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Still a lot to learn from the Chinese

TEN thousand, a hundred thousand, a million dead in the latest earthquake at Tangshan in China? It seems as if the Chinese authorities are not at present going to talk about the scale of the disaster, maybe believing that details of fatalities will produce some sort of ghoulish exultation in other countries and result in an indefinable loss of face. Certainly some silly people who, a year ago, would have dubbed the prediction which saved tens of thousands of lives on the Liaoning Peninsula a "spectacular success" have been talking about the present catastrophe as a "spectacular failure" of prediction. Such views can no doubt be discounted as shallow, but they do perhaps show why China will be sensitive to worldwide comment, and they do make it all the more necessary that the Chinese should understand the serious and compelling reasons why earthquake scientists, engineers and social scientists the world over want to learn as many lessons as quickly as possible from China, now an acknowledged leader in the field of prediction.

Even though there do not seem to have been any open alerts about the most recent quake, those who have recently returned from China report that there had been concern over magnetic field changes and that there was a feeling that seismic activity was migrating in the general direction of Tangshan. More remarkably, travellers continue to bring back accounts of unusual phenomena preceding and accompanying earthquakes, which seem to indicate that there is still a lot to learn about the art of prediction.

Animal behaviour as a predictor has now, of course, become an object of popular fascination the world over. For one thing, the jumpiness of cats, dogs and snakes can be understood by a much wider public than can fluctuations in the velocity of elastic waves; for another, it does bring science down to a folksy level at which the good amateur observer is just as valued as the professional. There are few branches of science where this is true today, and it is excellent news that amateur involvement has been given such a good name by the Chinese. Even the most sceptical Western observer will be im-

pressed by the sheer crescendo of reportings of unusual phenomena last year in the weeks before the Liaoning earthquake. The latest addition to the collection is 'earthquake lights'. Like anomalous animal behaviour, this has been a subject attracting practically no attention at all from seismologists, yet there is now a report from a respected Chinese seismologist of a glow in the air at the same time as a quake—something that had previously only been the subject of discounted hearsay.

What the Chinese have succeeded in doing, and what this most recent calamity will certainly not dissuade them from continuing, is to raise the consciousness of people to unusual phenomena, even to the extent of encouraging them to file reports. This is a lesson that should not be lost in California, the Soviet Union, Japan, the Middle East or other places scourged by earthquakes. There are encouraging signs that at least the inhabitants of San Francisco and Los Angeles are prepared to learn from the Chinese experience that the experts need all the help they can get. That is why it is important that the momentum of interest which has been developing should not be stifled by suppression of news and of the interchange of scientists.

There is a lesson in all this for the international organisations, too. Countries which have developed technologies for their home market invariably start to turn their thoughts to export potential before long. And if the technology is one like railways, air-traffic control or defence systems, the inevitable interchange of personnel, training of technicians and stationing of advisers creates a dependency which is a modern form of imperialism. Just because China is at present reeling under a disaster and no other country can yet do any better does not mean that in ten years time there will not be an exportable commodity—and that certain countries, already with tribulations enough of their own, will not be asked to buy an expensive system and absorb a thousand advisers. UNESCO, rather well equipped in this field, should take this matter seriously while it is still a cloud on the horizon. □