1965–66. From *a* we note a significant decrease of articles by 1, 2 or 3 authors and an increase in collective authorship giving only the name of the institution(s). This may turn to be temporary for it makes difficult the communication among researchers working on the same subject. Figure 2b shows a shift between 1965 and 1973 from the theoretical work in fundamental to non-fundamental sciences. It seems that *c* shows no significant shift in the pattern of institutions performing the work except for the decrease of that in universities. As regards the national origin of references (a total of 3,533 in 1965–66 against 1,242 in 1973–74) we note in a 6.9% decrease of Russian and 5.9% of Western, the latter amounting to 60% of all 1973–74 references. In 1965–66 there were 22 articles in Russian and 9 in French compared with 1 and 2 in 1973–74.

Although our method is relatively simple, it seems to us that a more refined one would not lead to radically different results. We conclude, first, that our results from *Scientia Sinica* do not support such widespread general conclusions by visitors, as for example by A. Peyrefitte, namely, that in the Cultural Revolution "Scientists have been dealt a body blow. The functioning of research has been revolutionised to a degree which is hard to imagine, except, however, for national defence projects".

We find quite the contrary situation. Except for a very significant quantitative decline (312 articles and notes in 18 issues in 18 months of 1965–66 against 93 articles in 8 issues of 24 months of 1973–74) our results indicate that the goals of the Cultural Revolution are not reflected to any significant degree in the 1973–74 *Scientia Sinica*. All our evidence shows that the science China is most proud to show the world is still done entirely by professional scientists, who for their ideas and research problems still turn, as in the rest of the world to national and international science itself and not to the masses. This points to the existence of a scientific community in China which functions by the same traditions, norms and usages as in USSR, USA and Europe. We also note that in the period studied, the Chinese have not made any new innovations in this tradition which are visible in *Scientia Sinica* except for the radical increase of "collective authorship" of dubious value. Consequently we conclude that—with the exceptions noted—the *Scientia Sinica*, has followed in 1973–1974, as throughout its history, the international tradition of science, according to chairman Mao's directive "Make the past serve the present and foreign things serve China".

Barefoot in the field

Though a thorough study of the barefoot doctor system has yet to be carried out, there is no doubt that it represents the first successful, large-scale attempt at the delivery of total health care in a developing country cut off from Western civilisation. Alexander Dorozynski discusses the system by which, in the space of a few years, China has managed single-handedly both to overcome chronic malnutrition and to bring under control most of the epidemic diseases which have plagued it in the past.

THE really significant developments in health care delivery in China have taken place during the past 10 years, since 1965, when Chairman Mao issued the "great call": "in medical and health work, put the stress on the rural areas." The results, although now taken for granted, have been amazing and unequaled anywhere else.

Child mortality has been reduced in a spectacular fashion, and something that seems to be a nationwide family planning programme has been set up. In a truly revolutionary process, the Western 'medical monopoly' has been overturned, yet its achievements have been incorporated into a truly national medical system that has drawn both from the experience of countless generations of traditional practitioners, and from modern science.

The term "barefoot doctor" is now known the world over. It seems that it was first used in the Chiangchen People's Commune on the outskirts of Shanghai in 1965, where a medical team started teaching young farmers to perform some medical tasks. These farmers continued to work in the fields, but also cared for their fellow farmers, who affectionately called them "barefoot doctors". A Chinese delegate at the 27th World Health Assembly has said that since then, about 1 million barefoot doctors, of different levels adapted

to the needs of their community, have been trained in China.

In developing countries, medical doctors tend to congregate in the cities, largely leaving rural areas unattended, with the exception of occasional visits or vaccination campaigns. In China, many mobile medical teams tour the countryside, transporting with them especially designed equipment that allows even major surgery to be performed 'in the field'. They attend to the most serious cases, teach, and give refresher courses to barefoot doctors.

An important aspect of this programme was pointed out at the World Health Assembly by Dr Wang Kueichen, a 37-year-old barefoot doctor—"There is no barrier between the doctor and the patient"—white coats, impersonal offices, gleaming instruments and the medical language, all of which often contribute to isolate the patient in the West, play no part in this patient-doctor relationship. Barefoot doctors, she pointed out, are called 'doctors', not paramedics or auxiliaries; but the relationship is close enough, she said, for her usually to be called "little sister" or "little daughter".

The major concern is with preventive medicine, and this may well be the principal reason of the system's success. Basic preventive medicine, immunisation, health education, well-baby clinics, and surveillance of communicable diseases are enough to cut down radically the incidence of the most common illnesses in rural areas. Labour-intensive techniques have been used effectively against epidemics. For example, millions of schistosomiasis-bearing snails have been picked by hand and destroyed, and there have been similar campaigns against bedbugs, mosquitoes, rats, and flies. As one medical professor has put it: "Each of us, regardless of whether he was a janitor or university president, had to carry around a big fly swatter and a vengeful lust for dead flies. Everyone had his or her quota to fulfil by the end of the week."

This did not exclude curative medicine. The recognition and treatment of diseases such as respiratory infections and diarrhoea, which are among the most widespread causes of infant mortality, is in most cases a simple task, which requires neither a medical degree nor eight years of medical training. In such instances barefoot doctors practise what is referred to as "the New Chinese medicine", an integration of western and traditional procedures including acupuncture, herbal treatment, modern drugs and sometimes relatively complicated surgical procedures such as appendectomies. According to most reports, female barefoot doctors also routinely perform abortions, using the aspiration method. □