

responsibility of the institutes rather than to the topics of interest to AM. Similarly, other grants that were perhaps less relevant to AM per se, had difficulty finding a home because they were multidisciplinary in nature and, while of cross-cutting interest to the NIH, they were not of interest to any specific institute or center.

5.3 *Economic Factors*

In most countries, the economic potential of growing AM markets has meant that much business and research interest in AM to date has been focused on specific techniques and products that can be marketed. On the other hand, the “healthcare industry”, or even academia, have rarely paid attention to conceptual and philosophical principles on which the use of those products and techniques are based. This trend is even reflected in government-sponsored research.

In countries like Peru, the government’s interest in traditional medicine began mostly in the context of providing affordable healthcare for indigenous populations, for example, in the Amazon basin, where most people are too poor to afford costly Western medicine and too remote to have access to it. However, in these countries also, the new interest in specific products (e.g. “cat’s claw”, “camu-camu” and “sangre de grado”) by the herbal medicine industry is beginning to create incentives other than those of affordable and accessible healthcare for the indigenous populations. These new economic incentives may be counter-productive: they may endanger both the survival of the plant species, and consequently, the health of the indigenous populations, because they encourage an economically needy population to over-harvest (perhaps to extinction) plants on which they may need to rely for their own health.

In China, the government has launched a program implementing timetables for development of new TCM “products”. Government and academic representatives have visited the US to indicate their eagerness to collaborate and to follow “proper methodology” (double-blind randomized clinical trials, RCT). Recently, at such a meeting,

it was recognized that traditional Chinese “medicine” should be distinguished from TCM “products”.

In the US, the “healthcare industry”, as the major players themselves define it, is one of the most lucrative American enterprises. As documented in several recent reports,¹⁻⁵ a large proportion of the American population uses AM and, therefore, constitutes a considerable potential market in the US. Consequently, alternative practices and products that had been shunned by the traditional healthcare industry are becoming an increasingly promoted feature of American healthcare packages, from healthcare maintenance organizations (HMO) to hospitals, including academically affiliated ones. The fact that the NCCAM is beginning to sponsor a few large clinical trials (e.g. St John’s wort for the treatment of depression and glucosamine for the treatment of arthritis), also stresses an emphasis on products and disease rather than on conceptual and philosophical approaches to maintaining health.

In 1999, two major “first of their kind” conferences were held, co-sponsored by academic medical center (AM) units and private “integrative medicine” entities, to educate not so much professionals and researchers, but mostly hospital, HMO, and insurance executives and administrators about how to integrate AM practices and products into their institutions and services.^{29,30} It is laudable that a wider community will become informed, but will the adoption of “complementary care”, as it is sometimes called, truly lead to changes in the practice of medicine?

The large and rapidly growing market for AM has created the potential for substantial financial gain, but realizing a quick “pay-off” may also yield research of poor quality, and perpetuate research only aimed at narrowly evaluating products’ effectiveness. While it is important to conduct such research, this may also lead to botanical medicine being used in the same manner as conventional drugs, as “magic bullets” for the treatment of specific medical conditions. In addition, because whole plants themselves are difficult to patent, there is strong financial incentive to attempt to identify active ingredients only, or at least standardized and relatively purified ones.

There are many reasons to explore options other than “magic bullet” drugs, one of which is the escalating, critical problem with drug interactions.³¹⁻³³ In the West in particular, more people take more “magic bullets” than ever before, in part because many older people have chronic illnesses requiring many medications. We must understand other routes to maintaining and restoring health with diminished reliance on polypharmacy.

5.4 *Scientific and Medical Factors*

Science is not a field of study but a *method of observation* that must be tailored to the object (or phenomenon) being studied. Thus, scientists must tailor the means of observation (the scientific method) to the subject, *not* have a standard method of observation and try to fit the object of study within the method that may deform (sometimes beyond recognition) the subject being studied. In this context, any phenomenon, if felt to be of importance, may be studied scientifically. Many factors can determine whether an area is worthy of study – for example, scientific significance of potential findings for scientists and the public, or strength of evidence to date. However, in many countries the scope of studies is limited by the fact that scientific investigations are guided by available support, which does not necessarily correspond to the intrinsic worth of the topics, but rather to other factors such as economic interest or technological limitations.

In general, there are many methodological approaches to the study of alternative or traditional medicine, and there is no restriction as to which one can be used. However, one must be very careful about the interpretation and extrapolation of results. For example, a number of double-blind studies have been conducted on acupuncture for nausea, using a single point, “Pericardium 6” (P6).³⁴ This series of generally well-designed studies has indicated that the stimulation by a needle of a traditional acupoint (P6) can decrease a centrally controlled symptom (nausea), and that this effect is specific since