# nature

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# Systems for sale; way of life comes free

FOR as long as nations have been going to war with each other, capturing the market of another country has been regarded as a desirable alternative to the bloody business of capturing its virgins, chests of gold, galleons or surface-to-air missiles. And whilst a favourable trade balance made up from a portfolio of exports ranging from pins to double-decker buses is a fairly good way of making a possible enemy into an ally out of necessity, a much better way, most governments seem to agree, is by exporting whole systems as opposed to single items.

The virtue of your system in someone else's territory is pretty obvious. First it needs installing; not really a job that the locals can do, so hordes of technicians are temporarily exported to roam unchallenged in the course of their technical duties. Then the locals have to be taught how to keep it going; schools are established and, with luck, some of your own way of life and thinking rubs off, along with all the know-how. Then there will be a continuing demand for spares –available, of course, only from the original manufacturers if the design is made exotic enough. There will be a steady stream of advisers, consultants, conferences and working parties. And when the system wears out, guess who has just the right second-generation system, tailor-made to requirements and ready to start the cycle all over again. It is clearly much more than just foreign exchange which such an arrangement brings in  it provides cultural links, a terrestrial toehold and, of course, political benefits.

In the past these super-exports have included legal systems, constitutions, drinking habits, land drainage, agricultural practices, railways, literacy schemes, communications networks, family planning programmes, meteorological services, health care, airlines and, inevitably, military systems of all shapes and sizes. Nor is there any sign that the pace in systems-exporting will slacken; indeed the newly-rich oil countries are a ready-made market, as every industrialised country knows. But what, besides the staple military diet, is likely to be an attractive system to sell in the 1980s and 1990s? One completely new item is likely to be the earthquake early-warning system.

Few can now be ignorant of the remarkable strides taken in earthquake prediction in the past ten years. Very few quakes have yet been accurately predicted, but the pace of scientific advance and the lessons now being learnt about public response in various parts of the world to the issuance of warnings make it almost inevitable that over the next few years a few countries, notably China, the Soviet Union, Japan and the United States are going to make major strides in learning how to save lives. But many of the most predictable earthquakes probably occur in other parts of the world— Turkey, Iran, the Philippines, Mexico, Central America, Peru, Chile and so on, and many of these countries look very attractive propositions to the politically-oriented travelling salesman.

A national earthquake warning system will require hundreds of widespread installations, the development of a data network and a lot of involvement of the local inhabitants, especially if the more unusual predictions of earthquakes, such as animal behaviour, assume importance. It will be seen to be a worthy altruistic enterprise, proof that the government is concerned. It will also cost a lot of money. It looks absolutely made-to-measure as an exportable system. The question is not so much whether but how.

If the 's' in its name means anything at all, there is surely a strong case for Unesco to take a long look at the problem. For although warning systems would undoubtedly be good things for many countries, these same countries can do without latter-day economic imperialism, often in the guise of overseas aid. An alternative means of delivering effective systems without the imperialist content will not be easy to find, but it is at least worth making a serious effort to do so at this stage. For time is getting short.                                                                      ☐