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The Politics of Therapeutic Evaluation in Asian Medicine

LAURENT PORDIÉ

National and international health policies tend to equate the “medical” space of traditional medicines to that of biomedicine. Asian medicines are screened with regard to rationality, legality, proofs of efficacy and safety and their clinical validation reflects a normative approach, the social repercussions and political issues of which are examined in this paper. Therapeutic evaluation is subject to socio-political interests, fully expressed in the market of therapeutic evaluation. This paper examines the contribution of the macro-policies of health to this market expansion and the three characteristic features of this market: the global emergence of ethnopharmacology, the Asian debates centred on intellectual property rights and local knowledge, and the social hijacking of clinical evaluation in India.

Tashi Tsering, an Indian practitioner of Tibetan medicine, told me recently how important it was to conduct clinical research with the aim of validating the biological efficacy of his centuries-old medicine. He told me he had three reasons to think so.

The first reason involved financial interest. Tashi thought that once he gained modern scientific validation for a certain treatment, it could potentially be sold internationally and become a substantial source of income for him and his community of practitioners. He not only underscored the market value that may then be lent to scientifically validated medicine, but meant to facilitate the creation of a particular type of commodity, directly linking his productive process to emergent patterns of global consumption. Indeed, therapeutic evaluation of Asian medicine is largely aimed at facilitating penetration into the international market for alternative medicines.

Second, he felt that his medicine deserved greater respect in the health field, and that the hegemony of what he called “the western approach to healthcare” was undermining the very legitimacy of his medical practice, both in his own Himalayan region and beyond. He wanted to prove, in a language accessible to the entire world, that his medicine was efficacious. The language he used was that of experimental science. Tashi undertook to “translate” a number of Tibetan medical categories, concepts – such as diseases – and terms into the biomedical idiom, where he found equivalents, no matter how approximate they were. He also adopted, apparently without question, a biomedical paradigmatic model of therapeutic evaluation foreign to his own medical culture. He demonstrated no awareness of the fact that such evaluation methods are themselves produced in specific historical and social contexts, which circulate worldwide and are assumed to be universally valid (Adams 2002). Tashi was also mirroring national and international health policies, which tend to equate the “medical” space of all Asian medicine systems with that of biomedicine.

The third reason invoked by Tashi was the protection of indigenous knowledge. He wanted to be involved in clinical research and therapeutic validation so as to claim legal rights over his medicine and to avoid patenting by foreign groups. He spoke of intellectual property rights (IPRS), and while his understanding of the legal meaning of IPRS was unclear, he felt strongly that having such rights was an important means by which to generate and capture income. He was, thus, again in line with official institutional narratives. Indeed, the UN agencies, World Trade Organisation (wto) and World Intellectual Property Organisation (WIPO),

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highlight the positive impact of IPRS on economic growth. Numerous economists today consider IPRS to be “the main value of exchange in the economy of knowledge of the 21st century” (WIPO 2003). But Tashi did not stop there. Having legal rights over his own medical knowledge was, just like successful therapeutic validation, a way to acquire status and consolidate the legitimacy of his medicine. IPRS were not only a juridical matter or a tool for financial ascent; they were also an instrument to be used in the social field.

What does this ethnographic example have to tell us? The discourse and practices of Tashi raise questions pertaining to the multidirectional flows of techniques and ideas, to issues in “cultural translation”, to the cultural production and international diffusion of “universal” models, and to the social and cultural dimensions of exchange and markets. In sum, it frames the problems of therapeutic evaluation and the economy of knowledge in social and cultural terms. To understand these aspects, it is, therefore, of particular importance to provide fine-grained accounts of how macro-political-economic relations are experienced in local contexts. This is vital to avoid the simplistic and inaccurate idea that dominant global cultural and economic models somehow subsume all local spaces within a homogeneous ideological and economic system (Tsing 2000). Global processes are at *all* times local processes embedded in communities, households, individuals, etc. I shall attempt to penetrate and explain this in the case of Asian scholarly medicine without losing sight of the broader macroeconomic and political currents of power.

This paper provides an overview of the *market in therapeutic evaluation*.¹ This market is subject to a set of conditions that characterise the social positioning, the therapeutic, economic and cultural value, the production and marketing of a given medicine or a part of its treatments in a geographical area, not necessarily limited to its place of origin. Health practices more or less explicitly compete with each other to obtain scientific approval, which is underpinned by strong political and economic interests. The market, understood in this way, is a space where actors meet who are motivated by a declared will to contribute to human health and who often have a desire for financial enrichment, social ascent, and recognition of individual or collective identity.

My focus is not merely on the mechanics of supply and demand, but rather on the various meanings that surround this market as a form of social production, the ways in which social institutions and the “economics of practice” interact with one another (Bloch and Parry 1989; Rankin 2004). I am interested in the way various spheres of exchange are created, transformed and globalised in terms of social and cultural ideas, values, and practices, peoples’ perceptions, social dynamics, issues pertaining to identity and power, and not simply in terms of the so-called “laws of the market”. I propose in this article to explore, in particular, the relations of power that this market contains and engenders.

Let us keep in mind the example of Tashi and now examine the wider context by examining four characteristic objects in this market: the contribution of the macro-policies of health to this market expansion, the role and transformation of ethnopharmacology, the debates centred on IPRS and local knowledge, and the social use of clinical research.

Therapeutic Efficacy and Global Health Policies

Two main historical events have conditioned the global quest for therapeutic efficacy. The first concerns one of the great medical reforms of the last century, marked by the emergence of controlled and randomised clinical trials. In the second half of the 20th century, a group of North American researchers and clinical practitioners, statisticians, editors of specialist journals and members of the government developed and promoted a method to judge the efficacy of a given treatment in an impersonal and statistically valid manner (Marks 1997).² This new criterion of scientific excellence, the so-called “gold standard” for evidence-based medicine, today dominates medical practice internationally (cf Meinert 1986). It also exerts a definitive influence on the way Asian medicines are approached and on how their efficacy is evaluated. In India, for instance, the Central Council for Research on Ayurveda and Siddha (CCRAS) thus states that “a properly planned and executed clinical trial is a powerful experimental technique for assessing the efficacy of an intervention” (CCRAS 2004: 15) and encourage research in this direction.³ Clinical trials are, however, based on experimental science and biomedical understandings of the body, which share a significantly different notion of evidence from that of Indian medicine (cf Naraindas 2006). They address the body as a biological entity rather than the body as a whole (i.e., physiological and cosmological) and, for that reason, claim universal validity and replicability. This is a telling example of the international circulation of techniques and the diffusion of ideas (Petryna 2005, 2007), which called into question the diverse cultural values and understandings of health, illness and the body found in non-western contexts. To the extent that only knowledge accepted as “scientific” has the power to silence those who would doubt it, “whoever attempts to bring different practices into being, addressing the patient in another way, is immediately disqualified” (Stengers 1997: 55). Science and clinical trials thus participate in the establishment of a “secular morality” (Brandt and Rozin 1997).

The second event concerns the United Nations and took place in 1950, when the World Health Organisation (WHO) and the United Nations Children’s Fund decided together to provide biomedical training to local healers in childbirth and post-partum practices in the framework of a national health programme in the Philippines. This project, which already defined the broad outline of the WHO programme, signalled the beginning of a new era for traditional medicines worldwide, and was influenced by two Asian examples: the Chinese barefoot doctors and Indian medical pluralism. It was, however, not before 1975 that the need to integrate traditional therapeutic practices into healthcare policies was recognised and adopted by the Executive Committee of the WHO, following recommendations by researchers working for the UN (Djukanovic and Mach 1975), and subsequently by the World Health Assembly in 1977. T A Lambo, then deputy director-general of WHO in Geneva, was however anticipating difficulties with the dominant national medical organisations. He stated, in an interview with the anthropologist Philip Singer (1977: 249):

I signed the paper of the traditional healing – the Executive Board paper, which, if you see, you’d be absolutely staggered. (...) We’re now [in 1975] proposing to the Executive Board which will go to the

Assembly that there should be some measure of integration of traditional healing. That each member State should examine critically all the modalities in their culture, at their disposal, and that at the same time be able to salvage as much as possible to syncretise and integrate this. And this is completely unusual. (...) Absolutely revolutionary. And there is going to be a great deal of resistance, antagonisms; there'll be the mafia of the world..."

This approach was further elaborated and consolidated by the WHO in the years following the Alma Ata conference of 1978, and became part of the ambitious programme "Health for All by the Year 2000". The programme of the organisation consisted of incorporating the healers into official healthcare systems – by promoting their organisation or by adding them to the base of the health pyramid.⁴ It also had specific objectives: (1) to encourage the study (above all medical and not social) of traditional medicine and derived herbal remedies, with the goal of contributing to the improvement of health, (2) to examine the benefits of traditional medicine in the light of "modern science" so as to maximise efficacious healthcare practices, and to combat those that were not, and (3) to promote the integration of traditional practices, proved to be efficacious and non-toxic, with biomedicine.

A WHO representative stated explicitly in the journal *Social Science & Medicine* that the "backwardness" of traditional therapeutic practices could only be put right following the scientific validation of their efficacy and safety, and by their "integration with biomedicine" (Akerle 1987: 177-78). The obvious difficulties of therapeutic evaluation were perceived, but they were attributed essentially to the "holism" that was judged to be inherent in traditional medicines. These difficulties are in reality more often than not formidable aporias. The problems regarding compatibility between diverse medical paradigms and epistemologies, the mixing of nosological categories and the impossibility of translating certain concepts (such as diseases) from one medical culture to another were seldom expressed. The same applies to the social issues involved in the integration of medicines, the uses and reinterpretations of research by the healers, etc. It is obviously not a question of impugning the fact that the biological efficacy of a medicine is an imperative for public health, for that is a matter of common sense. On the other hand, the technical difficulties and the related social consequences of clinical research should also be taken into consideration.

More than 20 years later, notwithstanding the abundant literature that exists on most of the above-mentioned problems, the discourses and programmes of the WHO have changed but little.⁵ The "WHO Traditional Medicine Strategy 2002-2005" (2002) was the first publication by this organisation designated as such, that is, as a global strategy. The division into general and specific objectives corresponding to the initial goals of the WHO is, however, now obsolete. The programme distinguishes four main objectives, which do not seem, in theory, to be hierarchically linked, and among which the questions of efficacy and safety are considered as "crucial to extending [traditional medicine] care" (OMS 2002: 3). This sounds very reasonable of course, but the document says nothing about the social implications of therapeutic evaluation itself. These directives do not always reflect the way in which the Strategy is put into practice by the states, which are free to carry out the recommendations, synchronically or not.

Therapeutic evaluation is, however, always considered, and be it secondary compared to the integration of practitioners into the health system or to the policies intended to formally organise the latter.

The anthropological investigation of therapeutic evaluation also shows the medicines as a theatre of more localised political issues. This situation casts light on the reconfiguration of power around health. As we will now see, the market of therapeutic evaluation has been able to motivate interests and has, at times, generated conflicts.

New Territories of Ethnopharmacology

Disciplinary divisions, firmly anchored in our academic traditions, are sometimes viewed as necessary for obtaining high standard works. Specialisation within multidisciplinary sciences is to begin with individual, and one tends not to distance oneself too far from his original intellectual circle. This, however, does not prevent the emergence of new sciences that claim to be multidisciplinary because of the very specific field in which they evolve, and which can only arise at a disciplinary crossroads. This is the case with ethnopharmacology, a specialised branch in the medical domain that arose in the late 1970s. Its purpose is to understand and analyse healthcare practices, to contribute to their regulation and their standardisation, to evaluate the biological efficacy of their pharmacopoeia and to discover therein new drugs. This science focuses primarily on the study of flora. The different definitions of ethnopharmacology (Dos Santos and Fleurentin 1990, Etkin 1996) all include the involvement of a wide range of disciplines (anthropology, botany, history, law, pharmacognosy, pharmacology, ecology, etc), but in practice the science is essentially pharmacological. In fact, this specialisation has not really developed new theoretical approaches for the study of pharmacopoeias, of their prescribers and users. The nature of research has remained almost unchanged, despite a tendency to compare studies from diverse disciplines and the growing inclusion of ethnographic data in pharmacological works.⁶

This discipline has arisen from the wish of a group of people to distinguish themselves from their respective scientific communities by gathering together under a new label. As Didier Fassin observes, this type of approach corresponds to a search for legitimacy, an attempt to obtain new territories, and "if it cannot succeed without the presence of a real health issue and an indisputable scientific basis, these elements cannot suffice without being accompanied by a conquest of power" (1996: 184). The precursors of ethnopharmacology infiltrated one of the spaces created by the market of therapeutic evaluation in order to establish their legitimacy on the scientific, social and political planes. The study of the social dimensions of ethnopharmacology reveals the issues of power characteristic of a science that claims both its multidisciplinary nature and its autonomy.

Ethnopharmacology formally appeared on the international scene in 1979, with the publication of the first issue of a journal dominating the discipline, *The Journal of Ethnopharmacology*. It was invited by the WHO to participate in programmes for the revalorisation of traditional medicines, which contributed "in a significant manner to [its] recognition by international public

health circles" (Fassin 1996: 173). However, ethnopharmacology was accorded only a relatively limited place in these programmes. It was, on the other hand, closely linked to the pharmaceutical industry until the 1990s which provided considerable financing. Bioprospection conducted by ethnopharmacologists could thus be of potential benefit to the industries, in particular, concerning the development of new medicines. Numerous partnerships thus saw the light of day: ethnopharmacologists in a certain manner serving the industry through academic societies, university organisations or research centres.

Ethnopharmacology, however, maintained an ambivalent relation with the pharmaceutical industry. The latter, little inclined to implement research programmes on endemic infectious diseases in Asian, African and South American countries, primarily for economic reasons, left a vacant space that was filled by the ethnopharmacologists. As Christian Moretti observed, the disinterest of the large pharmaceutical companies in malaria, leishmaniasis and Chagas' disease "[obliged us] to find alternatives in the study of traditional pharmacopoeias" (1993: 84). Ethnopharmacologists, thus, preferentially directed their studies towards this type of pathology, without for all that foregoing studies pertaining to ubiquitous diseases. However, in both cases, "ethnopharmacology (...) also lies within the framework of pharmaceutical research and contributes greatly to therapeutic innovation" (Moretti 1993: 79), which cannot be effectively done without having recourse to the pharmaceutical industry. The industry thus pushed ethnopharmacologists into domains of study different from its own research priorities, while remaining an inevitable partner for the medium- or large-scale diffusion of treatments recognised as clinically efficacious.

Since then, ethnopharmacology has been losing momentum. As a result of technical difficulties and juridical uncertainties engendered by bioprospection, the pharmaceutical industry reviewed its interest in traditionally used plant products (Chevassus-au-Louis 2000). The decline of ethnopharmacology is also due to technological evolution. Manufacturers have developed robots that today make systematic screening possible and very precise, at prices lower than those involved in the older methods and without necessarily resorting to ethnopharmacologists. However, that does not signify the disappearance of the latter; the partial withdrawal of the industry does not exhaust all the resources of which ethnopharmacology avails. Nina Etkin, former president of the International Society of Ethnopharmacology (ISE), asks: "If the pharmaceutical companies will not use the information, who will?" (2000: 7). It is thus that ethnopharmacologists have sought new areas to ensure the survival of their science and to legitimate its necessity. They participate today in the domain of international health development.

Nina Etkin comments as follows on the evolution of ethnopharmacology:

An area of even slower progress is the application of our research findings, both to advance bioscience and to make our work meaningful for local populations. (...) How can we reconcile that research conducted during the last two decades has yielded an enormous amount of information on plant constituents and activities with virtually no practical application? (...) It may be provident at this juncture to address how

the results of sophisticated medical ethnography and rigorous bioassays can be meaningfully integrated, translated, and applied to the traditional populations who use those plants (2000: 5-8).

This interest is subsequently confirmed by Michael Heinrich, who wrote in an editorial of the ISE web site that in the last years, the preservation of local knowledge, the promotion of indigenous health systems into primary healthcare and the conservation of biodiversity increasingly concern the scientists working at the interface of the social and natural sciences, and in particular the ethnopharmacologists (accessed 22 September 2006). "Ethnopharmacology can today place itself in the service of the development of indigenous communities", concludes elsewhere Jacques Fleurentin, president of the French Society of Ethnopharmacology (2004).

We are witnessing today the reorientation and concordance of an entire group of specialists, and not of a few isolated researchers as was formerly the case. Studies concerning international development, which is already essentially multidisciplinary, were therefore officially added to the list of disciplines included in ethnopharmacology. The large international congresses testify to this: in June 2004 at Kent University, one-third of the sessions organised by the ISE explicitly considered the area of health development, the remainder of the contributions having classically consisted of works of a pharmacological nature. In France, the main educational unit in ethnopharmacology, which moreover clearly expresses the multidisciplinary aspect of this science, already includes several courses on "sustainable development". According to Christian Moretti and his colleagues (2006), leaders in ethnopharmacology in France, the discipline is undergoing a paradigmatic change (p 11), because it combines today the preservation of biodiversity and economic development. It thus enters fully into "the paradigm of sustainable development" (ibid: 12).

This discipline accordingly endeavours to intervene in international public health circles. The main areas concerned are: (1) the micro-industrialisation of plant-based medicines, (2) "the production of improved traditional medicines" (Fleurentin 2000: 24), based on the galenic knowledge⁷ of ethnopharmacologists, (3) the preservation of biodiversity by determining, in particular the plant species and varieties to be protected on a priority basis, (4) the implementation of systems of standardisation and regulation (relating to medicinal plants abroad and to foreign pharmacopoeias in the west) and, it goes without saying, (5) therapeutic evaluation.

The involvement of ethnopharmacology in international development did not, of course, take place suddenly. Its possible utility for the local populations was already emphasised in the early 1990s, in particular by researchers in the precursory programmes of ORSTOM (now the Institut de Recherche pour le Développement, IRD). Christian Moretti thus observed, "of course, it is initially a question of preserving this extraordinary knowledge that one studies (...), but it is absolutely necessary that the holders of this knowledge then reappropriate it, after [we would have] evaluated it in a scientific manner" (1993: 88, 90). While the local reappropriation of what Pierre Cabalion uncritically termed "data translated into universal scientific values" (1990) is far from obvious, the approach was indeed intended to

benefit the local communities. It is thus the explicit contribution of ethnopharmacology to health development, and the precise definition of activities to attain this, that characterise the re-orientation of the discipline in the 21st century.

Although ethnopharmacologists generally display a magnanimous interest in the improvement of public health, in particular for the neediest populations, the practices that have characterised this discipline since its genesis until the current transformations pertain to issues of legitimacies and power and the economic domain. Ethnopharmacology is prompted by an interventionist will supported by the recommendations of the WHO. Issuing from the market of therapeutic evaluation, this discipline displays a measure of flexibility and an adaptability to changing situations by adjusting to varying degrees its contents, its objectives and its practice. It is perhaps in this diversification and adroit re-orientation that the guarantee of its continuance resides.

Revisiting Intellectual Property Rights

Once the therapeutic efficacy of a medicine is validated, ownership is claimed by the group or industry involved in its validation. To speak of therapeutic evaluation, ethnopharmacology and clinical research, therefore, raises questions about how to negotiate the rights of populations to their own material resources as well as their own original knowledge. And here comes the issue of IPRS.

Asian states construct their policies and attempt to apply international laws and agreements concerning the utilisation, protection and preservation of phylogenetic resources, along with the knowledge relating to them.⁸ The WHO supports this initiative and the organisation has included a new section on intellectual property in its world *Traditional Medicine Strategy 2002-2005* (OMS 2002). It is thus a question, on the one hand, of evaluating medicines and, on the other, of protecting them from the possible consequences of that evaluation.

We are also told that medical resources should ideally be protected so that the indigenous communities can benefit from them (use, profit-sharing, etc), notwithstanding the fact that the IPRS are embedded in larger and powerful economic agendas. IPRS are linked to political-economic and cultural processes that extend to regional, national and global scales, and they reflect these processes as well. The model retained to establish this protection, taken up in chorus by a number of indigenous associations, in general corresponds to the international definitions of property rights. It must be observed, however, that this compliance with IPRS and, through that, the approval granted to cultural domination – since customary system of property and ownership exist in all societies (e.g. Cleveland and Murray 1997; Hendricks 1987) – singularly contrast with the general intention of the activists, who are fiercely opposed to this hegemony. The process justifies and consolidates the relevance of IPRS on local and international levels, and confines indigenous knowledge to a sort of subaltern state.

The exploitation of local resources is today perceived as a potential threat to indigenous assets and indigenous knowledge. A new category of piracy has appeared. The biopirates study, patent, and illegally exploit natural substances with economic

potential for the industrial sector. The biopirates seek profit. Entire countries rise up against the abusive exploitation of local natural resources by foreign companies, imaginary or not, and India is one of the states in which opposition to the presumed exploitation of plant resources by foreigners is most pronounced.⁹ However, the majority of patent applications filed to the detriment of the populations originally possessing the knowledge, and almost all the pressure being exerted upon plant biodiversity, comes from the Indian pharmaceutical industry itself. A number of patent applications have been filed by transnational companies, but they represent a small minority. These patents, nevertheless, have very large repercussions on the social and political levels, as illustrated by the well-known case of the neem tree, which has been a major topic in the chronicles since the mid-1990s. Although India subsequently won its legal recourse, this event nevertheless significantly changed the nation's relationship to its biological resources and the mechanisms put in place to favour their protection.

Public opinion focused on the west, even though the most straightforward menace was clearly Indian. The situation was exploited by politicians who reformulated problems relating to the management of biological resources to serve nationalist ends – Hindu nationalism was a movement that was already influential in India, conveying animosity towards foreign interests in particular (Jaffreot 1993; Hansen 1999), well before one of its political parties rose to power and held it from 1998 to 2004. The idea of a foreign menace, which dominated IPRS discourse, was thus deployed and camouflaged the dynamics of the local society.

For the people I have spoken to over the last decade in India, IPRS are understood as potentially leading to two contrasting scenarios: IPRS are either seen as consubstantial to a loss of control that a group could suffer over its indigenous knowledge and bio-resources, or as consubstantial to the financial advantages that could come back to their community.¹⁰ For these reasons, IPRS are seen as both alarming and attractive. The overlapping in locality and globality, enrichment and exploitation, political advantage and stigmatisation makes IPRS a complex social object. IPRS symbolise indigenous resources and knowledge on the local level as well as on the global stage and are, for these reasons, easily integrated with social claims of all types. IPRS are conducive to instrumentalisation and are a means of expressing or justifying political problems. In the Ladakh region of the Indian Himalayas, for example, the local virulence of the discourse on IPRS expresses and confers power on the concerned elite therapists – it is used to claim a distinct cultural identity and the singularity of the local form of Tibetan medical practice (Pordié 2008).

IPRS stand in direct relation to the market in the evaluation of medicines, because the economic value of ownership over a given medicine – and thus of the resource – is dramatically increased when this medicine is proved efficacious. However, IPRS are the subject of bitter negotiations that ultimately have few connections with the medical, juridical or economic fields properly speaking. They are an evocative example for the study of the local socio-political relations embedded in this market.

We shall now go further and look at the social use of clinical research, culture and the production of commodities.

Clinical Research, Commodities and Culture

The market of therapeutic evaluation entails a process of objectification of medicine, which tends to distance practitioners from their therapeutic functions by placing medicine at the centre of the clinical relationship. The treatments tend to become concepts, “distilled to the active principle and delivered to the consumer without the burden of the rest of the medical system” (Banerjee 2004: 90). There is accordingly a transfer of power from the healer to the medicine – that is, from a culturally meaningful practitioner to a universalised form of treatment. Therapeutic power is thus inscribed in new values that are closer to the materiality of the product dispensed than to the practitioner’s knowledge, practice or reputation. These transformations fully coincide with the needs of the market. What is more, obtaining, or even claiming proof of biological efficacy leads to the relative uprooting of any given treatment from its original cultural field, due to the universal and absolute character of biology. In short, science and biomedical evaluation demands a process of withdrawal of the *medical culture* that consequently allows *medicine*, as a presumed category isolated from culture, to appear more clearly. This process favours commercial developments on the national and international levels.

But the replacement from the cultural and social should not be taken so straightforwardly. The problem must actually be framed dialectically: there is, on the one hand, a structural process of uniformisation and medical standardisation (evaluation, mass production of medicine and international diffusion) which is, on the other hand, counterbalanced by the will of producers/packagers to singularise their products, especially by underscoring their cultural origin. This form of cultural production requires an understanding of economic value as culturally given and culturally generated, rather than as an inherent property of commodities or markets (Rankin 2004: 32). This situation also makes Asian medicine a specific type of commodity. According to van Binsbergen (2005), the essence of a commodity is defined, no longer by the historicity, the sociality and the systems of classification and evaluation of a specific local community, but by a claim to universal applicability and convertibility, against a universalising standard that is impersonal, meta-local, non-identitary. It is also a cultural process, one which hides the traces of its own historicity. In the case of commoditised Asian medicine, exclusivity, immutability and universal commensurability of ownership do not entirely replace embeddedness and culturally-specific meaning. The newly acquired universal significance of a traditional treatment is not altogether substituted for the culture embodied by a given medicine. On the contrary, it makes the diffusion of fragments of culture possible, such as a certain “philosophy of life”, which has a strong marketing value and ultimately tends to characterise a niche in the international market (Zimmermann 1995). This situation shows the adaptation of globalised knowledge to local circumstances, and the transfer from locality to locality, which refer to Robertson’s notion of “glocalisation” (1995): trans-cultural practices arise where commodities originating in one locality are adopted and adapted for consumption in others.

The persisting anchorage of Asian medicine in the cultural can serve as a support for all sorts of commercial strategies and

ideologies. Commonly and mistakenly perceived as embodying a certain neutrality, science conceals all the better the strategies of the healers and institutions involved in healthcare traditions. In south India, Siddha practitioners gathered in an Tamil non-governmental organisation told me in 2004 that they found in science the best means to make their voice heard in the country and beyond, so that their medicine would be recognised, and thus hopefully marketed, in a particular therapeutic area. Elsewhere in Tibet, due to the uneasy relationship with the Chinese government and its policies towards religion, the use of science conceals all that could be perceived as a religious heritage (Adams 2001; Janes 1999). It is for this reason that clinical research makes it possible to “depoliticise” this medicine by resisting the political pressure nationally exerted on its practitioners. It also allows access to the market for alternative medicines, in a context where contemporary health reforms encourage mechanisms favouring local financing of Tibetan medicine. The use of science has its aims and implications beyond the medical domain.

These examples illustrate important dimensions of the global reconfiguration of Asian health systems. They shed light on new places and new expressions of power for those who are usually viewed as being dominated in the “medical” field. Health practices find the means to benefit from the market of therapeutic evaluation, hinging their own politics on the element of domination so as to better domesticate it.

Epilogue

The central objective of the WHO strategy for traditional medicine is access to healthcare for the poorest populations (2002: 51). The common assumption is that traditional medicines are cheap, and therefore constitute an ideal treatment for the poor. Whatever the ideology behind such a statement, how is this related to the issues of clinical research? In short, how does therapeutic evaluation appear in terms of “benefit for the underprivileged” in Asia?

As shown in this paper, research on the clinical efficacy of Asian scholarly medicine is closely tied to their commercialisation. The treatments recognised as efficient become national or international commodities, and the most well-known practitioners usually forsake the rural milieu. In this context, therapies and medicines tend to be geographically, socially and financially beyond the reach of the majority of the population, while biomedical treatments remain generally more accessible. The therapeutic evaluation of medicines thus entails a threefold shift: the medicines are urbanised (rural exodus), their use is characterised by a movement up through the social strata, and they become more costly. This articulation indicates more generally the social recasting that is at work in learned traditional health systems in Asia (Banerjee 2004, Janes 2002, Janes and Hilliard 2008, Langford 2002). Asian scholarly medicines address to an ever lesser extent the most destitute and the global agenda pertaining to therapeutic evaluation has therefore missed its main goal. These medical practices are today increasingly at the reach of national and global middle and higher classes only.

While it is necessary to ask about the biological action and the toxicity of a medicine and to try to develop appropriate means to respond, it is also imperative to understand the social stakes

involved in this type of approach. This article has shown that therapeutic evaluation has become a political issue that gives free rein to the most audacious appropriations. Therapeutic evaluation is thus not socially neutral. Science is imprinted with social and cultural norms and values, something numerous philosophers of science and historians of medicines have called to our attention for a long time (cf Latour and Woolgar 1988, Pickering 1992). The development of traditional medicines is expressed in a normative framework, of which scientific markers hope to delimit the space of possibilities. It does not take into account the socio-political consequences of evaluation, whereas the latter is today located at the centre of policies pertaining to traditional medicines. It is in this context that one wants to extend health coverage by the inclusion of non-biomedical practices.

Moreover, these policies are greatly influenced by the biomedical clinical practice and especially by therapeutic trials.

NOTES

- 1 Therapeutic evaluation research aims to assess the toxicity and efficacy of a given treatment, a surgical or non-medicated technique. This article is concerned by clinical evaluation methods (i.e., conducted in clinical settings), such as clinical trials.
- 2 Marks notes that it was a political community in the sense of a group sharing common or converging interests and joined together by its belief in the power of science (1997). This author regards the members of this community as “therapeutic reformers” and shows how this movement – that arose in the United States of America – was later internationalised.
- 3 Conformity to biomedicine, in this sense, is not a new phenomenon in India. Khan shows that this “stream of conformity”, which was initiated by the colonial state, has dominated the mainstream national leadership and government discourse in the first half of the 20th century (2006). The resistance to biomedicine was comparatively weak.
- 4 The WHO policy rested on an approach that was as pragmatic as it was ideological. It aimed at finding a solution for the neglected state of healthcare in “poor countries” and had the objective of extending health coverage in geographic, social and medical terms. Traditional medicines were thus instrumentalised. Re-named “TM practitioners”, the healers had to fill the gaps of national health programmes. These therapists accordingly left the margins of the official medical system to appear within it as recognised, but no less subordinate, actors. Assuming responsibility for them was also envisaged as a means of control because of their inevitable presence and the widespread recourse to their services.
- 5 One does, however, observe two fundamental additions: a section on intellectual property rights and one on “complementary and alternative medicines” practised in the west. Moreover, a specific document meant for users in the north on health risks, corresponding to and including a section on pharmaceutical monitoring, was produced in 2004. Thus, the WHO no longer approaches traditional medicines solely from the perspective of endogenous health development, but from an (economically) globalised perspective, in particular by accentuating the growing demand for natural medicines in the west.
- 6 Nina Etkin notes, however, in a study of publications that have appeared in *The Journal of Ethnopharmacology*, that most of the ethnographic information is very meagre and seems to have been added in a disjointed manner so as to satisfy the editorial recommendations of the journal (2000: 5).
- 7 Galenic pharmaceutics is the science that studies the manufacture, presentation, dosage, method of administration and the conservation of medicines. A galenic form refers to the individual

The reproduction of biomedical evaluative models in other medical systems does not follow of itself. The incompatibility between medical paradigms and the incommensurability of numerous health practices makes the task a delicate one. Evaluation, thus, generally involves an adaptation of these medicines to the proposed models, whereas the scientific approach would imply the contrary. In this way, in part, the medicines undergo therapeutic and social transformations.

The market of therapeutic evaluation is, above all, characterised by its social and cultural embeddedness, rather than by its ability to procure biologically efficient and cost-effective therapeutic treatments. In spite of this evidence, mainstream economic theories show an essential separation of economics, politics and culture. It does not seem advisable, however, to operate such separation but rather to carefully observe the role of culture and social life in economic processes.

- form under which the active substances and the excipients (inactive substances) are shaped to constitute a medicine. It corresponds to the final physical aspect of the medicine such as will be utilised by a patient (tablets, capsules, doses, solutions to be taken orally, injectable suspensions, etc) and to the type of absorption of the medicine (protracted release, gastro-resistant, etc).
- 8 See, for India: Anuradha, et al (2001), Challa and Kalla (1995), Cullet and Raja (2004), Dutfeld (1999), Mueller (2007), Subramanian (1999).
 - 9 For authors such as Alan Oxley, however, “there is no evidence (...) that there is one case of illegal removal of genetic resources from any country. The number of instances where great financial benefits have flowed from commercialisation of natural genetic resources are small. (...) Research (...) at Monash University revealed that there are virtually no cases of biopiracy (defined as forcible and illegal removal of property). (...) Misuse of intellectual property law is not biopiracy” (2006: 1). **While this latter point is currently being discussed, for a significant proportion of specialists these reasons altogether do not justify the contemporary vehemence on IPRs.**
 - 10 While actual examples of substantial profits would not be legion, the potential economic value of medicinal plants often generates more enthusiasm than real value. Only a small amount of the research, however, has led to commercialised therapeutic treatments. Should those concerned have the financial means to file a patent application, and even if the money obtained should reach the level of the community (villages, those possessing knowledge, etc), the benefits accrued generally do not profit the most destitute. In the mid-1990s, the well-known pharmaceutical industrialisation of a plant known as Jeevani (Arogyapacha, *Trichopus zeylanicus*), which was revealed to an Indian research institute by the Kani in Kerala, was thus the subject of numerous controversies. While the authorities presented this event as historical (it was, one said, the first time in the history of the nation that a minority group benefited from its traditional knowledge as a result of scientific research and the industrialisation of a traditional plant remedy), the benefits that were derived have concerned certain Kani members only, raising the question of what actually is an “equitable sharing”. In reality, it is above all those who hold the power that reap the benefits, which then appear as commensurate with the social hierarchy.

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