An anthropology of materia medica

'Materia medica' is the Latin term for medical material, the remedial substances usually called medicines or drugs. It is an old-fashioned term, slightly pedantic, but let it stand, to remind us that medicines are material things. In scholarly works 'materia medica' often refers to the assemblage of drugs available in a particular society or historical period, so it invites comparative assessment. It also designates a branch of academic study. At European and American universities there were departments and courses in materia medica until they were replaced in the nineteenth and early twentieth centuries by the new science of pharmacology. Whereas the study of materia medica ranged over the sources, preparation and use of all kinds of therapeutic substances, pharmacology focused on their effects upon bodily tissues. The emergence of the new discipline coincided with important developments in biochemistry and the beginning of drug synthesis in Europe.

This book is about materia medica in the sense that it takes medicines as the material things of therapy. But we propose to see them as things with social lives; we are more concerned with their social uses and consequences, than with their chemical structure and biological effects. The medicines with the most active social lives in the world today are the commercially manufactured synthetic drugs produced by the pharmaceutical industry. They have vigorous commodity careers; their dissemination to every part of the globe has far-reaching implications for local medical systems. They have become part of the materia medica of every local society—an eminent example of globalization. At the same time they are the most personal of material objects, swallowed, inserted into bodies, rubbed on by anxious mothers, used to express care and intimately empower the uncertain individual.

The global spread of biomedical drugs casts another light on the botanical and mineral substances that have constituted the materia medica of most peoples throughout human history. The different kinds of medicines provide context and meaning for one another. At the same time, all medicines have certain social and cultural characteristics in common.
So the chapters to follow touch upon the whole range of medicines, although they emphasize commercial pharmaceutical drugs. Thus we explore a field of study distinct from ethnopharmacology, which focuses primarily on the biochemical properties and effects of ‘indigenous’ medicines (while recognizing the importance of people’s own conceptions about these medicines).

In this introduction, we set out our assumptions about medicines as social and cultural phenomena. We briefly review the ancient tendency of medicines to move, as a background for appreciating the amazing spread of biomedical pharmaceuticals. We trace the development of anthropological interest in medicines, and explain our framework for the book.

**What are medicines?**

Medicines are substances with powers to transform bodies. Prayer, and rest, and exorcism may also have therapeutic powers, but they are not objectified or crafted or commodified as medicines are. The centrality of medicines for medicine is apparent in the identity of the words used in English. The same word, related to the Latin *mederi*, to heal, is used for the science or practice of treating and preventing disease, and for the substances used in that practice. Medicines are the primary means by which most medical traditions work upon disease and their use is the fundamental technology of biomedicine as an applied science. At a time when intellectuals and media in countries of the North are debating the new medical technologies, it is worth stepping back to consider the old medical technology, the use of medicines, as a general phenomenon.

1. Medicines are substances. Their materiality, their thinginess, is a property of great analytical importance for anthropology. As things they can be exchanged between social actors, they objectify meanings, they move from one meaningful setting to another. They are commodities with economic significance, and resources with political value. Above all they are potent symbols and tokens of hope for people in distress.

2. Medicinal substances have powers to transform. At least, such powers are attributed to them by social actors. Assumed efficacy is a defining property; a substance that no one believed efficacious would generally not be considered a medicine. They are supposed to do something, to change the body in a discernible way.

3. Transformative powers can be put to different purposes. Prototypically, medicines are meant to heal. They should do something about disease. Some medicines, such as vaccines, are meant to prevent particular diseases, or, like vitamins and tonics, to strengthen the body. Where intense awareness has been created about the factors that increase
chances of getting certain diseases, people even take medicines against risks. Medicinal powers can be used to injure as well as to heal. The term for medicine in many African languages refers to harmful as well as wholesome substances (Whyte 1988:218).

4. Medicines can be simultaneously noxious and beneficial. The ambiguity of medicinal potency is recognized in many cultures. The old Greek word pharmakon, from which ‘pharmaceutical’ derives, also meant poison. The eighteenth-century European pharmacopeia contained toxic drugs like belladonna and compounds of arsenic and mercury. The development of the science of toxicology was intimately linked with those of materia medica and pharmacology (Weatherall 1993:919). Today, package inserts in pharmaceuticals must warn of possible adverse effects and contra-indications. Beneficial as they are, medicines can harm accidentally (‘Keep all medicines out of the reach of children’) or be used for suicide. The potentially noxious effects of medicine are a key concern in the biomedical tradition: ‘There is…no known drug that is not harmful or even poisonous at high doses, and much of the scientific work on drugs has attempted to widen the gap between effective and toxic doses’ (Burger 1986:1).

5. Medicines are used intentionally to achieve an effect in some body. One of the themes of this book is that they have other effects as well. They change minds and situations and modes of understanding.

Medicines on the move

Medicines are mentioned in some of the oldest documents of ancient civilizations. Clay tablets incised with cuneiform script record medicines used in Sumeria 2,000 years before our era. The 60-foot-long Ebers Medical Papyrus has a section on ancient Egyptian medicinal remedies. The Rg Veda, dating from the latter part of the second millennium BC in South Asia, refers to specialists who knew the mysteries of healing herbs. Foundational texts of the Ayurvedic tradition, such as the Caraka Samhita, from the first millennium of our era, contain hundreds of medicinal recipes that can be related to nosologies of disease. In China, Shen-nung’s Scripture on Materia Medica, from the first century AD, contained as many descriptions of therapeutic substances as there were days in a solar year – 365 (Unschuld 1988:181).

It seems reasonable to assume that at least some medicines were exchanged from place to place from early times. In south Asia, for example, it is suggested that herbs from mountain or jungle areas were traded into other ecological zones (Basham 1976:30). In any case, knowledge about medicines was transmitted across geographic and temporal distances, as research on historical texts has shown. The Greeks, full of admiration for Egyptian medicine, transcribed their prescriptions (Wilson 1962). Hittite scribes in Anatolia copied tablets of Babylonian medical texts from Mesopotamia with their herbal mixtures, suppositories and lotions (Oppenheim 1962). Whole books of materia medica were translated; indeed whole traditions of medical and medicinal knowledge diffused. One of the most striking examples is the spread of the classic Greek tradition to the Arab world, on to South Asia as Unani medicine (from the Arabic ‘Yunani’ meaning Ionian) and in time back to Europe again (Birgel 1976).

In Greece the use of a range of botanical and inorganic substances was documented in the writings of Hippocrates of Cos and his followers about 400 years BC. However, the use of medicines was limited, emphasis being given to dietetics (Ackerknecht 1962:391). The great manuscript known as ‘De Materia Medica’ by Dioscorides, from the first century AD, contained an exhaustive description of plants, animal products and chemical substances (like mercury and arsenic), including those he had learned about during his travels as a surgeon with the Roman armies. His successor in the second century, the physician and prolific writer Galen, reorganized these listings but also sought out new medicines. ‘He travelled widely in Egypt, learning about the drugs imported from India, Africa and elsewhere from the shippers who brought them’ (Conrad et al. 1995:61).

This text-based tradition underwent a great revival as the Greek manuscripts were translated into Arabic around the third century. The flowering of formal medicine in the expanding Arab–Islamic world included systematic work on materia medica as Arab armies overran new territories with different assemblages of medicinal plants, animals and minerals. The expansion in medicinal knowledge is evident in the seventh-century manuscript on materia medica by Ibn al-Baytar which listed over 3,000 items, whereas that of Dioscorides had included only about 850. Arab–Islamic medicinal knowledge was written down and transmitted in a book trade that stretched from Spain to India. It was made available to literate lay people in popular introductory texts (Conrad 1993:703–7). Much of this corpus was translated into Latin in the eleventh century, introducing to Europe the wealth of Arabic knowledge of drugs.

In early modern Europe (1500–1700) the lively movement of medicines (as well as texts about them) is well documented. Enormous efforts were made to retrieve the drugs described in Dioscorides’ Materia Medica. ‘Venice . . . ordered its diplomats, physicians, and traders in the Middle East and in the Mediterranean to be on the look-out for the plants that grew in Dioscorides’ stamping ground’ (Conrad et al. 1995:305). Seeds
and specimens were transported, some to be planted in the first botanical gardens at Pisa and Padua.

New remedies were brought to Europe from Asia and the New World, of which one of the most famous was the ‘Peruvian bark’, brought back to Rome in the early 1630s by Jesuit missionaries. Tried out successfully in Rome and Genoa against the ‘intermittent fevers’ of those malarial areas, it quickly spread throughout Europe. Physicians debated its fit into the Galenic system of humours (Jarcho 1993:19), just as Latin Americans would discuss the hot and cold properties of penicillin three centuries later. The bark was so esteemed that royalty made gifts of it. Supplies shipped back by merchants were stolen from warehouses or captured at sea by pirates (Jarcho 1993:201–2). The exotic drug challenged medical thinking and enjoyed a long cultural career in which it developed from a specific against ‘the intermittents’ to being used as a panacea (Maehle 1999:223–90). It was not until 1820 that the active principle quinine was isolated from the bark of the tree named Cinchona by Linnaeus. Its travels were to continue as plantations were established by the Dutch in Java in the nineteenth century (with seeds smuggled out of Peru and Bolivia); they provided almost the entire world supply of commercial quinine up until the Second World War.

More mobile medicines

Throughout most of history medicines have been made from plants, animal parts and minerals through drying, grinding, decoction. This was certainly true in Europe as attested by the pharmacopoeias, books of standard drug recipes, published by medical academies in Florence, Lyons and London from the late Renaissance. After the time of Paracelsus (1482–1546) the methods of medical (iatro-) chemistry spread a new kind of drug production through much of Europe. The new technology came to be associated with those who challenged the dominant Galenic methods of established medicine and also with social reform (Temkin 1964:5; Conrad et al. 1995:318–23). Yet although iatrochemistry gained wider currency, herbal medications were still the most commonly used in Europe right up through the eighteenth century.

The revolution in drug production came in the nineteenth and twentieth centuries and laid the ground for a truly exponential increase in the movement of medicines. It built on advances in physiology, chemistry and pharmacy in France, and most dramatically in Germany. From the early 1800s, methods for extracting pure drugs, or active principles, from crude natural products were developed. At the same time, the new science of pharmacology was being professed (Weatherall 1993).

From the mid-nineteenth century, the ‘fine chemical’ industries in Germany began to synthesize drugs and produce them on a large scale. With World War I, American, English and French companies began their own industrial production to ensure supplies. Then, in the late 1930s the first sulfa drugs were developed and this set off a flurry of activity as the potential of anti-infective drugs became apparent. But it was not until after the Second World War, when antibiotics, including the new drug penicillin, were made widely available, that ‘the great drug therapy era’ opened. The pharmaceutical scene was transformed. Teams of scientists in industrial laboratories developed new drugs as well as ‘me-too’ products that duplicated existing ones but were marketed as different.

Thousands of synthetic products replaced the limited number of natural origin available before 1935. Both prescription medicines and the increasing number of over-the-counter (OTC) drugs were heavily promoted (Silverman and Lee 1974:5–22). The movement of medicines that had long existed on a modest scale became a mighty current as drugs were pumped out onto national and international markets.

Mass produced biomedical Pharmaceuticals spread to Asia, Africa and Latin America with remarkable speed. By the 1960s, antibiotics were being incorporated in the materia medica of Ayurvedic practitioners in India (Taylor 1976). By the 1970s one critical observer was writing about ‘the drugging of the Americas’ (Silverman 1976). While the vast majority of pharmaceuticals were and are manufactured in Western industrialized countries, some developing countries established their own production. By 1980, about 11 per cent of pharmaceutical production (by value) was located in Third World countries, mainly India, Egypt, Brazil, Argentina, Mexico and South Korea (Melrose 1982:28–9). The globalization of synthetic pharmaceuticals made a vast array of products available in poor countries, and prompted a growing concern about the dangers of misuse and waste of scarce resources. It was in the 1980s that the concept of essential drugs, inexpensive and safe medications for the most common diseases, gained notice, mainly through promotion by the World Health Organization (Mamdani and Walker 1985; Kanji et al. 1992: 28–41).

It is against this historical background of mobile medicines that we can set the development of an anthropological interest in materia medica. However, it is important to note that while historians and activists focus on the movement of medicines, anthropologists combine that interest with questions about why medicines are so attractive to people. What do they mean that could explain their movement from hand to hand and place to place? How is their movement shaped by social relations and how does it in turn shape those relations?
**Anthropology takes up the study of medicines**

The cultural (symbolic) logic of transformative substances was discerned by early anthropologists in 'primitive' societies. Since the publication of *The Golden Bough* by Sir James Frazer in 1890 (see chapter 3), anthropologists have attempted to understand how people conceive of forces as incarnate in, susceptible to the influence of, or powerfully represented by, material objects. They emphasized the possibilities this opens for communicating and controlling in an uncertain world. Studies of magic and fetishism showed how people manipulated things, including substances made for the purpose, to transform people and situations. In his classic treatment of magic, Malinowski wrote about 'material objects ... substances best fitted to receive, retain, and transmit magical virtue, coverings designed to imprison and preserve it until it is applied to its object' (Malinowski 1948:72). 'Magic is the quality of the thing, or rather, of the relation between man and the thing ... It implies the performing magician quite as much as the thing to be charmed and the means of charming' (1948:75). The questions to be asked concerned how substances carried meaning within a cultural world and how people used them for their particular purposes.

Several generations of anthropologists theorizing cosmology, ritual and symbolism explored these relationships. Lévi-Strauss was one giant in the landscape, explicating the 'science of the concrete' (Lévi-Strauss 1966) and the effectiveness of symbols (Lévi-Strauss 1963). A key landmark was the work of Victor Turner, pointing to the way symbols condense and unify different meanings. Before medical anthropology was established as a field, he was already writing of the overlap between 'medicine' as 'drug' and as 'ritual symbol' (Turner 1967:335). He showed how the meaning of Ndembu materia medica was mobilized as herbalists took ritual steps to awaken 'the powers hidden and slumbering in herbs' (1967:350).

With the growth of medical anthropology as a specialized field in the 1970s, the approaches already developed for studying rituals and symbols were widely applied to illness, healing and medicines. Building on the tradition of fieldwork in local communities, much medical anthropology concentrated on showing how seemingly exotic healing practices made sense. Within the 'ethnomedicine' approach, indigenous medicines were placed in relation to the cosmos, ritual and knowledge of a local (usually ethnic) group, as Turner had done. It was an approach whose great value was contextualization; healing practices made sense in relation to the shared meanings and social arrangements of the setting. Its weakness was that context was often presented as integrated tradition, a homogeneous, static view of local culture and society.

An alternative approach was rapidly gaining prominence. The notion of medical pluralism focused attention on the co-existence of different healing traditions within the same society. This was clearly useful in complex societies such as India, where different kinds of sacred and secular, professional and popular traditions flourished side by side (Leslie 1975). But with the spread of biomedicine in the wake of colonialism and international trade, the concept served to underline that all societies had several modes of conceiving illness and practicing treatment. The development of a research interest in medical pluralism was a precondition for the medical anthropological work on pharmaceuticals.

A few early pioneers drew attention to the spread of pharmaceuticals that accompanied the worldwide dissemination of biomedicine. Alland's study of Abron healing (1970) in the Ivory Coast contained a clear statement of the attraction of Western medicines (in contrast to Western medicine). Michael Logan (1973) showed how pharmaceuticals fit into Guatemalan humorous concepts. Cunningham's work on 'injection doctors' in Thailand (1970) drew attention to the popularity of hypodermic injections. However, these studies were exceptions to the dominant interest of anthropology in exotic cosmologies and ritual practices.

In the 1980s, fieldworkers were beginning to de-exoticize the study of medicines in non-Western settings (Van der Geest 1984). Research on the meaning and use of aspirin and penicillin was becoming just as legitimate as studies of fetishes and purifying herbal enemas. This was probably due in part to the simple fact that biomedicine, and particularly 'biomedicines', were genuinely popular and heavily used in many societies of Africa, Asia and Latin America (Foster 1984). Moreover, Illich's (1976) attack on biomedicine's expropriation of health and radical critiques of the pharmaceutical invasion of the Third World (Silverman 1976; Gish and Feller 1979; Medawar 1979; Medawar and Freese 1982; Melrose 1982; Muller 1982; Silverman et al. 1982) had caught the attention of some academics.

Researchers documented the local realities in which medicines were actually made available and used (Nichter 1980; Haak 1988; Nichter and Nordstrom 1989; Etkin et al. 1990). They showed the significance of the transaction of medicines through commercial and informal channels (Ferguson 1981; Van der Geest 1982a, 1982b; Fassin 1987), and emphasized that most pharmaceuticals, even regulated 'prescription only' drugs, were taken as self-medication, that is, without the supervision of a formally trained health worker (Haak and Hardon 1988; Hardon 1991). The first edited volume on the topic wove together themes concerning transactions of pharmaceuticals and considerations of the meanings attached to them (Van der Geest and Whyte 1988). These topics were
followed up in a second anthology (Etkin and Tan 1994) that included more articles on the practical problems of ensuring biomedically effective use of medicines in the conditions obtaining in countries of the global South.

Analytical moves

As older paradigms of modernization and development were supplemented by analyses of transnational cultural flows (Appadurai 1990; Hannerz 1992), anthropologists focused on the way that political ideals, entertainment, institutional forms, fashions and commodities both transformed and were transformed by the contexts through which they moved. Biomedicine is one of the best examples of globalization; it is truly cosmopolitan, not Western, medicine (Leslie 1976). In diverse social settings it provides a particularly appropriate empirical base for addressing newer theoretical issues concerning cultural globalization (Parkin 1995).

The older interest in ‘medical pluralism’ (Leslie 1975; Janzen 1978) took on new facets with the appreciation that oppositional identities are one possible outcome of globalization. Attending to pharmaceuticals facilitates understanding of how ‘traditions’ come to appear distinctive while simultaneously influencing one another deeply. Pharmaceuticals and ‘indigenous’ medicines take on meaning in contrast to one another (Sussman 1988; Nicter 1989:195–6). At the same time, pharmaceuticals may provide a prototype in terms of packaging and marketing for ‘indigenous’ medicines (Afdahl and Welsch 1988; Leslie 1989; Tuchinsky 1991). One outcome of this process was an emphasis on the medicinal aspect of other systems of healing as ‘traditional’ medicines gained ideological weight in opposition to synthesized pharmaceuticals, and became increasingly commercialized.

Pharmaceuticals may also be directly incorporated in a medical tradition notionally distinguished from biomedicine, as has been reported from South Asia (Bhatia et al. 1975; Burghart 1988; Wölfers 1988). The model of medical pluralism is further problematized by the appearance of pharmaceutical specialists who belong neither to the tradition of biomedicine as practised in formal health institutions, nor to the tradition of indigenous medicine. These ‘quacks’ or ‘charlatans’ or ‘bush doctors’ or ‘injectionists’, as they are called by the professional ideology, suggest that notions like ‘creolization’ (Hannerz 1987; Whyte and Van der Geest 1994:138–9) or ‘counterwork’ (Fardon 1995) which emphasize the creative revision of forms and ideas may be more useful than the idea of pluralism for grasping the dynamics of pharmaceuticals in complex health care systems.

In recent decades, an increasing interest in Western culture and its products meant that biomedicine came to be seen as a cultural phenomenon worthy of study. As the ‘exotic bias’ diminished, more anthropologists from both the North and the South did fieldwork in their own societies on aspects of popular culture and everyday life. Capsules, tablets and hypodermic syringes were no longer taken for granted and ignored; they could be defamiliarized (denaturalized) and analysed in terms of the meanings people attributed to them in settings as different as Uganda (Birungi 1998), the Philippines (Tan 1999), the United States (Vuckovic 1999) and France (Painzang 2001).

A renewed interest in material objects (Miller 1995) and their consumption cast older Marxist approaches to commodities and fetishism in a new light (Douglas and Isherwood 1979; Appadurai 1986; Ellen 1988; J. Ferguson 1988) and provided a bridge between culture and economy. The ‘thinginess’ of medicines and their tendency to become commodities suit them extremely well to this perspective. Seeing medicines as material culture opens up two sweeping vistas. One has to do with processes of commoditization, globalization and localization. The ‘zations’ (Anderson 1996:296, quoting L. Cohen) view is the broad one of social and political economic history, in which medicines not only move, as they always have done to some extent, but where their movement has implications about influence, dependence and transformation.

The other vista has to do with the positions of medical materials in technologies of health care. If we think of technologies as ‘practical arts’ with purposes, and consider the relations between people and objects in accomplishing these purposes, then we will be led to examine the ways in which artefacts are extensions of people in some situations, and fiercely contested in others (Pickstone 1994). It is possible to ask questions about powerful substances as part of a complex of institutions, technologies and practices characterized by styles of reasoning (Cambrosio et al. 2000:5). We can look ‘at how [people] perform things, rather than at the frozen products of those performances’ (2000:8).

The social lives of medicines

In Appadurai’s introduction to the anthology The Social Life of Things (1986) and in Kopytoff’s contribution to the same book, the notion is proposed that things have biographies. That is, it is useful analytically to trace the careers of material things as they move through different settings and are attributed value as singularities or as commodities for exchange. We used this idea to organize a review of the literature on pharmaceuticals: their production and marketing, their prescription, their
distribution through intertwined formal and informal channels, their deaths through one or another form of consumption, and finally their lives after death in the form of efficacy in modifying bodies (Van der Geest et al. 1996).

In reality of course, things alone do not have a social life. At most they can be seen as agents in the sense argued by actor-network theorists: they form parts of complexes that co-produce effects in particular situations; things and people both can be seen as actors in that they mutually constitute one another (Prout 1996). But even if one does not accept the radical position that things and people are equally agents, it is essential for anthropologists to describe the lives that medicines have with people and between people. These lives are imbued with the practical artfulness and purpose that characterize technology. They are lived in relation to problems and contexts.

It is these qualities that we want to capture in the chapters that follow. Each builds on an ethnographic description of medicines in a specific place in Europe, Asia, the Americas or Africa. Each shows medicine in the hands of particular types of actors, moving between persons in certain kinds of social relations. The first four chapters take the perspective of consumers of medicine and the following four give more weight to the providers. Finally, we focus on the strategists who manufacture and market medicines, and those who attempt to regulate them. Thus we move from the intimate relations of mothers and children, to the global ones of the World Health Organization and the member states for which it formulates policy. Each chapter concentrates on a different analytical problem in the study of medicines, one that seems well illustrated by the empirical case. Theoretical discussions and comparative material from other places are brought in to develop the main point. As each issue unfolds, it comes to overlap with some of the others. We hope in this way to give a sense of coherence, without forcing material and concepts into one tight paradigm.

The consumers: meaningful medicines at work

We begin with mothers and children in Metro Manila and the problem of efficacy – a logical starting point since drugs are used for their effects. In poor neighbourhoods of Manila, women say that cough and cold remedies dry up or ‘ripen’ colds, drive out phlegm and stop coughing. But there is a strong element of habit in their use of these remedies. They do not posit causes of colds, or experiment empirically to choose the most effective medicine. This ‘habitual’ form of therapeutic practice, noted many years ago by one of the ancestors of medical anthropology (Ackerknecht 1946), suggests that we need to consider efficacy very broadly. Drugs have effects on the mindful bodies of individuals; in speaking of the ‘meaning response’ (Moerman 2000) or the ‘placebo effect’, we recognize that social and psychological factors contribute to these individual effects. But drugs also have social and performative effects in the way they confirm sickness, and demonstrate the character and intentions of those who administer them. Using a commonly recognized treatment in a habitual (unarticulated, unconscious) way has this kind of social efficacy.

The problem of efficacy relates to perceptions of the powers of medicinal substances. This brings us to the symbolic nature of medicines and the question of not what, but how, medicines mean. In chapter 3 we move from the slums of Manila to the Sahel Plains of Burkina Faso. Whereas Manila mothers use medicines from the local shop, Mossi people prepare remedies from plants and animals in their locality. The logic they use is one of connections between causes, symptoms and treatments of illness. A disease that makes a child’s skin stiff and shiny like that of a snake may have been caused by its mother stepping over one, and should be treated with snake skin. Among the users of biomedicines, as among the Mossi users of plant and animal substances, symbolic associations may be metaphorical (analogies of likeness) or metonymic (connections of part and whole, for example). When medicinal substances with such meaningful associations are applied to ailing bodies, they concretize the problem and thus make it accessible to therapeutic action of a fitting symbolic nature. Suggesting connections and making disorder and its correction tangible is the symbolic and very practical work of medicines, even those synthesized in factories and prescribed by doctors.

This insight leads on to the next analytical problem, that of control. The materiality of medicines makes them graspable tools in the effort to control disease. But control is a tricky matter. In chapter 4, we see this illustrated in the case of distressed Dutch women controlling their anxiety with benzodiazepines. Whereas medical professionals speak of controlling or managing a disease with medication, the users of medicines are usually trying to control not just their physiological symptoms, but their situation. That is, they are trying to make adjustments so that they can manage their lives and projects. Medicines are empowering in that they offer users a means of control. In making this assertion, we place medicines within the lifeworlds of situated actors. But we must distinguish between control in the short term, and longer-term consequences of using medicines to deal with problems. Control may lead to being controlled. Drug dependence is the most obvious form of subjection. Social scientists point to others as well. Defining a problematic situation as tractable through medicines may
eventually increase the control of medical professionals and ideology—the process called medicalization. This may leave people feeling dependent on doctors and drugs to understand and deal with their problems.

Scepticism about biomedical drugs is the theme of chapter 5. We listen to patients in London who express their doubts about pharmaceuticals and their resistance to biomedicine. Some see them as dangerous to health. Many contrast the artificiality of pharmaceuticals to the authenticity of nature and natural medicines. This kind of oppositional thinking about medicines, so pronounced in the alternative, or complementary, medicine movement of our day is found in other versions where biomedicine is seen as an imported medical tradition. Despite the global popularity of pharmaceuticals, resistance to certain kinds of biomedical drugs, or critically characterizing the whole category of Western or allopathic medicines, is reported from many developing countries. We suggest that scepticism be seen as a kind of cultural politics, in which medicines are used to express issues of identity, control and power. Oppositions may be implied more than explicated. For the users of drugs, the personal is political in that they critically evaluate the larger connotations of putting medicinal substances into their bodies.

The providers: medicinal commodities and social relations of therapy

Turning towards the providers of drugs in the next section, we begin with drug vendors and their customers in a West African market. Commodification is the theme of chapter 6. The example from Cameroon illustrates how antibiotics are sold like other commodities, having effectively escaped the regulation that was intended to restrict their free exchange. This situation is common in many developing countries. It works to the advantage of those who make their living by selling medicines and it is also welcomed by the customers. Commodification can be understood in two different senses: medicines are commodified; and in a larger sense, so is health. Following Appadurai and Kopytoff, we show how the things themselves are divorced from the enclave of professional control and made common. That is, they are freely accessible and available to anyone with money; they are familiar and popular. The commercial interests in these valuable items ensure that they reach the remotest villages. They have lively commodity careers. This must be seen in terms of the other meaning of commodification: the idea that health can be purchased in the form of medicines or even that recovery from any illness requires buying medicines.

In the following chapter, we continue with the topic of selling drugs, but use it as a way of examining the articulation of sectors in health care systems. The ethnographic setting is Mexico and Central America. The actors are pharmacists and their customers. Ideally pharmacists are professionals who fill prescriptions written by doctors. They are part of the formal and professional sector of biomedical health care. In reality they bridge sectors. Pharmacists often function like physicians, providing advice along with medicines, even suggesting diagnoses. In Latin America, as in many parts of the world, the attendants in drug shops are often not trained pharmacists. Restrictions on sales of prescription drugs are not necessarily observed; that is, pharmacy shops function like part of the informal sector. As members of the local community, ‘pharmacists’ may share local ideas about medicines, rather than adhering strictly to standard biomedical guidelines. They may thus bridge the distinction between biomedical and indigenous or traditional medicine, perhaps selling both kinds. In a sense, commodification is the dynamic here, mixing, bridging and breaking through notional boundaries.

One kind of provider of medicines well known in many developing countries is the injectionist. Chapter 8 sets out the history of injection provision in Uganda as a basis for discussing the issue of technology. Injections are extremely popular ways of administering medicines; in fact most households own their own needles and syringes. With injectable chloroquine and penicillin for sale in local shops, ‘high tech’ medicine is readily available. In order to understand the use of injectable medicines today, we must analyse technology in the broad sense of material culture linked to knowledge, procedures, social roles and meanings. Like all technologies, injection practices in Uganda have purposes (injection is a practical art) and institutional histories. They became routinized as the highest standard of care in formal biomedical facilities. They gained social efficacy as the recognized token of ‘best treatment’ carrying a moral connotation about the quality of therapeutic relationships. In time they were commodified, made common, as providers offered them for sale outside of formal health facilities. Their meanings are shaped by local ideas of illness and the body, but in turn injections form those ideas by symbolically localizing illness in the flesh and blood. In the era of AIDS, new meanings concerning trust and personal relations have been attributed to injection equipment.

Physicians are the prototypical providers of medicines in professional medical traditions. In writing prescriptions, they communicate instructions about medicating disease. Chapter 9, about prescribing doctors, takes the theme of communication and unfolds it to show the many ways, in addition to inscription, that physicians communicate with patients about medicines. In fact, they communicate with and through medicines, as well as about them, as shown in the example from Sri Lanka where...
verbal communication is minimal. In a busy clinic, where high-caste doctors were treating poor, low-caste patients, there was limited verbal exchange about symptoms and diagnosis. The two parties had different perceptions of illness, and there was no time for dialogue. Both had great confidence in the medicines, however, and the act of prescribing functioned as a positive gesture that allowed them to avoid discussing their differences. Writing a prescription is an effective way of ending a consultation, and conveying authority and concern. Yet in other situations, the doctor does try to communicate with the patient about symptoms, and here medicines with their concreteness provide effective ways of pointing up elusive sensations. Adjusting prescriptions is a procedure that helps doctors to communicate about pathological processes. A patient consulting a doctor of Chinese medicine may become more attentive to changes in her mindful body knowing that she must monitor them in order to report to her practitioner who adjusts the medication in follow-up visits. Thus prescribing, with its writing, its dialogue about materia medica and its unspoken (mis)understandings is a rich communicative practice with implications for the patient's experience of illness and the doctor's ability to reach out to patients.

The strategists: marketing images and regulating practice

In the third section of the book, we turn away from the immediate concerns of ill people and the practices of passing medicines from providers to users. We focus on the strategists, who plan and direct the movements and uses of medicines from more distant positions. Chapter 10 is about the manufacturers of commercial medicines who market their products to both users and providers. The example of companies making 'traditional' Ayurvedic and Unani medicines in India shows that manufacturers are producing images as well as material things. In many ways the companies are modelled on those that manufacture biomedical pharmaceuticals. They test their products and make scientific claims about their efficacy. At the same time, they distance themselves from biomedicine by underlining the superiority of the Indian tradition with its values of purity and harmony with the environment. Ethnographic studies of pharmaceutical companies are extremely rare. But by studying marketing practices (advertising, package inserts, the activities of sales representatives), it is possible to trace the cultural economy of the manufacturers. The market, culture and medicine form three sides of a triangle. Commercial aims are clothed in cultural values of scientific integrity and humanitarian concern. They play on local values and images, while claiming the legitimacy of a universal science.

In the headquarters of international organizations, in national ministries of health, at conferences in big hotels, in the offices of donor agencies, other strategists are concerned with medicines. Chapter 11 focuses on health planners concerned to improve the availability and effective use of medicines. It presents the case of the attempt by the World Health Organization to establish and implement an Essential Drugs Policy that would encourage rational and economical choices concerning drugs. Limited resources should be spent on drugs that are necessary, effective, safe and affordable for use against the most common treatable diseases. In many ways the policy was seen as inimical to the commercial aims of the drug industry. It encouraged health managers to evaluate the market critically and to choose on the basis of objective health needs, rather than demands nurtured by the pharmaceutical companies. Two analytical issues emerge clearly in connection with the analysis of medicines in the hands of health planners. One has to do with the process of policy formation, in which different interest groups contend. The drug industry, doctors and AIDS activists lobby against some or all of the limitations on drugs to be purchased in the public sector. Private sector commercial interests are reluctant to accept regulation on what drugs they may sell. The second issue concerning the planners has to do with the effects of policies. Health planners produce papers, and dispute about the contents of the papers. But translating paper policies into action is a complicated affair. For in reality drugs are in the hands of all the kinds of actors highlighted in this book. Assumptions about efficacy, symbolic associations, hopes for control, scepticism, commodification, lack of strict regulation in health systems, the seduction of technology, communication by prescription, and commercial interests all play in to the circulation and use of medicines.

The book concludes by considering a category of actors that has been implicit throughout: anthropologists who describe and analyse the social lives of medicines. Through participant observation we too are caught up in the sociality of medicines and take stances on the kinds of knowledge we produce and the ways it is used.
In this book we have been following the social lives of medicines in the hands of different actors: mothers of children in Manila, villagers in Burkina Faso, women in the Netherlands, consumers in London, shopkeepers in Cameroon, pharmacists in Mexico, injectionists in Uganda, doctors in Sri Lanka, industrialists in India and policy makers in Geneva. One important category of actors has been left implicit, however: we ourselves, the authors of these chapters. For us, anthropologists, medicines have still another meaning and another type of life; in our hands and on our paper they are intriguing cultural objects. They embody anthropological ideas about the power things have over people, and about the power relations between people mediated through objects, about symbolization, about medicalization, and about the process of globalization.

If medicines are life-saving objects to mothers with children, symbols to explain the world to African farmers, profitable commodities to traders, pharmacists and manufacturers, and tokens of concern to prescribing physicians and their clients, they are first of all topics for writing and reflection to anthropologists; they are good to think and good to write about. In people’s ways of dealing with medicines all facets of cultural reasoning and action come to the fore, as we have tried to show in these chapters. At the same time, however, medicines are not purely an academic issue for anthropologists. We too accept their power to alleviate suffering and their significance for the people with whom we work.

**Anthropological lives with medicines**

Each of us encountered medicines as worthy of research in situations that were as much ‘everyday life’ as ‘anthropology’. During our research medicines ‘struck’ us as being of the utmost importance for survival to the people we were staying with. We had to focus our attention on them. Ignoring pharmaceuticals, we realized, was the result of an inverse type of ethnocentrism among anthropologists who were only interested in
'difference', in exotic phenomena, and who did not have to worry about access to medication when they were sick.

Sjaak van der Geest was first drawn to the study of pharmaceuticals when he was doing fieldwork on sexual relationships and birth control in a rural town in Ghana. During that research young people repeatedly told him that they used a certain medicine to prevent pregnancy and that they used the same medicine to terminate a pregnancy which they had failed to prevent. Students at the university, he soon found out, were using the same medicine for the same purposes. The name of the medicine was 'Alophen'; it was for sale in all drugstores he visited, in Accra as well as in rural towns and villages. Alophen, he discovered, was a purgative produced by a company in Detroit. How this product had come to play the role of most popular contraceptive for Ghanaian youth was a riddle. His curiosity and concern grew further when he found out that doctors and other medical professionals were unaware of the social life of Alophen; worse, they had never heard of it. The popularity and wide-spread use of foreign-produced medicines outside the knowledge and control of the professional medical world proved not only intriguing to him but also of life importance to those using them. Suddenly he began to see pharmaceuticals everywhere: in shops, at the market, in small kiosks and in private houses. Some of them were relatively harmless, others were dangerous prescription-only ones. A few years later he started his research on the distribution and use of pharmaceuticals in Cameroon.

Susan Whyte's anthropological life with medicines began with the realization that medicines from distant places formed a kind of alternative to the ritual treatments of misfortune she was studying in Uganda in 1970. She was intrigued with the way people attributed special power to medicines from the Indian Ocean island of Pemba, to amulets made of recycled cartridges and tin cans, and even to the fearsome 'batri', said to be extracted from the imported battery cells used in flashlights and radios. She also caught glimpses of specialists in another kind of foreign medicine, the lay injectionists who discreetly administered penicillin to their neighbours and earned a bit of money. Returning two decades later, she found there was nothing discreet about the booming business of 'European' medicines that had spread even in rural areas. Pharmaceuticals had become folk medicines. As Whyte explored the lively trade in pills, capsules and vials of injectable medicine, she was led to problems in the national health services as well as to local conceptions of the power of medicines. The fact that Denmark, where she lived, was supporting the Uganda Essential Drugs Programme challenged her to consider policy implications of what she was learning in ethnographic fieldwork. At the same time, commitment to a community she had known over many years, where infectious diseases continued to bring suffering and death, inspired her to think pragmatically. Together with a team of Ugandan researchers she became involved in the Uganda Community Drug Use Project with the purpose of contributing to improved use of those indigenized foreign medicines.

Anita Hardon was confronted with problems in the use of medicines when she was conducting fieldwork on the complex interactions between nutrition and infectious diseases in small children in a rural village in the Philippines. Mothers repeatedly asked her for advice on medicines, showing her prescriptions, usually with four or five different medicines, mostly unnecessary for common childhood coughs and diarrhoeas. She decided systematically to review treatments given to the children and found that 80 per cent of all children's illnesses were treated without health workers' advice. Trained also as a medical biologist, she was concerned about the risks of uncontrolled use of medicines in self-care and irrational prescribing by doctors. She was asked by a community-based health programme trying to educate consumers on the 'rational' use of medicines in self-care to assess why the interventions were not having much effect. This study resulted in her thesis, which describes how people confront ill-health in an urban slum in Metro Manila. It also impelled her to become an active participant in the international advocacy movement Health Action...
International, which aims to increase access to essential drugs globally, to promote more appropriate drug use, to reduce the number of insensetive drugs on the market, and to regulate advertising to prescribers and consumers. In her later work, Hardon has turned to the social construction of pharmaceutical technologies, specifically contraceptives. She has been part of the international women's health movement, which calls for reproductive technologies to be developed and provided more in line with women's needs.

**Anthropologists handling medicines**

The brief sketches above raise issues about how anthropologists studying medicines have positioned themselves in relation to kinds of knowledge and uses of knowledge. Medicines have intrigued us, and fuelled our anthropological imaginations, yet ideas and practices around medicines were not simply data to be analysed. We were concerned about health problems and we felt that what we had learned had implications for health professionals and policy makers. But we did not necessarily think that our knowledge should be used simply to facilitate their agendas. Rather we wanted to use it to interrogate public health paradigms and professional practice, to draw attention to blind spots and biases, including the neglect of consumer agency. We also wanted, at times, to go beyond analysis and critique, to engage ourselves in concrete projects of action. Reflecting on the ways we as anthropologists have handled medicines, we suggest that there are three distinguishable positions, although much anthropological writing straddles more than one (Whyte and Birungi 2000).

As a method of knowing, ethnography demands (preferably extended) periods of engagement in some empirical world of lived experience. Through 'the revolutionary move of joining people where they live' (Hart 1998), ethnography should richly describe the situated concerns of particular people using specific medicines for the problems they think they are pressing. That kind of research practice, combined with the broad comparative perspective of anthropology, tends to give a view of all knowledge as contingent. What biomedical researchers believe about antibiotics is just one form of (ethno-)knowledge based in a certain kind of social practice. What customers in a Cameroon market believe about red and black capsules is equally legitimate and worthy of respect and understanding.

Such an approach could be called populist in its sympathetic portrayal of the lay users of medicines. At its best it unfolds lifeworlds and world-views; it shows how people experience symptoms and what choices and constraints guide their actions. Rational Drug Use? Users have their own form of rationality, as good ethnography reveals. The populist position emphasizes the agency of consumers of medicines. It tends to describe their criticisms of the professional providers of medicine and how they popularize it by obtaining medicines and knowledge on their own terms. A beautiful example is the citation of a statement made by an informant in Sri Lanka:

**Medicine cures, doctors control the knowledge of medicines and we are made dependent. We do not receive health education about medicines, only about using soap, drinking boiled cool water, and taking immunizations – things from which there is no profit. There are many things we want to learn, but they teach us only what they want us to know. Yet we are not helpless. Just as we have learned to use Sinhala Bahet (herbal medicines) so we will learn about ingiriisi (allopathic) medicines through experience.** (Nichter and Nordstrom 1989:367)

In the chapters of this book, the populist approach is strong. The sceptics who do not take their medicine in London, the Ugandans going to a trusted neighbour for an injection, the Cameroonians finding a way, when the formal health care system lets them down: we are trying to understand their reasoning in those situations.

The populist view valorizes consumers' capabilities and agency. In contrast, the 'enlightened' one doubts them. It reveals people's knowledge of medicines as inadequate; their medication practices are irrational, and they are likely to be victims of commercial interests. These criticisms are based on an informed position against which popular knowledge is measured and found wanting. Much applied anthropology takes an 'enlightened' stance, almost of necessity. When we co-operate with biomedical planners, policy makers and practitioners in projects whose aim is to improve health and health services, we often adopt biomedical standards for evaluating medication practices. Although 'critical' medical anthropology deplores the tendency of anthropologists becoming the 'handmaidens-translators to biomedicine' (Morsey 1996:32), it also seems perverse to refuse in principle to accept the knowledge of biomedicine when it has the potential to save lives. There are high rates of self-medication in countries where infectious diseases claim many children's lives. There is growing microbial resistance to safe and cheap drugs for infectious diseases. In these situations many anthropologists accept that it is important to compare lay people's knowledge and use of drugs to biomedical orthodoxy. But most would not focus only on the 'shortcomings' of lay people vis-à-vis biomedical ideals of rational drug use.

A critical version of the 'enlightened' position problematizes the knowledge and practice of both specialists and lay people. The proliferation of medicines is related to a transformation in consciousness whereby professionals and lay people alike come to believe (or know) that
medicines are the answers to their problems. From this position, as we have seen, some speak of 'false consciousness' generated by health commodification – the belief that health can be secured through medicinal commodities (Nichter 1989:235–6). Notions of ideology, hegemony and complicity are invoked in discussing the medicalization and pharmaceuticalization of suffering. Health professionals play the role of intellectuals, 'sustaining commonsense definitions of reality through their highly specialized and validating forms of discourse' (Scheper-Hughes 1992:171). Lay people are 'complicit' in that their everyday knowledge and practice, indeed their bodily experience, are oriented towards medicinal commodities as solutions to their problems. The knowledge and practices of both users and providers of medicines are found wanting. Against what standards are they measured? Neither Nichter nor Scheper-Hughes is explicit about this. But it seems safe to say that their criticisms are based on classic public health principles: recognition of the social/political/economic bases of health, social justice, disease prevention and health promotion, and rational drug use (pharmacological efficacy plus economic efficiency).

Much of the 'critical enlightened' view of medicines is directed against situations where people are using tonics, vitamins or other drugs deemed unnecessary, rather than taking steps to change the political economy of health. The critique is just as relevant to the use of 'indigenous' medicines. As Charles Leslie once wrote:

The bottom line in the discussions ... is how much choice people in poor countries should have in spending their pennies. Of course health care planners believe that they should not buy tonics to prevent premature ejaculation, or to make their sons more intelligent. They should deal realistically with the terrible problems in their countries, with malnutrition and infectious disease. (Leslie 1988:xii)

At some point, this discussion gets uncomfortable for practising anthropologists. The public health concept of rationality and progress can be taken to imply that rituals, symbols and other concepts of efficacy are at best irrational, at worst deceptive. Where that point lies is highly debatable.

To what extent should anthropological research simply ignore biomedical judgements about rational use of drugs, in order better to engage the perspectives and practices of the consumers and providers? At what point, if at all, should they make judgements about 'irrationality', unwarranted medicalization, incompetence or exploitation? There is not going to be agreement on this question. In fact, individual anthropologists are not even consistent with themselves in this regard. But we want to point out that this question arises more insistently for an anthropology of materia medica than it does for anthropological studies in other domains of culture. Drugs are special commodities.

A third anthropological position is possible, one we have called pragmatic. It emphasizes the participation part of participant observation, and takes applied research as an opportunity both to work for limited change and to create knowledge through practical grappling with problems. The attraction of this position is that it is contingent and processual: it is oriented to the 'truths' of a given situation as they happen over time. It requires an appreciation of differentiated perspectives and interests; and it learns about them by trying to change them. But there are difficulties here, too. The action researcher has to make a decision – at least a tactical one – about what practices should be changed, and s/he has to make alliances with parties interested in altering them. In doing that, anthropologists place themselves in a social relation to medicines and to other actors. They handle them not only on paper, but in the strategizing and exchanges of social life.

**An ethnographic agenda**

However we choose to position ourselves in relation to the sociality of medicines, anthropologists have a unique contribution to make in the form of rich and careful ethnography. Let us conclude, therefore, by supplementing Nichter and Vuckovic's (1994) research agenda with some suggestions for field research that arise from the foregoing chapters.

To say that medicines are social is to remind ourselves of two sides of the same coin. First, medicines take on meaning through common social experience in the context of social relations. Second, their use in social life has implications, immediate and long term, for those relations. Stressing the sociality of medicines raises certain kinds of research questions to be answered through ethnographic research.

**The logistics of meaning**

The first set of questions has to do with how medicines come to mean for people in particular situations. We have seen that medicinal substances link conventional images from everyday life (tethered donkeys) or from imagined worlds (pure nature, scientific laboratories) to bodily experience. But how do those images get confirmed as meaningful? Answering that question requires attention to the ways people learn about medicines in the course of their daily lives. Researchers have been most concerned with what medicines mean and what people know about them. They are only now beginning to ask how people acquire different
The authority of doctors, exemplified in that precious bit of script, was not laid to rest by family, neighbours and friends. Children in Manila assimilate knowledge about cough medicine in the course of being treated by their mothers. Mossi women sitting around a cooking fire exchange advice about the ashes of forked sticks as medicine for fissures around a child’s anus. But we have also seen how people learn through other kinds of relationships. Those Manila mothers saved the prescriptions they received from doctors, in case their child developed the same symptoms again. The authority of doctors, exemplified in that precious bit of script, was one among several social contexts for learning. Ugandans have learned the ‘best treatment’ for generations.

The growing forces of commodification have opened up new channels for getting to know medicines. The challenge for fieldworkers is to trace out empirically what kinds of social relations are involved. In some cases, familiarity and lack of social distance between seller and consumer seem to facilitate developing a common popular knowledge, as is the case with drug vendors and their customers in Cameroon. Advertising provides images to the public; but this seemingly anonymous communication may be personalized through discussions with the attendant in a neighbourhood drug shop about the merits of various brands. The commercial interests in manufacturing meanings for medicinal commodities present difficulties for this social logistics approach. But it is crucial to do ethnography along these lines in order to find out how images are formulated and communicated.

The social efficacy of medicines

A second set of research questions about the sociality of medicines concerns their social uses and effects. If we use the term efficacy, it is to raise the issue of whether the social workings of medicines are intended or seen as desirable. And by whom. Again, for ethnographers, these are empirical questions that require trying to understand the situated concerns of social actors as well as attempting to analyse connections of which the actors themselves may be unaware.

In an immediate sense, social efficacy is about what giving and taking medicines does for the social relationships of those involved. What are their intentions beyond getting rid of symptoms? Or rather, do the symptoms have social implications that are part of the problem? We have seen how complicated even these seemingly simple questions can be. Mothers in the Philippines were caring for their children in a context of high child mortality where they might be blamed for negligence. Women in the Netherlands were trying to exert some control over their lives so that they could manage their jobs, children and husbands. Many Americans ‘buy time’ with medicines, in order not to miss work (Vuckovic 1999).

How is the enactment of medication understood? Whatever the intentions of people interacting through medicines, the social meaning of offering and receiving medicine can differ. To be a compliant patient in a Dutch psychiatric hospital may be virtuous in the eyes of the staff and a total loss of autonomy in the experience of an ‘inmate’. To reject modern medicine as artificial and turn instead to Bach Flower remedies is to perform a small statement about cultural politics. We have to enquire about the sense in which taking medicine is a social act as well as a medical one. Within relationships qualities like trust, authority, respect, concern and generosity are at stake. As a social actor, the consumer of medicines indirectly conveys something about his or her social identity as modern, enlightened, conventional, traditional, disciplined, critical or indifferent.

These kinds of research questions focus on direct interaction and immediate implications. But some of the most controversial aspects of social efficacy are about indirect and longer-term implications of medicine use for social relations. Like other forms of technology, medicines seem to be at the disposal of people; but people are also disposed by medicines to understand and deal with their problems in a certain way (Van der Geest 1994). This insight is the basis for the arguments that the mounting commercial availability of all kinds of medicines has far-reaching social effects. The growing presence of medicines creates an awareness of the need for medicines. This increases the wealth and power of those who supply them. And it also encourages people to define and manage their problems medicinally, emphasizing some kinds of social relations (with drug sellers and doctors) at the expense of others (such as environmental and social justice activists). We want to emphasize, however, that such conjectures about social efficacy should be subjected to empirical research in specific instances. That would mean examining the social effects of the composite, intertwined system of drug provision in general as we have sketched out in the cases of Cameroon and Uganda. Ideally ethnography on this topic would follow processes over time so that changes could be seen in historical perspective.

We hope that future anthropological work on medicines will produce ethnography on questions like these and thereby create a better basis for the development of theory and the application of knowledge.
as drug dealers, pickpockets and sex workers are cases in point, but politicians, salesmen and medical doctors may also not tolerate an anthropologist in their midst. Another problem may be that the people under research will present a false picture of their ideas and practices once they know they are being 'watched'. In such situations researchers are likely to resort to a more liberal interpretation of their ethical code. 'Classic' examples of undercover research in medical anthropology are Caudill (1958) and Rosenhan (1973), who did fieldwork in psychiatric hospitals (before the professional code existed). Tomson and Sterky (1986) and Wolffers (1987) made their research assistants pose as clients in order to collect reliable information on sale practices by pharmacists and drugstore keepers. This technique of using 'simulated clients' is often used to study health providers, especially the relatively powerless small-time drug retailers in developing countries (Madden et al. 1997).

4. A recent thriller by the popular author John Le Carré (2000) is a scathing indictment of multinational pharmaceutical companies that use the people in Africa as unwitting research subjects for new and expensive medicines.

5. The conflict of interests between manufacturers, patients, insurance companies and policy makers emerged clearly in the case that the pharmaceutical industry brought before the South African court to prevent the country from providing cheap anti-AIDS drugs to its citizens. The industry eventually dropped the case (April 2001) because of the negative publicity it produced.

11 HEALTH PLANNERS

1. Health Action International is an umbrella of consumers organizations, which specifically aims to ‘further the safe, rational and economic use of pharmaceuticals world-wide, to promote the full implementation of WHO’s Action Programme on Essential Drugs and to look for non-drug solutions to problems created by impure water, poor sanitation and nutrition’.

2. Country case-studies were done in Colombia, Nigeria, Tanzania, Kenya, Zimbabwe, Mozambique, Burundi, North Yemen, South Yemen, Sudan, Bangladesh, Indonesia and Vietnam.


References


