

CORRESPONDENCE

Terrorism

SIR,—“The death of Dr Aharon Katchalsky in the wild shooting at Tel Aviv airport” provided *Nature* (237, 302; 1972) with a springboard from which to inveigh against what appears to be world-wide terrorism. Thus, the bombings by the Irish Republican Army, the killings in central Africa, the perennial threat of indiscriminate slaughter in the Middle East, and the hijacking of an airplane in an attempt to secure Angela Davis’s release from prison are cited as particularly heinous examples of terrorism that usually are counterproductive to the cause for which the acts were performed.

Remarkably, no mention is made of the far greater terrorism that has been practised by the United States in Vietnam for almost a decade. It is difficult to imagine terrorism that is more senseless and counterproductive than that which the US has inflicted on the Vietnamese people, yet *Nature* does not see fit to include that activity in its extended list. Does not *Nature* consider massive indiscriminate bombing and shelling, widespread defoliation, and untold numbers of massacres of the kind that took place at My Lai as wanton terrorism? Or is it that when millions (rather than dozens or hundreds) of people are killed, maimed or made homeless by these acts that it is no longer terrorism but something more acceptable? Or can it be that when these kinds of acts are perpetrated in the name of such a “civilized” and distinguished nation as the United States by definition they no longer can be considered acts of terrorism?

I write to raise this issue because I fear that not to cite the grossest form of terrorism now being exercised is to imply that *Nature* approves of US actions in Vietnam and such approval can only help to extend the devastation in that long suffering land. The last thing needed is more approval of US activities in Indochina.

Yours faithfully,

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The omission of Vietnam from the list of examples was deliberate but not intended as an implicit comment on United States activities in Vietnam (which are, in any case, not part of *Nature*’s parish). But what has happened and is happening in Vietnam

differs from acts of terrorism such as that in which Aharon Katchalsky was shot in that it is a consequence of a declared military policy of a government.—Editor, *Nature*.

Science and Ethics

SIR,—All scientists who are concerned with the ethical aspect of their profession will be interested in the problem raised by the Brain Research Group of the Open University (*Nature*, 237, 469; 1972) about the NATO sponsorship of a summer school on brain proteins due next September. Since science has ceased to be a gentleman’s hobby it has lost most of its purity and independence. We are facing a number of promises and threats brought about by the social involvement of science, grown too fast to allow the development of new social ethics. The “bad” exploitation of scientific achievements is possible under more or less disguised forms and the warning of Rose’s group seems justified.

My participation as a student at two previous NATO summer schools on brain research gives me the opportunity to contribute some facts to this problem.

The meeting in Milan in 1970 (Chemistry of Brain Development) was attended by thirty-five speakers (twenty-five from western Europe and ten from the USA) and by fifty participants (western Europe twenty-eight, USA fourteen, India three, eastern Europe two, Japan two, Greece two, Egypt one, South Africa one, Argentina one, Cyprus one, Australia one, Mexico one, Pakistan one, Venezuela one, Spain one). The meeting at St Vincent in 1971 (Structural, Functional and Chemical Characteristics of Developing Neurons and Neuron Sets) was attended by eleven members of faculty (five from USA, five from western Europe, one from eastern Europe) and by sixty-one participants (western Europe thirty-six, USA sixteen, eastern Europe seven, Australia two, Japan two, Republic of China two, Canada two, Israel one). Both schools were also sponsored by scientific societies and a private firm. Free scientific communication was allowed as in any other international meeting (more, in fact, because of the great deal of faculty-student interaction). Scientific information and ideas exchanged during the meetings will of course be available for military purposes (like all data published in bio-

logical journals) until we decide to stop making war. The motivations and the purposes of the sponsors have not been declared at the meetings, NATO being hardly mentioned in the opening speech. The purposes of NATO’s Scientific Affairs Division must have been defined at the moment of its establishment, and probably they are (on paper) very similar to those of other international organizations like EMBO and ECBO.

It is my opinion that the participants of these meetings have not in any way facilitated the military application of neurobiology. The presence among faculty and students of people coming from, and working in, Communist countries (as in any other scientific meeting) is proof of no direct or indirect military purpose; it also shows that scientists are not affected by the international neurosis of the blocs, and get together to solve their puzzles (even at the expense of a mission-orientated organization). I support the suggestion of Rose’s group that NATO’s scientific sponsorship is a tip to obtain a kind of social respectability (not legitimation, which is provided by human aggressiveness). Therefore a question of principle would justify deserting these schools to show political disagreement with their financing organization. On the other hand, both NATO and our laboratories share the same financial backing and political will (British taxpayers and electorate). So we should all pack up and go on strike until our governments have stopped all kinds of military activity. I would rather join an international movement of scientists aiming at this than try to tell military biology from peaceful biology, or devise tricks to stop generals from learning anything about the metabolism of myelin proteins.

Yours faithfully,

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Publication Delay

SIR,—Permit me to take issue with your correspondents Gassman, Penney and Khan (*Nature*, 237, 58; 1972) on the matter of publication periods in specialized scientific journals. My company publishes some 130 journals serving many special fields of science. Of these, over half appear exclusively or mainly in English, while the remainder are always pleased to have articles in

English. It has been our constant endeavour to trim publication periods, and manuscripts average 4-5 months from acceptance to publication. We are currently streamlining our production procedures in a way which will cut this period to 2-3 months.

There remains the time required to review and, if necessary, revise manuscripts. Although we impress on editors and referees the need for speed, this period is to some extent beyond our control; however, it should be clear that

without it we could not maintain standards at the highest level.

We already implement the suggested solutions to the maximum practicable extent: (i) large page size, frequent issues; (ii) review by local editors; (iii) air mailing; (iv) lists of forthcoming articles and, in some cases, prepublication abstracts in leading abstracts journals. The writers will surely appreciate that, if we were to make manuscripts freely available prior to publication, we should be in danger of

sawing off the branch we (as producers) and they (as users) are sitting on.

Finally, we, too, are aware that all these measures entail extra costs, and frequently must result in higher subscription rates. Perhaps the proponents of rapid publication would make it their special task to explain this to librarians.

Yours faithfully,

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Obituary

Dr J. R. Rossiter

DR JOHN REGINALD ROSSITER, Director of the Institute of Coastal Oceanography and Tides, died on May 16, 1972, at the age of 52.

The name of Jack Rossiter will always be associated with the Liverpool Observatory and Tidal Institute on Bidston Hill, which he joined as a junior assistant in 1937. Apart from a period on active service with the Royal Artillery during the Second World War, he spent his entire working life at Bidston Observatory in the course of which he earned an international reputation for his researches in the field of tides and storm surges. His career was bound closely to the fortunes of the institute to which he belonged. He received no formal university training but by part-time study obtained a London (external) BSc degree, with first-class honours, in 1947. The same University awarded him an MSc degree in 1956 for a thesis entitled "The Meteorological Disturbances of Water Level." His DSc degree followed in 1961.

In his early years at Bidston, Rossiter was intimately involved in the processes of tidal prediction and analysis for which the Institute had become renowned under its director, Dr A. T. Doodson. This brought him into direct contact with observational data and its treatment employing numerical methods of skilful and ingenious design, in which elaborate and advanced computations were carried out with no more than desk calculators. He often recounted with pride the high standards of accuracy and efficiency to which he and the other assistants were committed in those days, and in directing the preparation of tidal predictions in later years insisted on the maintenance of such standards.

By 1952, the work of Professor J. Proudman in Liverpool, and that of Dr Doodson and Dr R. H. Corkan at Bidston, had made the institute a world

centre for research in tidal dynamics. The sudden death of Corkan at this juncture, and the illness of Doodson which was to follow, gave Rossiter responsibilities and opportunities to continue work in the rich tradition which had been built up. He became interested in the determination of tidal charts by solving finite-difference forms of the hydrodynamical equations using the relaxation method, again involving hand calculations. In collaboration with Doodson, charts of the M_2 tide were derived for the Irish Sea on the basis of coastal observations of tidal elevation only. Later he applied the relaxation method to tides in an idealized ocean bounded by meridians and parallels.

Following the disastrous North Sea storm surge on the night of January 31, 1953, which caused widespread coastal flooding in south-east England and Holland, it fell to him to investigate the surge observationally and thereby assess its origins and development. This he did in an outstandingly comprehensive paper to the Royal Society. In 1954 the Advisory Committee for Oceanographical and Meteorological Research, under the Ministry of Agriculture and Fisheries, was set up and under its jurisdiction the institute was authorized to undertake a programme of research work on the subject of storm surges. Rossiter became a prominent member of the committee and contributed much to its deliberations and decisions, taking a special interest in the North Sea surge problem. He developed methods of forecasting storm surges on the east and south coasts of Great Britain employing statistical formulae. Subsequently he turned his attentions to the propagation of tide and surge in the Thames estuary, and in numerical solutions of the hydrodynamical equations was able to demonstrate and explain the interaction between these waves. Following this investigation he worked with G. W. Lennon in constructing a numerical

tidal model of the Thames employing the initial-value method. The treatment given was so thoroughly professional as to make it a standard reference for subsequent work of its type.

An assessment of his scientific contribution would not be complete without special reference to his studies of mean sea level and its variations. For many years he was secretary of the Committee on Mean Sea Level of the International Association of Physical Oceanography, and from 1960 was Honorary Director of a permanent service for the analysis of sea level data, centred at Bidston. In these capacities he was responsible for the compilation and publication of monthly and annual values of mean water level, and also produced a bibliography on the subject. Taking data for European waters he resolved annual values into a secular variation, wind and air pressure contributions, and the nodal tide. This made possible the definition of a mean sea level surface of reference for the region. A result he found which deserves mention for its practical importance in the design of sea defences against coastal flooding is the tendency in the Thames estuary over the last 50 years for the height of mean high water to increase at approximately twice the rate at Tower Pier (over 2 ft/century) than at Southend, this being chiefly due to the relative rate of increase in tidal amplitude at the two places.

After the retirement of Doodson in 1960, the Tidal Institute became a department of the University of Liverpool with Rossiter as its director. Once in a position of authority, he started to give the institute a new and more expansive outlook. Research and scholarship remained vitally important ingredients, but, in addition, a go-ahead thrustful approach was introduced which sought to give the institute a more essential and participating role in marine science.

One of his first objectives was to use the digital computer for tidal analysis