: Toward a Durable Peace* should be redone for the UK—as several colleagues are now attempting. But in suggesting how my US numbers "fail on a num-

ber of technical issues" he may mislead UK readers unfamiliar with transatlantic differences.

First, he says my 0.55 capacity factor for US pressurised-water reactors (PWRs) is "unrealistically low", "absurd", and "silly", and so it must seem to people used to British gas-cooled reactors which are far more reliable (though allegedly more costly). Yet my citations show that the US empirical average through 1976 is 0.61 (0.59 for all light-water reactors) and falling as less reliable larger plants come on line; that the officially projected lifetime average is 0.57; and that the 10-year levelised average expected for new big PWRs on the basis of exhaustive statistical analysis of existing units is 0.49. Thus my assumed 0.55 is arguable either way but hardly out of court under US conditions. (European units tend to do better, Japanese ones worse.)

Second, in my analogy suggesting that if we could mass-produce power stations the way we do cars they would cost an order of magnitude less than they do, but we can't because they're too big, I did take account of generator cost and of equivalent engine lifetime. (I also noted many important economies of small scale—related to reliability, reserve margin, short lead times, etc—which are not "very dubious" nor even empirically controversial. For a taxonomy of scale issues, see my "Soft Energy Technologies" in the 1978 *Annual Review of Energy*.)

Third, the \$100/(m²+m³) solar installed price Dr Chapman quotes is for the mid-1980s (in 1976 dollars), not now; my late-1970s estimate of \$150 is broadly consistent with his. My ca 1985 price estimate is based on empirical prices now obtainable by careful shopping in a fairly mature solar market (such as California, with due adjustments for different climatic needs). Current UK prices in an infant market with little volume or diversity are understandably higher but do not indicate what could be achieved. I do not see why the "cost of storage in the UK" should be £300/m³ or even £40/m³, as I cited empirical installed US prices, for modular underground tanks of tongue-and-groove concrete slabs, equivalent to £12-20/m³ for sizes of order 10–10³ m³, and several even cheaper methods are available. Perhaps they are