Health is no longer understood simply as an absence of disease in biomedicine, and well-being is sustained by improving on nature – an imagined state to be achieved by technologies of the present and the future. Epidemiological knowledge is used not only to identify risk factors for future diseases, but also to distinguish an increasing number of potential conditions that were until now considered part of 'natural ageing'. We are all 'patients-in-waiting'.[106] The growing array of biomedical technologies used to modify these risk factors promises to annul the effects of the past in the present – the accumulated burden of life's 'exposures' to noxious events, agents and even genes. Pharmaceuticals can lower cholesterol, increase bone mass and restore youthful hormone levels; they offer the possibility of enhancing life by targeting conditions previously thought to be unavoidable or irreversible. Medications such as Viagra or Cialis, initially marketed for erectile dysfunction in men, or antidepressants such as Prozac that are now marketed for a range of conditions including 'social phobia disorder', have brought about the possibility of striving to become 'better than normal'. For the wealthy few who can afford such interventions, they promise to reengineer bodies to an enhanced state of health.

In contrast, where biomedicine is not accessible or largely unavailable, the promise associated with it has become part of the local imaginary, with the result that many people go to great lengths and expend precious financial and social resources to obtain access to biomedical technologies.[107] Furthermore, pluralism – relying on more than one kind of medical assistance, often for the same condition – is centuries old. As we will see in the next chapter, not only biomedicine, but also literate medical traditions (Chinese medicine, Ayurvedic medicine, Tibetan medicine) have attained a global reach. In various locales these mobile traditions interact and even hybridize with biomedicine and with indigenous, non-literate traditions to create diverse therapeutic economies. Yet even as it travels, biomedicine largely retains the coherent set of ideas and ideals discussed above that are exclusive to it. Perhaps the most crucial position that differentiates biomedicine from other types of medical practice is its insistence that bodies can best be understood as standardized entities the world over. In contrast, virtually all other medical traditions pay careful attention to contingency when accounting for misfortune, often locating affliction in chains of previous events, local environments, the vicissitudes of various non-human actors such as the spirit world, or an imbalance between individual bodies and the cosmos. For biomedicine, the laws of biology largely dispense with local particularity; there is no ghost in the machine. This is the key to biomedicine's global reach, its universal claim to efficacy, and indeed its miraculous effects when technologies such as vaccinations, curative medication and surgery are put to work. Biology alone is the standard that enables biomedicine to claim global purchase on achieving human health and well-being.

The sociologists Geoffrey C. Bowker and Susan Leigh Star have defined a standard as 'any set of agreed-upon rules for the production of … objects [that] spans more than one community of practice'.[108] They add that 'standards are deployed in making things work together over distance and heterogeneous metrics', citing the example of computer protocols for Internet communication.[109] Most significantly, they add that 'there is no natural law that the best standard shall win – QWERTY, Lotus 123, DOS, and VHS are often cited as examples in this context'.[110] Biology itself may be viewed as a standard: it is the set of rules that makes biomedicine, and more specifically biomedical technologies, work across vast distances and in highly different settings – whether these be different 'communities of practice' (such as clinics or laboratories) or individual bodies. The next chapter shows how ethnography is a particularly useful strategy for revealing how biomedicine produces local and particularistic effects as it travels around the globe.

3

Anthropologies of Medicine

Two topics, one of 'medical pluralism' and the other of 'medicalization' are discussed in this chapter to illustrate how, in their analyses over the years, social scientists have situated biomedical practice in the context of cultural, social and political variables. This historically and ethnographically grounded approach shows how political and economic interests, prevailing moral concerns and gender bias are often embedded in biomedical knowledge and practice. Furthermore, social science research has made it starkly apparent that clinical biomedicine targets the isolation and treatment of the material body, based on the assumption of its universality and the associated idea that illness is deviation about a standardized 'norm'. This focus guarantees that biomedicine, scientifically grounded though it is, nevertheless embraces unexamined moral assumptions. In so doing, the social and political origins of disease and illness are set to one side, and local understandings about health and well-being are minimized or even disregarded. It should be noted at the outset that the ideas of both medical pluralism and medicalization have been steadily transformed over the years, to the point that some now argue that use of medical pluralism should be superseded, as we will see below.

Until recently the majority of social scientists have paid little attention to an anthropology or sociology of medicine and, in common with the majority of scientists, have assumed that the 'body proper'[1] falls fully into the domain of the natural sciences. But, in striking contrast to medical scientists who pry open the material body to expose the truths hidden therein, many social scientists prefer to leave the body 'black-boxed' and give it little or no attention.

The Body Social

An assumption of a marked dichotomy between the 'natural' and the 'social' order so evident in European thinking since the Enlightenment is widely recognized as a product of Western metaphysics.[2] This stark separation of the social and intellectual life of humankind from the natural world – a separation assumed to be ordered by universal laws – facilitated the formation of the natural sciences as a discipline and also exerted a profound influence on social science theory from the early part of the twentieth century. Émile Durkheim in *The Elementary Forms of Religious Life* wrote: 'man is double'; in Durkheim's estimation a 'higher' morally imbued 'socialized' body could be distinguished from the universal physical body common to us all. For Marcel Mauss, Durkheim's nephew, and others who became a close-knit working group that published the journal founded by Durkheim, *L'Année Sociologique*, the corporeal body was conceptualized as a *tabula rasa* – the 'first and most natural tool of man'. Their assumption was that the body itself is a stimulant to the mind to model and represent the social world as being congruent with both the natural world and the human body.[3] Another pupil of Durkheim, Robert

An Anthropology of Biomedicine, Second Edition. Margaret Lock and Vinh-Kim Nguyen.

Hertz, wrote about the way in which the body is 'good to think with'[4] and noted that the ready availability of the body as a referent 'naturalizes' the social order. The idea of society itself, social taxonomies and categories, and embedded social hierarchies, were thus made 'natural' and unquestionably real.

From the mid-1930s Mauss made a break with Durkheim when he explicitly argued for 'a "triple man", one who is not only biological and social but in whom the psychological acts as mediator, bringing about the "total man"'.[5] Mauss vividly demonstrated for the benefit of his lecture audiences how specific bodily techniques, some of which he learnt in the army, create physio-psycho-sociological assemblages of human action. In effect rejecting the position of Comte and Durkheim, Mauss posited the psychological as a mediating factor between the social and the biological, 'thus creating a small space for the embodied individual as a wilful actor, with both the potential to resist the normative social order under certain conditions, and the capacity to display an irreducibly social character'.[6] However, interest in Mauss's theories was not sustained, and throughout most of the twentieth century, following the Durkheimian tradition, the material body was deliberately set to one side as a 'black box', the contents of which were ruled inessential for sociological analysis. The philosopher Russell Keat commented on this phenomenon by pointing out that a good deal of time has been spent in the social sciences and humanities throughout the latter half of the twentieth century in discussing the distinctiveness of human beings, while at the same time holding to an assumption about the non-distinctiveness of the human body.[7] Even as we write at the beginning of the twenty-first century, the interiority of the body remains notably absent from most social science literature, suggesting rather graphically that researchers continue to subscribe to a nature–culture dichotomy in which the body interior, an assumed universal, is fully consigned to the domain of the biological sciences, where it most appropriately belongs.

Similarly, post-Enlightenment European and North American philosophers have attended more to the life of the mind than to the body itself.[8] There are, of course, notable exceptions, amongst them Karl Marx, Frederick Engels and Walter Benjamin to name the best known. Maurice Merleau-Ponty, in his *The Phenomenology of Perception*, deliberately set out to overcome mind–body dualism by taking bodily sensuous experience as primary. His phenomenological approach is a conscious rejection of the Kantian humanist tradition in which a transcendental ego claims to know the objective world using an abstracted, rational perspective. Merleau-Ponty argues instead that embodied, intentional selves interact with the world and that this interaction, largely mediated via perception, precedes all knowledge production. But Merleau-Ponty nonetheless directs attention to what he believes is universal individual behaviour. His theory does little to overcome nature–culture or nature–society dualisms, and these categories were not problematized by him. The assumption of a uniformly standardizable 'body proper'[9] has survived with little substantial criticism for many years. Not surprisingly, perhaps, for many social scientists, philosophers and bioethicists alike, the dominant understanding of the individual body from which societies are supposedly assembled continues to be thought of as 'a skin-bounded, rights-bearing, communicating, experience-collecting, biomechanical entity'.[10]

A recent turn once again towards materiality, notably in the field of cultural studies with its interest in the flesh and in body surfaces, has done little to relieve this situation.[11] However, several theorists, including Bruno Latour, Margaret Lock, Ian Hacking, Donna Haraway and Karen Barad, take a radically different stand from the majority of earlier writers. These individuals have worked explicitly to set out new approaches to the human body in which the reality of the material is not denied for one moment but, equally, the biological body is not accepted as a universal entity that we will ultimately fully apprehend by means of scientific investigation.

Our primary purpose here is to give readers, in particular those with little or no experience of social science research, an introduction to the manner in which investigations by social scientists have richly demonstrated how medical knowledge and practice of all kinds is deeply social. Throughout the twentieth century emphasis has been given in anthropological research to knowledge production in connection with health, illness, healing and related practices worldwide, showing conclusively that such knowledge cannot be fully comprehended in isolation from social, cultural and political contexts. Initially the focus was on medical traditions other than biomedicine, but the way was paved for arguments claiming that biomedicine too should be analysed in sociocultural context, a position arrived at first by insightful sociologists, and then followed by anthropologists.[12] Frequently buttressed by the work of Michel Foucault in which he considered the epistemological foundations of modern medicine, social scientists began in the 1970s to analyse the way in which the discourse and practices of biomedicine are permeated not only by political forces but also by social and cultural forces.[13] The work of historians discussed in the previous chapter, and that of social scientists to be discussed below, are in this respect largely complementary.

Allan Young, writing in the early 1980s, was perhaps the first medical anthropologist to assert that what is required is an 'understanding of how medical facts are predetermined by the processes through which they are conventionally produced in clinics and research settings ... the task at hand is to critically examine the social conditions of knowledge production'.[14] Prior to this time, by far the majority of anthropologists had been content to research only 'traditional' medicine on the assumption that biomedicine, being grounded in science, was of an entirely different order. After the publication of Young's work and that of several other social scientists, it became evident that biomedicine should be considered 'symmetrically' to other medical traditions, that is, as an assemblage of knowledge and practices inextricably associated with political expediencies, social interests and embedded values.

It is abundantly clear from much of what follows that ethnographic analyses of accounts and interpretations given by patients, families, community members, medical specialists, and other key informants provide indispensable insights as to the way in which medical knowledge and practice affect everyday life, often transforming it profoundly.

Contextualizing Medical Knowledge

As far as it can be ascertained, people everywhere have always amassed knowledge and instituted practices designed to preserve health and account for the incidence, aetiology and treatment of illness. Anthropologists started to record such knowledge from the latter half of the nineteenth century, but it was not until the 1920s that the physician/anthropologist W. H. R. Rivers, drawing on his experiences in New Guinea and Melanesia, argued that medicine in non-literate societies is not merely a random assortment of practices based on custom or superstition.[15] On the contrary, he insisted, medicine is an integral part of society at large. Building on this insight, anthropologists working in numerous societies have shown how medical knowledge and practices, of both experts and ordinary people as they go about daily life, are culturally and regionally informed and should be evaluated in context before judgement is made about their worth, or lack thereof. Furthermore, professional medical knowledge in any society is systematized and has a logic to its practices that is transmitted to disciples, apprentices and students.[16] The well-known British anthropologist, E. E. Evans-Pritchard, writing in the 1930s about witchcraft amongst the Azande, concluded that even this 'exotic' practice could be construed, when examined in context, as a rational response to the apparent randomness of misfortune. Furthermore, he noted that Azande draw on multi-causal explanations for misfortune; quite often it is evident to everyone involved that social or morally related behaviour accounts for a particular event, and it is then considered inappropriate to judge that witchcraft is involved.[17] Research that followed over the next half century in Africa, Asia and amongst indigenous peoples of the Americas and Australia has made it clear that amongst non-literate medical traditions the idea is ubiquitous that the causes of disease and death are recognized as many. When efforts are made to create a taxonomy of such causes they are best thought of as constituting an 'externalizing discourse',[18] because the origins of disease are located largely outside the human body and make reference to human social relations, the environment, and the spiritual or cosmic order.[19] These external causes are not systematically linked to named anatomical pathology but produce malaise of many kinds, depending on the specific circumstances of each case. Each illness episode is, in effect, unique. Furthermore, research has shown that at times no reason is required to account for illness or accidents – they simply happen by chance.[20]

Four major literate, secular and professionalized medical traditions emerged in the first century CE. The Greek physician and philosopher Galen, influenced by Hippocrates, Plato, Aristotle and the Stoics founded what came to be known as Galenism, a system widely practised in what is today known as Turkey and the Middle East. Following translation of the Arabic texts in the eleventh century Galenism was practised in European universities until the eighteenth century, after which it was gradually, but never completely, eclipsed by what came to be known as biomedicine. The other classic literate traditions that continue to be widely practised today are Chinese medicine, used also in Japan, Ayurvedic medicine, that originated in India, and Unani medicine, associated originally with Hippocrates and Galen, later influenced by Persian/Arabic traditions, and made use of today by Moslem populations in South Asia. Amongst all of these traditions, attention is paid to specific entities and changes on both the surface and inside the body believed to be signs of illness or imminent death. Internal signs are indirectly ascertained based on pulse-taking and palpation, samples of sputum, urine and so on. The significance of such signs, external and internal, do not stand alone; they are made meaningful with reference to extracorporeal events including social and physical environments, behaviours and habits of the patient in question and, at times, that of their relatives.

Generalizations made about the condition of patients are not based on the assumption of a universal body, but rather on the basis of body types and constitutions shared in common amongst some people but not others and, additionally, as the result of exposure to similar external conditions and events. A diagnosis may well be one that falls into a cluster of diagnostic types, but rigorous standardization and systematization is not good practice – each illness episode has important singular qualities.[21] Of course globalization and the spread of biomedical knowledge and technologies have affected – often dramatically – the knowledge, explanatory accounts and practices of indigenous medical practitioners wherever they live. And similarly, ordinary people too are everywhere profoundly affected by these changes, a theme that recurs throughout this book.

As was made clear in the previous chapter, in contrast to medical systems that draw on an externalizing discourse, clinical biomedicine usually gives weight to an 'internalizing' discourse, even when it is acknowledged that factors external to the body may well be at least in part contributory to the condition. In recent years this approach has become common even for the management of psychiatric disorder. Furthermore, biomedicine makes no allowance for misfortune or chance as an explanatory variable per se – a scientific approach to the 'ordering of reality' does not permit this,[22] although unexplained conditions can be accounted for as being beyond the current state of scientific knowledge. With its assumption of a 'body proper' given wholly by nature,[23] biomedicine is unique. Compared with other medical traditions biomedical explanations are, comparatively speaking, reductionistic, and focused primarily on the detection of named entities such as viruses, genes, biomarkers or other signs internal to the body thought to be directly implicated in malfunction or incipient malfunction, even when the habits, lifestyle and, at times, the environment in which the patient is living are taken into consideration. Furthermore, anatomy and surgery are two biomedical specialties that have never been developed in a systematic way in other medical traditions aside from a few remarkable exceptions such as trephination. These two specialties, together with germ theory, contributed greatly to a reductionistic, internalist approach that, until recently, has been the uncontested anchor for biomedicine and for the development of technologies that furnish representations of the inner body.

Medical Pluralism

Working for many years in Mysore State in India, anthropologist Alan Beals made the following comment over 30 years ago about the availability of medical practitioners in both urban and rural areas where he carried out his research:

> there are a wide range of practitioners including unpaid local healers, saints and religious figures, priests, drug and herb authorities [ayurvedic doctors], midwives, astrologers, government doctors, missionary doctors, private doctors and foreign-returned doctors. Most of these practitioners are sincere men who believe in what they are doing and are trusted in return. A few practitioners in every category are insensitive, dishonest, or incompetent.[24]

Writing about the phenomenon of medical pluralism a few years later, Charles Leslie noted that the assumption on the part of the majority of health care planners at that time was that indigenous medical practices would soon die out, although some might be incorporated into a worldwide 'cosmopolitan' medicine. Time has shown that this assumption was completely false. Aside from some notable exceptions where, due to major political upheavals or social disruptions, medical assistance of all kinds is virtually absent, nowhere has indigenous medicine simply faded away.[25] Beals listed several reasons why individuals select one type of practitioner rather than another – reasons that remain pertinent to this day. Amongst them are the kind of disease or affliction that needs attention; 'folk' beliefs about the cause, cure and appropriate curer for a specific problem; the economic and social status of the patient and her family, and the kinds of advice and information available at the time a particular strategy is adopted.[26]

The extent to which medical traditions other than those of biomedicine continue to flourish and the fact that people everywhere in the world frequently consult with more than one type of medical practitioner provide incontrovertible evidence that biomedicine alone is not sufficient to meet the needs of vast numbers of people.[27] Lack of economic resources nationally to build health care facilities and the inability of some patients and families to pay for biomedical care account in part for thriving indigenous medical practices. But this tells only part of the story. Even where biomedicine is readily available, many people – wherever they live – consult with various types of practitioners when dealing with illness and disability. Research makes it clear that patients and families often prefer to go to local healers even when a visit costs more than one to biomedical practitioners.[28] Furthermore many governments actively support indigenous medicine, often for nationalistic reasons. In all the major cities of the world biomedicine is present but so too is a large array of Chinese and Ayurvedic facilities, amongst other forms of health care in great abundance. Further, medications from numerous medical traditions are on sale in most major cities today, including antibiotics in many parts of Asia, Africa and the

Americas. In North America and Europe health food stores and pharmacies supply a vast range of medications for which a prescription is not necessary.

Japan has had a comprehensive socialized health care system since the 1930s and today boasts an abundance of technologically sophisticated biomedical facilities. Even so, while virtually everyone routinely makes use of biomedicine for most of their health-related matters, the majority also quite frequently make strategic choices as to whom to consult with amongst biomedical practitioners, acupuncturists, herbalists (who are trained MDs), masseuses and traditional bone-setters, depending upon their particular ailment. With well over 100 years of exposure to biomedicine, the practice of East Asian medicine continues to flourish in Japan, most of it in a carefully monitored, standardized form. Furthermore, biomedical practitioners, notably those whose specialties are paediatrics, geriatrics, and obstetrics and gynaecology, and those who work in pain clinics, routinely refer their patients to East Asian medical practitioners and at times make use of traditional therapeutics themselves.[29]

Similarly, in Haiti, where the majority of people are pitifully short of resources, strategic decisions are made by people about visits to one or more of a range of possible healers, including biomedical practitioners, depending in part on the various therapeutic techniques on offer and the cost.[30] And in Bolivia it has been shown that resort to indigenous medicine sometimes constitutes a self-conscious challenge to the domineering attitudes with which biomedical practitioners are often associated[31] – biomedicine is indelibly associated with colonial oppression for many people living in Asia, Africa and Latin America. Moreover, there are times when the mixing of 'traditional' beliefs with biomedicine can be dangerous.[32] Research showed that the Mende living in Sierra Leone often made decisions about the use of the pharmaceuticals they had bought at the market on the basis of ideas associated with local medicines concerning an appropriate mix of colour, consistency, taste and so on. The researchers were rightly critical of the manufacturers for having assumed that there would be no local knowledge of any kind about medicinals that might affect the way their drugs would be used.[33]

In summary, the form taken by medical pluralism varies considerably depending upon geographical location, and the reasons for the choices that people make can only be fully appreciated in light of local histories and current conditions. Nowhere is biomedicine received into an environment devoid of ideas about illness causation and knowledge and practices relating to the body and, even when exposed to scientific knowledge, people rarely relinquish totally indigenous theories of disease causation, nor do they cease to use local 'idioms of distress' to express their physical discomfort.[34] Furthermore, everywhere people have grown up with expectations about ideal family size and its composition, appropriate human social relations and mutual support, how to deal with birth, sickness, dying and death, all of which assumptions can be profoundly affected by the introduction of biomedical knowledge and technologies that have the potential to challenge the entrenched moral order.

The Modernization of 'Traditional' Medicine

Traditional medical systems have long histories but they are neither static nor lacking in innovation. A considerable amount of integration, syncretism, and borrowing has taken place amongst indigenous and biomedical practitioners over the past century, and a large number of indigenous healers have adapted to the new global reality, often adding one or more biomedical technologies to their repertoire.[35] At times such adaptations are the result of pressures placed on healers directly or indirectly by governments to systematize and standardize their practices – to 'biomedicalize' themselves.[36] Further, practitioners are not immune to the effects of a world where television and the Internet inform people everywhere about what is in their own best interest. The result is that 'traditional' healers 'modernize' their practices and package their wares to attract buyers. Although some have fallen by the wayside, many healers have proven, not surprisingly, to be innovative, flexible and pragmatic.[37]

In some locations, where no money has been allocated to build biomedical health care facilities, indigenous practitioners continue to be the sole providers, sometimes after receiving basic training in biomedical principles of hygiene and contagion.[38] In many urban areas, the training of complementary practitioners is regulated, notably in East Asia, Europe, North America and parts of South America, and extensive schooling in the principles of anatomy and physiology is commonly required, in addition to instruction in traditional knowledge and practice, the latter often in truncated form.[39] The result inevitably involves standardization and elimination of practices considered anomalous that cannot readily be 'integrated' with a biomedical approach. Sometimes these changes are actively adopted by younger practitioners who wish to present themselves as offering modern, fully rational and scientifically grounded services.[40] In the case of non-literate traditions the possibilities for integration are, of course, limited, but this does not stop biomedicalization from taking place.[41]

Despite the undeniable efficacy of biomedicine in connection with many problems, indigenous or local medicine is often chosen preferentially with the result that indigenous healers continue to flourish even where biomedicine is readily available. As Volker Scheid and others point out, today wherever biomedical and non-biomedical practices meet, arguments about legitimacy are inevitably grounded in the twin ideas of 'tradition' and 'modernity',[42] which help to explain the appeal of indigenous biomedicine. The Indonesian government, for example, has chosen to actively support indigenous medical practices for explicitly nationalistic reasons.[43] Biomedicine, associated with 'Western' values, especially with what are believed to be American values, is perceived as a threat to the moral order by certain governments, most clearly in connection with contraceptive use and other reproductive technologies.[44] Indigenous medicine, on the other hand, is strongly associated with positive family values thought to be under siege, and is therefore actively encouraged by the government. Similarly, biomedicine in India has long been understood as a 'tool of empire', and the major revival and professionalization of Ayurvedic medicine that commenced in the middle of the twentieth century were fired by nationalistic sentiment.[45] Today the spread of HIV in India is regarded by some politicians as a 'cultural invasion', as too is biomedicine by some. Ayurveda has been promoted as 'an Indian weapon against this invasion.'[46]

Medical Hybridization

When a decision was made in China at the time of the Cultural Revolution that the medical system should 'walk on two legs', the government actively promoted both biomedicine and Chinese medicine, a trend that had already been fostered by the government since the 1930s. This was in part due to financial limitations and the enormous expense involved in adopting biomedicine wholesale in such a populous and at that time economically deprived nation, but equally due to a firm belief in the efficacy of indigenous Chinese medicine coupled with nationalistic pride and a reluctance to succumb entirely to the values associated with the West. Although enormous pressure existed to 'scientize' and rationalize the recognized schools of traditional medicine and their various approaches[47] in contemporary China, the entanglement of Chinese medicine and biomedicine has taken place to such an extent that Volker Scheid uses a metaphor taken from science and technology studies, a 'mangle of practice',[48] to describe the situation. He argues that pluralism is not adequate to capture the complexity, and points out that a great deal of genuine assimilation is evident in both discourse and practice, so that 'synthesis' is a better descriptor.[49] Even so, it is evident that assimilation is not symmetrical, and that Chinese medicine has been transformed by biomedicine to a much greater extent than has biomedicine by Chinese medicine, and government financing of Chinese medicine is much less than for tertiary care biomedicine. Institutionally, the buildings, organizations, personnel, schools, departments, books, journals, and ideologies of medicine and the body in contemporary China continue to be self-consciously bifurcated along 'Chinese' and 'Western' lines.[50]

Assimilation is, however, strikingly apparent in patient behaviour, most often when treatments are cobbled together piecemeal. An epidemic of so-called impotence has recently been documented in China. Many Chinese men, following doctor's advice, resort to the use of herbal medicine and Viagra at the same time to overcome their difficulties. The expectation is that herbal medicine will 'nourish' vitality and restore equilibrium in daily life, whereas Viagra works directly on the 'mechanical failure' of one particular body part.[51] Zhang makes clear that, for this particular problem, 'hybridization' exists in the minds of patients and practitioners alike between 'traditional' medications on the one hand and laboratory created drugs on the other, both of which have value.

Stacey Langwick, working in Tanzania, also takes issue with the term pluralism in the world of today. She argues that it is inappropriate to think of biomedicine and non-biomedical therapies as being complementary strategies for dealing with medical problems. Langwick writes about 'postcolonial' healing in which both bodies and agents of affliction are steadily transformed ontologically over time. In other words, the very notion of what is 'real' with respect to bodily states gradually shifts, giving rise to a 'multiplicity of bodies and threats'. Medical practices should not be classified and separated out as named types – biomedicine, Christian, Islamic, spiritual, herbal and so on, she argues, rather, 'postcolonial healing incorporates the traditional and the modern in flexible ways at a range of levels'.[52] Furthermore, use of a therapy does not necessarily mean that a patient has 'faith' in either the therapy or the person administering it. Langwick also shows how knowledge and practices drawn on in the diagnosis and treatment of, for example, malaria and in the condition known locally as *degedege* that has much in common with malaria are, in effect, 'interdependent therapeutic ecologies rather than discrete differentiations of pluralist systems'.[53]

Langwick notes 'interferences' amongst medical systems, and describes in detail how malaria and *degedege* become knowable in practice, informed by the very different ontological stances and epistemological propositions taken by biomedical practitioners and local healers with respect to these conditions. When patients resort to practitioners of both medical approaches for similar illness episodes, as they very often do, the result is one of an ongoing reformulation of both bodies and disease entities in the minds of patients and to a certain extent in medical practitioners as well. Langwick concludes that healers, in their efforts to assemble, refigure, translate, elaborate, visualize and defend objects of African therapeutic knowledge and practice, suggest the possibility of more radical forms of politics than do struggles to control already defined elements of the world.[54] This, Langwick insists, is 'ontological politics' that moves beyond the boundaries implied in the term pluralism.

Biodiversity and Indigenous Medical Knowledge

Global concern about the management of biodiversity has lent new support to indigenous practitioners in South and Southeast Asia, parts of Africa, and parts of Central and South America. The World Bank and the World Health Organization (WHO) have signed documents making it clear that these organizations are in support of the systematic utilization of plant, animal and mineral products used by traditional healers for pharmaceutical research and

possible drug development.[55] Traditional practitioners are encouraged to enter into agreements with biologists and conservationists eager to harvest and analyse plant materials of all kinds growing in isolated areas, about which indigenous herbalists know a great deal. Herbalists sometimes make arrangements with people running government or NGO-supported projects for the preservation of biodiversity, on the understanding that in return they will have support for their local medical practice, be able to control access to medicinal plants, and even on occasion be able to obtain funding to build a clinic.[56] Formerly isolated healers are thus integrated into the global system of exchange, inevitably with the result that many begin to reconceptualize their understanding about body, health and illness.

One major difficulty that arises when traditional medical practitioners are incorporated fully into mainstream delivery of health care alongside biomedical practitioners is that their knowledge and practices are abruptly transformed due to the enforcement of standardization and conformity with practice regulations. The experiential knowledge of healers is devalued, and their personal approach to patients is replaced by a decontextualized objectivity characteristic of biomedicine – thus the epistemological basis of traditional medical knowledge is seriously violated.[57] Market commodification of herbal medication exacerbates this situation. A good number of anthropologists have written about the effects, mostly negative, of these transformations.[58] It is instructive to watch the global spread of traditional Chinese medicine (TCM) to countries such as Tanzania, particularly when a biomedical and Chinese medical approach are combined – economically a very attractive option for many governments.[59]

Many of these collaborative activities are now beginning to take place not only in clinics but also in laboratories located in the cities of Asia and Africa. For example, WHO, in collaboration with the Chinese government, is providing technical support to the government of Tanzania for the production of anti-malarials made from artemesia, a plant widely distributed around the world, and commonly used in China in the practice of moxibustion.[60]

Self-medication

Space does not permit an assessment of the efficacy of the many forms of complementary medical practices, a great number of which, without doubt, bring about positive outcomes – although many more do not. It is starkly clear, however, that perhaps the majority of the world's population continues to rely entirely on indigenous medicine, and has little or no access to biomedical services, or only minimally so. Nevertheless, some awareness of what biomedicine can offer, particularly in connection with birth control and infectious and parasitic disease, is evident amongst people virtually everywhere. At the same time, the idea has taken root of a right to good medical care, something that has not been evident until very recently.[61] Furthermore, millions of people are now made aware of specialized biomedical technologies on the Internet, and some make use of these services even when basic clinical services are not necessarily present in their own community.[62]

Despite these developments, it is mistaken to imagine that people almost without exception seek out medical assistance of one kind or another when they are unwell. Research findings from Peru derived from a very large national survey carried out in the 1980s showed that more than 80 per cent of the population opted not to seek out health care of any kind for illness episodes, and instead managed problems at home using self-medication.[63] Other commentators argue that a bias is present in the literature on medical pluralism because self-medication is ignored, leading to the assumption that people inevitably make a choice between biomedical facilities and traditional medical practices of various kinds.[64] Research from Peru, Ethiopia, Mexico, China and elsewhere makes it apparent that to ignore the extent to which self-medication is used masks the way in which very large swathes of people in all parts of the world, including some parts of North America and Europe, continue to be largely self-sufficient as far as health care is concerned, until such time as a major crisis affects them.[65]

Das and Das, drawing on intensive ethnographic investigation, explicitly break down a distinction usually made between the practices of physicians and the beliefs of patients.[66] Writing about India they point out that a 'geography of blame' is at work because it is assumed by authorities in India that, with access to generic drugs supplied by the government, many people simply go to drug stores, buy 'strong' medication and 'self-medicate' to excess. The authors do not deny that harmful use of antibiotics is indeed taking place, and in low-income neighbourhoods they observed that doctors of both biomedicine and complementary medicine of various kinds were overworked and spent less than a minute with patients. The powerful antibiotic tetracycline was prescribed routinely by virtually all practitioners for a range of symptoms, including coughs, colds and intermittent fever. Many patients could not afford to pay for the full prescription and so would buy only three days' worth. For chronic diseases such as tuberculosis (TB) only small amounts of medication were bought at any one time.

The ethnographic interviews carried out in the study by Das and Das showed convincingly that the experience of illness was punctuated by days when people had a small amount of money to consult a doctor (public hospitals are constantly overflowing with patients, forcing people to seek out private care of one kind or another). On other days they could only afford to go to a drug outlet to buy medication and not see a doctor, and on the many days when they were without money, their pain simply had to be endured. Das and Das conclude that a conjunction of local medical practices, local concepts of disease and household economies bring about a 'medical environment' in poor Indian neighbourhoods, and that to accuse people of misusing medication is to fail to take account of the reality of everyday life and the complex ecology in which 'self-medication' takes place.[67]

A Short History of Medicalization

Beginning in the nineteenth century, specialists in public health, epidemiologists, clinicians, and social scientists started to direct their attention to the contribution of social and political conditions to disease causation, and to the unequal distribution of disease within any given society. Until recently, however, these concerns have been dwarfed for the most part by an assumption that drug development would steadily bring about the conquest of disease. In order to account for the growing importance of biomedicine in everyday life during the latter half of the twentieth century, the sociologist Irving Zola argued that medicine had become an important institution of social control, supplanting the more 'traditional' institutions of religion and law, with the result that many aspects of daily life were being 'medicalized' in order to 'maintain' health. Zola made it clear that he was by no means totally opposed to the process he was documenting. Following Zola's lead, a genre of research appeared in which the word medicalization – 'to make medical' – was adopted as a key concept.[68]

It can be argued that medicalization commenced many hundreds of years before Zola's observations, from the time that one or two people were first recognized as healers amongst certain human groups. Later, with the consolidation of the early literate medical traditions of Europe and Asia, between approximately 250 BCE and 600 CE, the first groups of healers to be professionalized made themselves available to deal with physical malfunctions and disease of all kinds, as well as with the exigencies of everyday life, including difficulties relating to the life course, notably infertility. Nevertheless, it is usually assumed, notably in the sociological literature, that medicalization is a relatively recent phenomenon, one inextricably associated with modernization as it unfolded in the 'West'. For many commentators its origins lie with the professionalization of medicine and the emergence of medical specialties.

Commencing in the seventeenth century, European and North American modernization fostered what has been described as an 'engineering mentality', one manifestation of which was a concerted effort to establish increased control over the vagaries of the natural world through the application of science. By the eighteenth century, legitimized by state support, the consolidation of medicine as a profession was taking place, together with the formation of medical specialties and the gradual accumulation, compilation and distribution of new medical knowledge. As we saw in Chapter 1, systematization of the medical domain was in turn part of a more general process of modernization to which industrial capitalism and technological production were central, both intimately associated with the bureaucratization and rationalization of everyday life. As part of this process, health began to be understood by numerous physicians and by the emerging middle classes alike as a valued commodity, and the physical body as something that could be improved upon.[69]

Professional medical interests expanded in several directions during the eighteenth and nineteenth centuries. First, there was an increased involvement in the management not only of individual pathology, but also of lifecycle events. For example, birth had been attended and assisted uniquely by women until the early eighteenth century in Europe and North America, at which time male birth attendants began to be trained and worked at the lying-in hospitals located in major urban centres to deliver the babies of well-off women. These accoucheurs later legitimized their right to practise through the formation of the profession of obstetrics.[70]

By the mid-nineteenth century, other lifecycle transitions were medicalized, including adolescence, menopause, ageing and death, followed by infancy in the first years of the twentieth century.[71] In practice, however, large segments of the population remained unaffected by these changes until the mid-twentieth century. A second aspect of medicalization involves standardization. With pervasive moves by the state, the law, and professional associations throughout the nineteenth century to increase standardization by means of the rational application of science to everyday life, medicine was gradually integrated into an extensive network of formal practices whose function was to regulate the health and moral behaviour of entire populations. These 'disciplines of surveillance' function in two ways.[72] First, everyday behaviours were normalized so that, for example, emotions and sexuality were made targets of medical technologies, with the result that human reproduction was brought largely under the purview of public health. Similarly, other activities, including breastfeeding, hygiene, exercise, deportment and numerous other aspects of daily life became subject to surveillance – largely by means of public health initiatives and with the support of the popular media.

By the late eighteenth century the social consequences of medicalization were already visible. Those populations labelled as mentally ill, individuals designated as morally unsound, together with many individuals living in poverty were incarcerated in asylums and penitentiaries where they were subjected to what Foucault termed 'panopticism'. Inspired by Jeremy Bentham's plans for the perfect prison in which prisoners are in constant view of the authorities, the Panopticon was a mechanism of power reduced to its ideal form – an institution devoted to surveillance.[73]

These changes could not have taken place without several medical innovations. First, the consolidation of the anatomical pathological sciences whereby the older humoral pathology associated with Galen was all but eclipsed, so that belief in individualized pathologies was gradually abandoned in favour of a universal representation of the 'normal' body from which sick bodies deviate. Second, was the introduction of the autopsy, enabling systematization of pathological science; and, third, routinization of the physical examination and collection of case studies. Fourth was the creation by the state of the concept of 'population' as a means to monitor and control the health of society at large, at which time disease began to be understood as at once individual pathology, and statistical deviation from a norm of 'health'. Treatment of pathology continued to be the core activity of clinical medicine, but the emergent epistemology of disease causation based on numeration gradually gained ground from the early part of the eighteenth century, resulting in a new discipline – public health – supported directly by the apparatus of the state, the key function of which was the oversight of populations.

Other related characteristics of medicalization, well established by the late nineteenth century and still evident today, can be summarized as 'dividing practices', whereby sickness is distinguished from health; illness from crime; madness from sanity, and so on.[74] Using this type of reasoning, certain persons and populations are made into objects for medical attention and distinguished from others who are subjected to the attention of legal, religious or educational authorities. In order to accomplish this end, various 'assemblages' are deployed constituted by a combination of spaces, persons and techniques. In the domain of medicine, these assemblages include hospitals, dispensaries and clinics, in addition to which are government offices, the home, schools, the army, communities and so on. Recognized medical experts function in these spaces, making use of instruments and technologies to assess and measure the condition of both body and mind. The stethoscope, invented in the early nineteenth century, was one such major innovation, the first of many technologies that permit indirect assess to the interior of the body, rendering the patient's subjective account of malaise secondary to the 'truth' of science.

Several noted historians and social scientists argue that from the mid-nineteenth century, with the hospitalization of citizens of all classes for the first time, and not only wealthy individuals, the medical profession was able to exert power over passive patients in a way never before possible. This transition, aided by the production of new technologies, has been described as medical 'imperialism'.[75] Many researchers limit use of the term medicalization to these particular changes, whereas other scholars insist that the development of hospitalized patient populations is just one aspect of a more pervasive process of medicalization, to which both major institutional and conceptual changes contribute. Included are fundamentally transformed ideas about the body, health and illness, not only amongst experts, but also amongst populations at large.[76]

It is noteworthy that medical and public health management of everyday life was evident not only in Europe and North America, but also in nineteenth-century Japan and to a lesser extent in China. In India, Africa, Southeast Asia and parts of Central and South America, medicalization was intimately associated with colonization, as will be explored in Chapter 4. Activities of military doctors and medical missionaries, the establishment of tropical medicine departments and of public health initiatives, designed to protect the colonizers and to 'civilize' the colonized rather than to ameliorate their health, were integral to colonizing regimes. As was the case everywhere, however, large segments of the population remained untouched by these activities until well into the twentieth century.[77]

Opposition to Medicalization

In a review of the literature on medicalization, Peter Conrad argues that during the 1970s and 1980s the term was used by social scientists most often as a critique of inappropriate medical practice, rather than simply to convey the idea that something had been made medical.[78] Sociological and anthropological literature of this period argued uniformly that health professionals had become agents of social control. This position was influenced by the earlier publications of Thomas Szasz and R. D. Laing[79] in connection with psychiatry, where they insisted that the social determinants of irrational behaviour were being neglected in favour of an approach dominated by a biologically deterministic medical model. Zola, Conrad and others argued in turn that alcoholism, homosexuality, hyperactivity and other behaviours were increasingly being 'biologized' and labelled as diseases.

While in theory this move from 'badness to sickness' relieved patients of culpability for their condition, it nevertheless permitted medical professionals to make judgements about the labelling and care of such patients that inevitably had profound moral repercussions with respect to how they should best be managed.[80] Medicalization of distress of all kinds has over the years become pervasive, a process described by Jacqueline Zita as 'diagnostic bracket creep'.[81] And media reporting keeps us all alert about conditions that we are informed are increasing dramatically, often explicitly linked to the ubiquitous stress thought to be associated with late modernity, including posttraumatic stress disorder (PTSD), attention deficit and hyperactivity disorder (ADHA), obesity, diabetes and so on.[82]

A reaction set in during the late 1970s against medicalization. Ivan Illich's stinging critique of scientific medicine entitled *Medical Nemesis* had a great effect on the public at large and on certain health care professionals. Illich argued that biomedicine at times inadvertently produces disease, a process known as iatrogenesis. He asserted that biomedical treatment often creates negative, even serious side effects in the body (a position contradicted by no one today, that is bolstered by incontrovertible epidemiological evidence that prescription drugs are a common cause of illness and death).[83] Illich went further, and insisted that the autonomy of ordinary people in dealing with pain and illness is compromised by medicalization. Today, addiction to prescription painkillers and resistance to antibiotics have emerged as major public health issues, underscoring Illich's warnings as prophetic.

At the same time many feminists, amongst them anthropologists, publicly characterized medicine as a patriarchal institution because, in their estimation, the female body was increasingly being made into a site for technological intervention in connection with childbirth and other conditions associated with reproduction.[84] Similarly to what had happened in eighteenth-century Europe, medical anthropologists documented the ways in which midwifery throughout the world was being forcibly placed under the authoritative knowledge of governments and the medical profession.[85]

Other feminists have not critiqued medicalization per se, but have nevertheless insisted that to cast women in a passive role with respect to medicalization is to perpetuate the very kind of assumptions that feminists have been trying to challenge. They note that an active resistance to medicalization contributed to the rise of the home-birth movement and to widespread use of alternative therapies and remedies of many kinds. But empirical research has also made it clear that responses of individuals to biomedical technologies are pragmatic, and based upon what is perceived to be in the best interests of involved women themselves, their families and, at times, their communities.[86] Anthropologist Emily Martin's cultural analysis of reproduction was one of the first attempts to show how women are not simply victims of medical ascendancy, but rather exhibit resistance and create alternate meanings about the body and reproduction to those dominant amongst the medical profession.[87]

Today, the majority of women worldwide apparently continue to internalize the norm that their prime task in life is to reproduce a family of the ideal size and composition, that is, to contribute to reproduction of both the family and society, and that failure to do so will diminish them in the eyes of others. Under these circumstances it is not surprising that a pragmatic approach to medical technology and medical services is much more common than is outright resistance to technologies designed to assist with reproduction.

There has been a spate of recent publications on medicalization highlighting new concerns about this process. For example, Conrad argues that the commercial and market aspects of medicalization and the associated direct-to-consumer advertising so pronounced in the United

States must be taken into account.[88] Children as young as four years of age are being prescribed powerful psychotropic drugs to treat anxiety, attention deficit disorder, depression and other problems.[89] The trend to manage childhood behaviour and mood through psychiatry has raised suspicions that the pharmaceutical industry is supporting the creation of new diagnostic categories and self-help groups with an eye to expanding markets for psychopharmaceuticals. On the other hand, Conrad insists, individuals today act increasingly as 'consumers' of medical diagnoses, and actively seek out medication as legitimization for their distress. Many also have a desire for 'biomedical enhancements' such as human growth hormone or Viagra and clearly the Internet is influential in creating and sustaining this trend.

The sociologist Adele Clarke and her colleagues call for a recognition of 'biomedicalization' directly associated with the ever-increasing practices of technoscience in medicine.[90] Kaufman and co-authors draw on this concept to illustrate recent changes associated with ageing in California, notably the way in which technological innovation permitting life-extension in connection with conditions such as cardiac procedures, kidney dialysis and kidney transplants, has been routinized, resulting in significant moral and ethical concerns. The ethnographic findings of Kaufman et al. show that an imperative to treat, coupled with a discourse of hope that includes not only patients but also family members, outweigh the ideal of choice, including the possibility of stopping treatment. These authors conclude that the extension of medical jurisdiction over life itself 'renders medical intervention natural and normal, especially in late life.'[91] A further consequence has been the tendency to privilege pharmaceutical solutions to biomedical problems and even broader public health issues, what is called 'pharmaceuticalization.'[92] Long before this term was coined, anthropologists had already examined drugs as commodities with 'social lives.'[93] Anthropologists have since drawn on the early anthropology of pharmaceuticals to explore the impact of pharmaceuticalization particularly in global health (see Chapter 12).[94] In summary, medicalization desocializes illness and, further, 'depoliticizes' what are fundamentally political questions revolving around the distribution of wealth and social justice.

The Social Construction of Illness and Disease and Beyond

More than thirty years ago, when Susan Sontag contracted breast cancer, she warned us about the 'punitive and sentimental fantasies' concocted in connection with certain illnesses. She was concerned about the way in which stereotypes and moralizing discourse are associated with so many illnesses. Sontag insisted that the 'most truthful way of regarding illness – and the healthiest way of being ill – is the one most purified of, most resistant to, metaphoric thinking.' She was particularly concerned, not surprisingly, with some research current at that time in which a claim was made for a statistically significant association between a given personality type and increased risk for breast cancer.[95]

Sontag's exhortation to confine our interpretations about illness to the material body is easily justifiable, it seems, as a means of eliminating inappropriate moralizing and discrimination about specific diseases. She is not alone in this; many families when confronted with, for example, psychiatric illness or biological conditions that result in disability, seek out medical help with the hope of being given a neutral professional label for the condition, thus relieving either the affected individual or their family of responsibility. However, in taking this position, an assumption is made that the causes of diseases can be fully explained and treated by confining attention to the physical body alone. Moreover, it is also assumed that medical taxonomic categories accurately reflect discrete, readily demarcated pathological conditions in the body.[96] The following discussion shows just how difficult it is to sustain this position.

In his work conducted in Iran in the 1970s, the anthropologist Byron Good developed the concept of 'semantic networks' in order to understand the complex meanings embedded in language used to describe bodily distress and illness. His interest at the time was in 'popular' medical knowledge strongly influenced, in the case of Iran, by the Galenic medical tradition and classical Islamic scholarship. Good's argument is that the meaning of certain terms used in everyday language that refer to bodily conditions do not specify merely a cluster of symptoms, but rather that such categories are in effect a 'syndrome' of common experiences – 'a set of words, experiences, and feelings which typically "run together" for the members of a society'[97] and which make physical sensations, moral order and social events inseparable. Good explores in detail the meanings associated with a common illness in Iran known as 'heart distress,' the physical sensations of which consist mainly of a pounding, irregular heartbeat, or a squeezing of the heart, accompanied by anxiety. The illness is self-diagnosed, and is most common in women and the elderly, who visit a doctor only if the episode is judged as unusually severe, when they usually receive a prescription of vitamins or occasionally a tranquillizer. Good establishes the complex semantic networks associated with heart distress by carrying out extensive interviews; the most common of these networks are first, problems with female sexuality, including concerns about the negative effects, physical and social, of taking the contraceptive pill, and second, worries generated by the oppression of daily life. He concludes that heart distress is not simply an individual matter but a public, collective project, recognized as a legitimate expression of suffering.

Good's research, with its emphasis on the narrative representations of illness, set off a train of research in which emphasis was given to the relationship amongst language usage, physical symptoms, and social and cultural contexts. A decade later Arthur Kleinman highlighted the way in which the experiences of illness and meanings attributed to it are inevitably situated in 'local moral worlds'[98] – a concept used widely in medical anthropology and biomedical ethics. These researchers alerted investigators to the inappropriateness of attempting to simply reduce or 'translate' the language of distress and suffering as equivalent to biomedical categories.

For example, Robert Barrett has shown how the institutional practices of psychiatry first created in the nineteenth century made possible the production of a new category of knowledge – schizophrenia. Prior to institutionalization, the kind of 'crazy' behaviour involving disorders of cognition and perception that we now associate with schizophrenia would have elicited a range of responses, not all of them indicating that pathology is necessarily involved. Barrett, a psychiatrist and anthropologist, interprets schizophrenia as a 'polysemic symbol' in which various meanings and values are condensed into a syndrome – stigma, weakness, inner degeneration, a diseased brain and chronicity. He argues that without this associated constellation of meanings schizophrenia, as we understand it, would not exist.[99]

Barrett goes on to state that the individualistic concept of personhood so characteristic of Euro-America has contributed to our understanding of this disease. He shows how a theme of a divided, split, or disintegrated individual that runs through nineteenth-century psychiatric discourse was incorporated into the first descriptions of schizophrenia in the 1880s, and continues to the present day. Schizophrenia is not the only disease associated with splitting and dissociation, but it has become the prototypical example of such a condition. The loss of autonomy and boundedness characteristic of the condition are taken to be signs of the breakdown of the individual, and thus of the person. Further, in line with Ian Hacking's concept of looping, Barrett argues that the description, classification and treatment of schizophrenic patients as broken people with 'permeable ego boundaries' profoundly influence the subjective experience of the disease.[100]

Barrett insists that categorizing patients as schizophrenic implies a specific ideological stance that highlights, problematizes and reinforces certain symptoms and experiences, such as, for example, auditory hallucinations, while paying little attention to others. Barrett's argument is not one limited to the social construction of disease – of schizophrenia as in effect a cultural myth – he does not dispute at all the reality of symptoms, or the horror of psychiatric disorder. He points out nevertheless, that a careful review of cross-cultural literature indicates that some of the constitutional components of what we understand as schizophrenia may be virtually absent in non-Western settings:

> in some cultures, especially those that do not employ a concept of 'mind' as opposed to 'body', the closest equivalents to schizophrenia are not concerned with 'mental experiences' at all, but employ criteria related to impairment in social functioning or persistent rule violation.[101]

Arguments similar to those of Barrett have been developed for clinical depression as it is currently defined, that is, as being a 'psychiatric ethno-category' that implicates ideas about self and personhood characteristic of Euro-American society.[102]

The research of the anthropologist Junko Kitanaka on the relatively recent 'rediscovery' of depression in Japan graphically demonstrates how specific histories and cultures inform the way in which ideas about the relationship between mind, body, and the social order come to be recognized as disease, and hence which conditions should no longer fall within the domain of families but should be attended to in the clinic.[103] Japanese psychiatrists have recognized depression as a disease since the late nineteenth century, but Japanese, although fully cognizant of 'feeling down' and 'being gloomy', continued to think that such sensations were simply part of everyday life. It was only from the 1990s that individuals and families began to participate in the medicalization of depression. Kitanaka found that the medical management of suicidal tendencies became one significant aspect of this process of medicalization.

Suicide has long been understood in Japan as something that can be sub-classified into several types depending upon the context in which it takes place. One form, known as *kakugo no jisatsu* (suicide of resolve) is understood as an act of 'free will'. This type of suicide has for centuries been 'aestheticized', and continues to be so today in popular culture, the media and even amongst many psychiatrists. Formerly, such acts of suicide were associated with the samurai class, but also included are people who believe that they have become a burden or have failed others in a profound way. Suicide rates in Japan (one of the ten countries in the world with the highest suicide rates) have remained at around 30,000 per year for more than a decade and approximately 100 people a day commit suicide. In an effort to stem this situation Japanese psychiatrists appear regularly in the media stressing, as was formerly not the case, a link between suicide and depression. This biologized suicide is explicitly labelled as pathological – a disease that can be treated with medication.

However, Kitanaka argues that Japanese psychiatrists sometimes exhibit deep ambivalence about medicalization of suicidal patients; most continue to recognize 'suicide of resolve', and in the clinic they actively draw on this distinction at times, notably with individuals who apparently have no pathology and who give rational accounts about why their attempted suicide was 'worthy'. Psychiatrists strive to achieve a 'minimum of shared understanding with patients about the biological nature of the "mental illness"', but at the same time deliberately avoid the realm of the existential, and do not actively explore the psychological aspects of the patient's distress.[104] Kitanaka argues that 'instead of fundamentally destabilizing the cultural discourse, Japanese psychiatrists may well be complicit in reproducing cultural assumptions about suicide', in that they reinforce a moral hierarchy in which some suicides are aestheticized as courageous, while others, although they may be sad and moving, are nevertheless thought of as simply mundane and pathological.[105]

It is striking that this contemporary psychiatric practice, in which the psychological is set to one side, shows marked overlaps in practice in many of the clinics in Japan run by East Asian medical practitioners.[106] In both situations, although narratives about the intolerable life situations of patients are usually listened to with great sympathy, medical practitioners do not believe that they should 'psychologize' and individualize the social suffering of the patient, nor do they make recommendations for change in the social lives of patients – rather, the task of the doctor is to ease 'real' bodily pain in order to give patients the strength to deal with everyday life.

The ethnographic work of Lawrence Cohen in India furnishes a striking example of the move in that country to construct ageing as a condition that should be recognized as needing professional attention on the part of the emerging specialty of social gerontologists. Cohen interviewed several activists working on behalf of the elderly in India who pointed out that they have had to promote the idea of 'senior citizen' into local discourse because until recently there has been no awareness that ageing could be anything other than an inevitable time of loss and decay. 'The primary task of an Indian gerontology is … not to study aging but to … create it', one activist informed Cohen.[107] However, Cohen soon realized that the object of concern in the struggling field of academic and applied gerontology in India is pensioners living in the wealthier parts of cities, and that the majority of Indians are simply 'erased' from this narrative. The gerontological world is dominated by a powerful story about the decline of the extended Indian family that formerly took care of all the needs of old people – a decline due to the advent of Westernization, modernization, industrialization and urbanization. It is argued by activists that these old people are worthy of government support, but that such support should be made available to families who would then look after their ageing relatives appropriately. In orchestrating this professional narrative, the diversity and reality of ageing for most Indians, historically and in the present, in poverty and without supportive extended families living in spacious houses, is simply erased. Cohen's book includes heart-breaking descriptions of old people, especially women, living on the streets, many senile, who become local fixtures described by those around them as 'crazy'.

Amongst the many rich anecdotes that feature in Cohen's book is one about a middle-class family made up of a married couple and the husband's mother living together in a one-bedroom flat. The relationship between mother-in-law, Somita, and daughter-in-law, Sharmila, was always strained, and once the old lady became senile the situation deteriorated badly. The couple placed Somita in an old people's home but she was thrown out after three days, described as 'crazy'. Sharmila and her husband Mithun were accused of lying to the managers of the home and made to feel that they embodied the 'Bad Family' described so often in the media and in professional literature. Somita was eventually diagnosed with Alzheimer's disease but, even then, although armed with a definitive biomedical diagnosis, no placement could be found for her for a very long time. Cohen spells out the advantages of receiving such a medical diagnosis in that blame is removed from the family, and Sharmila feels relief, although the moniker of the Bad Family did not entirely dissipate in this particular case.[108]

This example makes it abundantly clear how paths to the management of bodily conditions and their medicalization are not predictable, particularly in contexts where there are few facilities and universal health care is not available. It also highlights dramatically how efforts to modernize care are rarely directed equitably at all segments of diverse populations – a situation that applies equally to the United States and elsewhere. Today, anthropologists have moved way beyond illustrating how ethnomedical categories are made use of by local populations. Inevitably the use of such categories changes over time and are modified as people everywhere are drawn to a greater or lesser extent into a globalized world.

We have already discussed the 'looping effect' in which, through the recognition of specific conditions as diseases, individuals are labelled and populations to be managed are brought into existence. We turn now to a perspective brought to the fore as a result of anthropological research in connection with everyday life. This work highlights just how messy the process of medicalization can be, and demonstrates graphically the way in which biomedical diagnoses, by their very formulation, can work to eliminate the social, cultural and political conditions that contribute to the causes of distress and disease.

The Politics of Medicalization

Medical anthropological literature is replete with further examples from many parts of the world that shows how the radically differing taxonomies of illness and disease generated by biomedicine, by other medical traditions, and in everyday discourse, often cause disputes about the significance of symptoms, what counts as normal and abnormal, and how distressful physical conditions should best be managed.[109] For example, Aihwa Ong, working in Malaysia, argued that attacks of spirit possession on the shop floors of multinational factories are expressions of complex, ambivalent responses of young women to violations of their gendered sense of self, difficult working conditions, and generalized stress associated with modernization. The psychologization and medicalization of these attacks by consultant medical professionals permitted a different moral interpretation of the problem by employers: one of 'primitive minds' disrupting the creation of capital.[110]

Arthur and Joan Kleinman analysed narratives about chronic pain in China as 'normal' responses to the chaotic political changes of the latter half of the twentieth century in that country. They argued that these political events were associated with 'collective and personal delegitimation' of the daily life of millions of people, and that the subjective experience of physical malaise that resulted, when interpreted as, and reduced to, physical disorder in the clinical situation, fails to take account of – or even actively erases – the larger political picture.[111]

In a Brazilian shanty town, Nancy Scheper-Hughes interpreted an 'epidemic of nervoso' as having multiple meanings: in part a response to the ongoing state of emergency in everyday life but also a refusal of men to continue demeaning and debilitating labour. Amongst women, it was a response to a violent shock or tragedy (often the death of a child). The epidemic signals a nervous agitation, 'a state of disequilibrium', the only channel for expressing dissent in *favela* (slum) society. Individuals are often very aware of the injustice of their situation, but also exhibit ambivalence, and describe their own hard-worked bodies as 'worthless' or 'used up'.[112] Scheper-Hughes concludes that the semi-willingness of people to participate in the medicalization of their bodies results from participation in the same moral world as their oppressors.[113]

In North America the condition known as 'foetal alcohol syndrome' is a singular, complex example of an historically and culturally infused condition. Medical research has shown that excessive alcohol use, especially binge drinking during pregnancy, is associated with damage in the neurological development of the foetus, and hence with mental retardation. However, the methods used to diagnose foetal alcohol syndrome are questionable. It is clear that the condition has undergone 'diagnostic creep', in that over the course of several decades an increasing number of signs and symptoms have become recognized as relevant, thus increasing the size of potential patient populations and simultaneously calling for greater moral regulation of the behaviour of pregnant women to be supervised by social workers, legal experts, educators and psychologists.[114]

Current estimates of the percentage of infants affected at birth (somewhere between 4 and 5 per cent) are much smaller than had been previously estimated,[115] and today it is recognized by many that confounding factors, notably poor nutrition and other effects of poverty, are implicated, and not alcohol use alone.[116] It is also very likely that epigenetic effects are involved (see Chapter 15). Foetal alcohol syndrome and the related, less clearly defined, foetal alcohol spectrum disorder, have distinctive political components and are thought of, particularly in Canada, as an 'Indian problem', one associated with irresponsible and immature First Nations young women. The impoverished life of so many First Nations individuals, and the discrimination and racism that confronts them in daily life are left out of the equation in virtually all of the professional literature relating to this condition.[117] So too is systematic mention of alcohol use during pregnancy by large numbers of non-Indian women. The politics of race dictates the way in which knowledge about this condition is processed and transmitted, and the looping process is at work as First Nations communities themselves attempt to confront the problem and the negative image associated with their communities.

Another illustration is provided by the refusal of many Japanese adolescents to go to school, thought for a decade or more by many psychiatrists to be behaviour that should be medicalized. In some instances the children (the majority of them boys) undeniably had major psychiatric disorders, but amongst those numerous adolescents who were articulate about their situation, many complained of manipulation by families, of teasing by peers, of other stresses associated with the competitive education system in Japan, and of hours spent commuting on trains. Young people diagnosed with 'school refusal syndrome' often remained essentially isolated in their homes for months on end, frequently in bed much of that time, their desperate parents unable to bring the crisis to an end. When medical help was sought out by parents, often with reluctance because of feelings of shame, 'family therapy' with the child's teacher present was usually suggested, although the father was often absent due to his obligations at work.[118] Amongst children believed to be vulnerable are those subjected to teasing because they appear to their classmates to not 'fit' well into the group. Japanese psychiatrists treating this condition claim to take both the biomedical diagnosis and the socio-medical diagnosis seriously and try to reconcile the two approaches,[119] but this is not always the case, as we will see below.

Since the late 1990s a new condition has been recognized in Japan, that of *hikikomori* (withdrawal), a condition characterized as a profound lack of interaction with other people in which a very large number of individuals (the exact number is impossible to estimate) shut themselves away in their parents' homes, refusing to leave for months or even years on end, usually eating alone, and frequently passing time on electronic devices of many kinds. *Hikikomori* is used to gloss this condition of withdrawal that affects individuals ranging in age from teenagers to those in their late thirties, the majority of them young men. Several noted psychiatrists in Japan, but not all, insist that this condition is primarily a social matter and not due to a psychiatric condition, and one or two social commentators have gone so far as to assert that affected individuals are healthy, but are forced to live in a society that makes unhealthy demands on them.[120] Efforts to deal with the problem are largely by means of support groups attended mostly by anguished parents unaccompanied by the affected individuals. The Japanese media has dubbed these and other efforts to deal with the phenomenon as the '*hikikomori* industry'.[121]

Based on careful ethnographic work, the anthropologist Amy Borovoy concludes that the origins of this condition are multiple but 'the fact that these various dilemmas lead to the shared outcome of shutting oneself away at home is remarkable', so much so, that this endpoint calls for investigation.[122] Borovoy argues that examination of this particular outcome provides a window onto the management of mental health, social welfare, and the institutions and practices that have informed post-war Japan. A good number of *hikikomori* cases start out as school refusers who may have undergone bullying or ostracism at a young age, but others retreat later in life, after failing to find satisfactory work once graduated from college or university. Borovoy and others have found that at times severe psychiatric disorder is evident involving violent outbreaks, obsessive compulsive disorder and, hallucinations. Her analysis makes clear that Japan's enormous commitment to social equality at all costs such that virtually everyone can count ultimately as middle class must be taken into consideration. This tendency has been noted by other researchers in Japan, but the phenomenon of *hikikomori* lays bare what Borovoy suggests is best thought of as the 'darker side' of a commitment to equality. She documents how, in the Japanese mental health care system, medical professionals go to great lengths to avoid diagnosing individuals as having a mental health problem because, above all else, they want to avoid the consequences of permanently labelling such individuals as different and damaged. Everything is done to avoid marginalization, and removal of young people from the mainstream of school, social life and, eventually, the work force. Pathologizing is avoided, with the result that schools and families are expected to absorb deviant behaviour and work to restore order. Outpatient mental health care is at a minimum, and it is only those who become extraordinarily dysfunctional who will be sent for custodial care. No doubt, in part as a result of this situation, considerable stigma persists throughout Japan in connection with mental illness. Borovoy also shows the extent to which mainstreaming is accepted as normal in Japan in order that all children will be exposed to the same education and hence, in theory, have equal opportunity. She uncovers 'holding areas' in Japanese society that protect people until such time as they can fully return into society: so-called step classrooms, prolonged sick leave and mothers available at home to tend solicitously to their children. It is of note that in the United States, for example, numerous similar cases of retreat from society, are likely to be labelled as 'Internet addiction', and managed as such.

The phenomenon of *hikikomori* shows clearly how the concept of medicalization must be contextualized. Borovoy's analysis reveals the broader political, social and cultural variables implicated in the labelling of behaviours, psychiatric and social, as does Kitanaka's research discussed above, and that of Ong in Malaysia. Nationwide stigmatization of psychiatric disorders should be regarded as a human rights matter, as should the excessive prescription of powerful medications. And, worldwide, episodes of violence appear to be more common than is withdrawal. When we read of episodes of gross violence perpetrated in many countries, most often by men, upon investigation, it appears that mental disorders are very often implicated. We can only begin to grasp these phenomena by examining local histories, politics, values, and ideologies and the particularities of the lives of individual perpetrators.

The psychologists Swartz and Levett point out that 'psychological sequelae' have frequently been reported in connection with the impact of massive long-term political repression of children in South Africa. They go on to argue that psychologization is a too narrowly defined term to encapsulate the experience of the children – 'the costs of generations of oppression of children cannot be offset simply by interventions of mental health workers'.[123] Further, they argue: 'it is a serious fallacy to assume that if something is wrong with … society, then this must necessarily be reflected in the *psychopathological* make-up of individuals'.[124] In common with other authors cited above, Swartz and Levett are concerned about the normalization and conversion of political and social repression and malaise into individualized pathology, and its management solely through medical intervention. Anthropologists have documented what appears to be a global trend towards the recognition and management of social distress in psychiatric terms, what can be called as a corollary to medicalization, 'psychiatrization'. In Iran, for instance, Behrouzan documents how the widespread suffering in the wake of the massively destructive 1980–1988 Iran–Iraq war, which killed over a million and maimed countless others, was made explicit through resort to Prozac – an antidepressant widely used in Iran in the 1990s which made it permissible to talk about repressed suffering.[125]

Beyond Medicalization?

Research such as that cited above is part of a large body of literature that highlights how medicalization contributes to masking significant historical, social and political variables that contribute to illness and distress, while attention is directed towards the systematization and stabilization of diagnostic categories and the management of bodily conditions presumed to be an expression of underlying pathology. At one end of the spectrum of these disorders, serious pathology is in all probability implicated, and biomedical intervention might well be effective. However, it is clear that a great deal of what in the biomedical world would be described as 'somatized behaviour' – evident in such cases as heart distress in Iran, *nervoso* in Brazil and elsewhere, and school refusal syndrome in Japan – is poorly managed by biomedicine. Even though individual medical practitioners are often sensitive to the contribution made by social and political factors to ill health, and many understand the dangers of applying medical labels to conditions when pathology is poorly understood, clinicians have no choice but to focus on the task at hand – care of the patient who, more often than not, is in serious distress.

Because the clinical encounter is one that favours an internalizing approach focused on the body, and the patient is seen in isolation from the context of his or her everyday life, a reductionistic, medicalized approach is virtually unavoidable and is indeed indirectly encouraged because biomedical diagnoses of bodily dysfunction are the levers by which the health care system is activated. At times, medicalization can be used to reassure patients and relieve them of guilt, but at other times medicalization oppresses them, as when the complaints of poor and minority patients are dismissed as due to bad or immoral behaviour.[126] Equally pernicious are the subtle ways in which bias is built into the very diagnostic categories used by biomedical practitioners that force them to make marked distinctions between 'normal' and 'abnormal', and often assign categories of ethnicity or race to mark out those people assumed to be at differential risk for various conditions.

In summary, understanding medicalization primarily as enforced surveillance, as certain social scientists have done, is misleading. Individual citizens and even families frequently cooperate willingly with medical monitoring and management of bodily distress in the belief that they will benefit (although their hope for relief may well not be realized). On the other hand, considerable local resistance exists to the kind of enforced surveillance and medicalization of pregnancy of First Nations women, or monitoring of the workplace that takes place in Indonesian factories and elsewhere. There is also mounting evidence of resistance to genetic testing on the part of a good number of people as we will see in Chapter 15. Similarly, arguments restricted to a critique of the social construction of disease, at the expense of recognizing the very real, debilitating condition of individuals who seek out medical help, are also misleading. Ethnographic investigation into the local effects health care economies, the application of key technologies, unexamined values embedded in biomedical discourse and practices and in popular knowledge, all of which variables may promote medicalization or cause resistance to it, bring significant insight to the uncertainties and conflicting objectives at work when individual bodies are managed biomedically.

In Pursuit of Health

The pursuit of individual health, an occupation taken very seriously by many people all over the world today, is closely associated with the idea of self-governance. Moreover, it is an activity fostered alike by all levels of government and the medical profession. The very notion of health is, however, difficult to pin down. Despite efforts to define it in contemporary health policy circles, as well as in medical and popular literature, 'health' takes on meaning primarily through the absence of physical disease. Such an interpretation tends to place it within the purview of the medical profession, as something that is best sustained through systematic, technologically sophisticated monitoring of individual bodies.

The assumption that health, like disease, is limited to the condition of individual bodies and, further, that disease prevention automatically enhances health and is primarily the responsibility of individuals, is a product of the social times in which we live. Health is not a state or condition easily subjected to measurement – as public health literature so often assumes[127] – and, while promotion of the rights of individuals with respect to health care is crucial, to focus on individual agency and responsibility disguises the social and political origins of disease and illness, together with responsibilities of the state for maintaining well-being.

A tendency to view the preservation of health as an individual matter emerged very early in Europe. It was amongst the elite living after the time of the highly influential physician Galen (200 CE) that physicians were first thought of as the 'managers' of people's health, a condition, it was understood, as having relatively little to do with either society or the environment. Galen defined three types of health – the absence of dysfunction; a minimalist definition of physical health; and a positive definition – in which health was equated with happiness and an abundance of energy. Correct regimens with respect to eating, drinking, sleep, wakefulness, sex and the emotions were spelled out in instruction manuals for both physicians and the literate minority. This was in contrast to the classical East Asian medical system, for example, in which, although a lifestyle regimen was strongly encouraged to promote well-being, the value of sustaining health was understood primarily as being for the benefit of society at large, above all in order to ensure successful reproduction and to produce a strong workforce. In contrast, health in Europe from the time of Galen was valued as essential for individual well-being.[128]

At the time of the French Revolution, the right of individuals to state-supported health care was first aired, an argument stimulated by the demand for healthy people to be active participants in the modernization of society and in colonization.[129] A triangulation of interests amongst the state, the medical profession, and individuals became evident from the beginning of the nineteenth century with respect to the preservation of health and health care, at times in congruence with each other, but more frequently partially at odds. Once government was implicated, the way was opened up in the nineteenth century for promotion of the idea that good health is something owed to individuals by society – health became a right.[130] But it was not until the end of the nineteenth century that state support for public health and clinical care was widely recognized as integral to modernization, laying the foundations for the formation of national state-managed health care systems commencing in the early twentieth century in most European countries, Japan, Canada and Australasia, and then later in many other parts of the world, with the notable exception, of course, of the United States although, with the formation of Obama Care – the Patient Protection and Affordable Care Act of March 2010 – improved health insurance coverage was made much more widely available to millions of the US population – but, the recent election brings this under threat.

A second trend also emerged in nineteenth-century Europe and North America, and remains extremely powerful to this day, namely the idea that individual health and well-being can be improved upon, and is not simply finite and God-given. In discussing what he understands as a remarkable expansion of the health sector over the past several decades, Robert Crawford situates the pursuit of health in a framework of political economy.[131] Writing about the United States, he noted that expansion of the medical sector in the 1950s and early 1960s went virtually unquestioned, the assumption at that time being that increased medical facilities would lead directly to improved health across society. This expansion was first challenged in terms of unequal access and a lack of equity, but it was the women's movement that provided a more stinging critique, pointing out the hegemony of medicine, and its role as an institution of social control.[132]

By the 1970s an about-turn in health policy took place, associated with fears about the burgeoning numbers of elderly in the population. It was now claimed that health care expenditures must be curbed, and political pressures were mobilized to cut costs at a time when citizens had come to think of health care not merely as a right in the abstract but as a personal entitlement. Crawford cites Robert Whalen, the Commissioner of the New York Department of Health, who asserted in the late 1970s that it was essential that people should assume 'individual and moral responsibility' for their own health.[133] John Knowles, past president of the Rockefeller Foundation went further:

> The idea of individual responsibility has been submerged in individual rights – rights or demands to be guaranteed by Big Brother and delivered by public and private institutions. The cost of sloth, gluttony, alcoholic intemperance, reckless driving, sexual frenzy and smoking have now become a national, not an individual responsibility, and all justified as individual freedom. But one man's or woman's freedom in health is now another man's shackle in taxes and insurance premiums.[134]

Crawford argues that this victim-blaming ideology, well established before HIV/AIDS was recognized, justified a withdrawal from policies that smacked of entitlements to health care.[135] Leon Kass (later to become one of the primary bioethics advisers of President George W. Bush) even claimed that it is inappropriate that 'excessive preoccupations' about cancer lead to government regulations that unreasonably restrict industrial activity.[136] Others argued in the 1970s, in the face of striking evidence to the contrary, that poverty was on the decline and that further progress on this front would inevitably lead to improved health.[137]

These political moves designed to foster a sense of responsibility on the part of individuals came at a time when it was increasingly apparent to large segments of the public that people have no control over the polluted environments in which they live, the quality of food they are sold, and the safety of medicines they are prescribed. It was in this atmosphere that the 'wellness as virtue' movement exploded,[138] a movement actively encouraged by governments, since in theory it would contribute to a decrease in health care expenditures.

As later chapters show, an approach to 'health maintenance' in which self-responsibility is a guiding norm, has a global reach today, often with unexpected consequences. But there are other ways to conceptualize well-being. Just one example must suffice here. Health, as it was understood by the majority of indigenous peoples of North America prior to colonization, was one in which the well-being of individuals is understood as intimately related to the land. The anthropologist Naomi Adelson, carrying out ethnographic research amongst the Whapmagoostui Cree living in northern Quebec, analysed the social ramifications of a polysemic concept made wide use of in everyday life amongst the Cree – *miyupimaatisiiun* ('being-alive-well').[139] The idea of 'being-alive-well' is by no means limited to the physical condition of individuals; much more important are matters relating to the relationship amongst individuals and their social, spiritual and natural worlds that changes dramatically due to outside forces with each passing year. Amongst items of particular concern to being-alive-well are the availability of sufficient food, in particular sufficient game (essential to avoid starvation until the latter half of the twentieth century); active preservation of the Cree way of life amid non-native technologies including skidoos, SUVs, and firearms; and the continuity of Cree identity following a massive disruption and relocation of large segments of the population brought about by the Quebec government's construction of the network of James Bay hydroelectric dams on

Cree-inhabited lands that commenced in the early 1970s. A plan, eventually abandoned, to build a second dam closer to the Whapmagoostui community site caused additional untold stress for a further decade.

In recent years Cree activists and health care workers have self-consciously mobilized *miyupimaatisiiun* in order to promote self-determination, individual well-being, community solidarity and distinctiveness of identity, and improved biomedical services staffed primarily by the James Bay Cree are now available. The idea that the absence of disease alone is the best measure of health remains unsatisfactory to the majority, and the concept of *miyupimaatisiiun* continues to be used routinely in a variety of Cree Health Board programmes making clear that the very idea of health is locally contextualized.

In Summary

This condensed overview of half a century of social science research on medical knowledge and practice shows how they are both unfailingly rooted in a context that provides a logical framework within which illness and healing are interpreted and managed; this context is constituted by historical precedent, shared values, economics and politics. The tension between internalizing and externalizing logics present in all medical knowledge and practice is linked to broader understandings of – and struggles over – ideas about the relationship amongst the physical body, individuals, families, communities, nations and environments with respect to disease causation and how best to alleviate sickness. Medical practices inevitably have the potential to act simultaneously as modes of social control on the one hand, and as a release from pain and disease on the other. As such, they have the power to both subordinate and emancipate individuals and communities.

Biomedicine is exceptional amongst medical traditions because of its systematic approach to objectifying, classifying and quantifying the human body, assumed to be, in practice, a universal template. This approach was consolidated during the formation of the modern state spurred on by a desire to produce a healthy workforce in order to enable the twin processes of modernization and colonization so central to the political economy of the nineteenth century. The state provided the infrastructure for applying statistical methods to vast populations and for increasingly sophisticated clinical and laboratory practices. Biomedicine, albeit grounded in science, is a site of struggle about control and the interpretation of what will count as legitimate truth claims with respect to body classification and management.

Even though the efficacy of many biomedical treatments is undeniable, disease taxonomies are inevitably socially constructed. This process is influenced in part by the difficulty encountered by medical practitioners in having certain conditions recognized as amenable to medical management and hence in receiving professional compensation for their services, and also by the ways in which language, culturally informed values, historical antecedents, social processes, and the material body itself contribute to the creation of categories through which illness is subjectively experienced and professionally recognized and managed.

Biomedicine proliferated globally during the course of the twentieth century; even so, numerous kinds of medical care are readily available and, in some situations, profoundly modify and transform each other over time, while in other places the situation continues that little or no organized health care of any kind is available. The spread of biomedicine has been due in part to the expansion of available medical services as a result of economic growth, and to a growing awareness by local peoples of what biomedicine has to offer. As a result, without doubt the life expectancy, health and well-being of much of the world's population have been improved, even though biomedical practitioners have at times promoted their wares, often backed by pharmaceutical companies, with negative consequences. Another pervasive change is that large numbers of people, notably those living in urban areas east and west, have internalized the idea that they are first and foremost responsible for their own health and well-being, and that medical practitioners can and should assist them in this endeavour. This has greatly contributed to the protean spread of biomedicine into just about every domain of life. Furthermore, amongst those who can afford it, many now make use of the apparatus of biomedicine to overcome their perceived physical deficiencies in appearance, and other subjectively experienced inadequacies.

Unanticipated difficulties arise with the globalization of biomedicine, notably where interventions are deployed in situations where the state does not have the means to generate reliable statistics. The result may be that what is locally considered important for good health care is at odds with what is being introduced from the top down – the Inuit case study about birth management practices by the Canadian government until recently is an example of this phenomenon. Furthermore, there may be a lack of consensus at local sites about the value of biomedical technologies, particularly when their effects are perceived as a means of undermining the moral order. In addition, it is clear that very many people continue to be eclectic in their search for medical assistance for a variety of reasons ranging from perceived efficacy, cost, availability, convenience, trust, and, on occasion, what is believed to be morally appropriate.