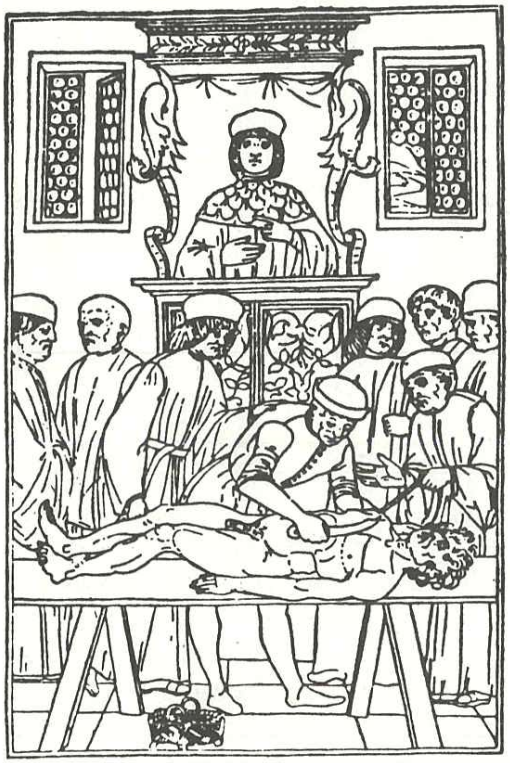
HUW 306
SCIENCE IN CULTURE
PART A

MEDICINE & SOCIETY

Deakin
University

MEDICINE & SOCIETY

STUDY GUIDE & READINGS



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This book forms part of the *Science in Culture* course offered by the School of Humanities in Deakin University's Open Campus Program. It has been prepared for the *Science in Culture* course team, whose members are:

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The course includes:
HUS305 Part A: Medicine and Society
(Study Guide and Readings)

HUS306 Part B: Knowledge Making
(Study Guide and Readings)

HUS307 Part C: Knowledge Using
(Study Guide and Readings)

HUS308 Part D: Science and Society
(Study Guide and Readings)

Published by Deakin University
Geelong, Victoria 3217
First published 1985
Revised annually

Edited and designed by
Deakin University Book Production Unit
Printed by Deakin University Printery

ISBN 0 7300 0735 9

Cover illustration:
An amputation illustrated in a military surgery treatise in 1593. Notice the boxing-glove form of anaesthetic.

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Title page illustration:
A fifteenth-century woodcut of an anatomical lecture at the University of Padua.

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MEDICINE & SOCIETY: AN INTRODUCTION

Prepared for the course team by Richard Gillespie

Medicine & Society: An Introduction

OVERVIEW

Medicine impinges on us every day. We visit a doctor, discuss a friend's illness, watch a television program on childbirth or cancer, worry about medical bills, take a pill or read about a medical breakthrough. The range of these activities suggests the variety of physical and mental states, expertise, practitioners and institutions that make up our experience of health, illness and medicine. Illnesses range from acute diseases to chronic conditions, from mild disorders to fatal attacks, from the preventable to the inevitable and from physical injury to mental disorder. Treatment may simply involve a physician telling us we have the flu and should go to bed for a couple of days or it may involve a long stay in hospital with the utilisation of complex scientific equipment and techniques co-ordinated by a staff of highly trained specialists. Practitioners include nurses, family doctors, surgeons, medical specialists, chiropractors, nutritionists, faith healers or, if we think about it, ourselves. (On realising that I have a cold, I take aspirin, drink fluids and rest. I am, in effect, acting as my own doctor for I am diagnosing the illness, predicting its outcome and prescribing an appropriate treatment.) Finally, the institutional locus of medicine may be a hospital, nursing home, doctor's office or a school or workplace.

In the face of this bewildering array of illnesses and responses to them, it is tempting to step back from the confusion and assume that this complex system of medical care has evolved in such a way because it maximises our health. Certainly, the vast majority of people in our society believe that medical care improves as it becomes more scientific and as health expenditure increases. It is not difficult to discern the reasons for this faith in scientific medicine. Since the late nineteenth century, scientific medicine has claimed one victory after another in the fight against disease: the viral, bacterial, and parasitic agents of infectious diseases have been isolated, vaccines have been developed, antibiotics have been discovered, and surgical techniques have been dramatically improved. In 1911, the German immunologist and bacteriologist Paul Ehrlich used Salvarsan to treat syphilis; the search for further 'magic bullets' has continued ever since. The military metaphors are apt, for doctors and scientists have tended to see medicine as a war against disease, with honours going to those who could score a decisive victory. Similarly, surgeons refer to surgical procedures which entail a high risk of failure as 'heroic' — although the accolades go to the surgeon, not to the patient.

Scientific medicine has undoubtedly increased our knowledge of health and disease and has developed techniques and substances which have reduced our susceptibility to diseases and aided our recovery from illness. However, over the last ten or fifteen years, scientific medicine has been subject to a growing critical scrutiny. A few physicians, in particular those trained in social and preventive medicine, have argued that the improvements in health and longevity in developed nations since the mid-nineteenth century are on balance due not to the application of scientific medicine, as is commonly assumed, but are rather the result of improved nutrition and living standards. They specifically argue that effective clinical intervention for diseases such as tuberculosis, measles, and pneumonia came *after* deaths from the diseases had substantially declined. Medicine should be credited with a successful mopping-up operation, not with winning the major battles.

Feminists have responded that the medicalisation of childbirth has stripped the event of its important emotional and social meanings. Mothers have been regularly anaesthetised during the final stages of birth and thus removed from the experience, the baby is often taken from the mother for several hours, and father and friends are excluded from the event — a natural event has been transformed into a medical crisis. There is now an increasing awareness that a less technical and more informal style of childbirth reduces much of the trauma associated with the event and can allow birth to be a family, rather than a medical, event. Many hospitals now offer such an alternative within the hospital itself, primarily as a result of demand from mothers, although the mother must be prepared to seek out this alternative and be willing and able to pay for it. Thus, an event such as childbirth is constructed by an extraordinary range of elements: the relative power of doctor and patient to control and direct the experience; the development of a professional, scientifically oriented, hospital-based medicine; and the sexual politics of a male-dominated profession controlling the female patient.

In order to comprehend contemporary medicine we must, therefore, pose questions about the social and scientific organisation of the health-care system. In what types of institutions is medicine practised, and how have these institutions developed? How has the hospital as an institution shaped medical procedures and treatments, indeed our very concepts of illness and health? How have the various health professions emerged, what is their relative power, and how do these professions structure medical practice and the patient's experience? What has been the impact of the growth of specialities in the twentieth century, with their exclusive focus on a part of the body, a set of procedures, or one type of patient? What factors determine the growth of medical research, how are fields of research selected, and how are new technologies, drugs and procedures implemented? To what extent does access to health care vary between social groups and nations, both in terms of the quantity of health care available and in terms of its quality and type? Finally, how does the financing of the health-care system affect the individual's access to it? These questions and the debates surrounding them will flow through all the units of this course.

At a more abstract level, we shall analyse the contention that illnesses and diseases are social as well as scientific constructs — that is, that social assumptions and values are embedded in seemingly scientific definitions of specific illnesses. This argument has been made most strenuously in the case of mental illness; it is argued, for example, that mental illness is simply a medical label for behaviour that society (or psychiatrists) determine unacceptable and deviant. Thus, following a well-established tradition, the 1968 *Diagnostic and Statistical Manual* of the American Psychiatric Association classified homosexuality as a mental disorder. However, the emergence of the gay movement in the 1970s has weakened this medicalisation of homosexuality, and in 1982 the second edition of the manual shifted homosexuality to a lesser category of illness. We may also locate shifts in the other direction. The drug addict in nineteenth-century Great Britain was mildly condemned for what was considered immoral and antisocial behaviour. Only at the beginning of this century was drug addiction transformed into a disease by the medical profession and the drug addict thereby viewed as a dope fiend, totally at the mercy of his or her physiological cravings. Drug addicts were from then on regarded as ill, their addiction demanding the vigorous intervention of the physician and the state.

Medicine embraces so many of the structures, beliefs and experiences of society that it provides an ideal focus for an analysis of society itself. Anthropologists in particular have favoured the study of healers and belief systems in 'traditional' societies as a means of teasing out social organisation. Social historians have revealed changing social attitudes by comparing the response to a particular disease over time. The first cholera epidemic in the United States in 1832 was seen in religious terms as God's scourge to punish an immoral society. By the third epidemic in 1866, cholera was seen as a social problem which was primarily due to insanitary, not immoral, living conditions. The response to cholera highlighted a more general process of secularisation of the society and of a tendency to see social problems in a political and scientific, rather than a religious, light. Likewise, the eminent historian of

hospital as the centre of medical care for all acute illnesses is a predominantly twentieth-century phenomenon. In the eighteenth and for most of the nineteenth century the wealthy and middle classes were treated at home; only the poor and working classes were likely to seek treatment in a charitable hospital where they would be crowded into large wards and receive treatment ranging from the cursory to the adventurous and experimental. William is thus cared for at home or, during his attack in New York, at the home of Quaker acquaintances of the Drinkers. His family assumes the responsibility of nursing and caring for him including sleeping with him so as to be able to attend to him immediately.

Treatment. In the light of contemporary medicine the treatment of William Drinker seems a strange mixture of the appropriate and the bizarre. He is made to rest, anything which causes stress is carefully avoided (at least during the acute stages), he is given nourishing broths, and he is cared for tenderly. Yet, at the same time, he is bled regularly and given a series of ineffective drugs. However, it is clear from Elizabeth Drinker's diary that no such contradiction is perceived by the doctors or by William and his family. Indeed, William requests to be bled on at least one occasion, and all believe the procedure relieves his illness. As to the drugs, the doctors themselves are often sceptical as to whether they will have a positive effect, but they are always prepared to try something new, confident from past experience that the treatment could at least do no harm. Rather than measure the treatment on the basis of whether modern medicine considers it effective or not, we rather need to understand it within the total context of the care of William during his illness. Lying ill in bed, William is reassured that he is receiving the best treatment that medicine can offer. If he gets worse or shows no improvement, then the sickness clearly overwhelmed the therapeutic value of the treatment; if he improves then some of the credit can be attributed to the remedies. There are no lack of similar occurrences in modern scientific medicine or in fringe medicine; for example, the prescribing of antibiotics for viral infections such as influenza, or the use of laetrile or vitamin C in the treatment of cancer. In all these cases the effectiveness of the treatment extends far beyond its value as measured in terms of our scientific knowledge.

Relationship between patient, doctor and family. Decisions regarding William's treatment are made in a far more democratic fashion than would be the case for a similar disease today. Physicians, family and friends confer on possible treatments, although it is evident that the physician treating William has the final decision. We can understand this in the context of the rather limited expertise the physician can call upon and that the family and patient have as much knowledge of the course of the illness and treatment as the medical profession. The physician's lack of expert knowledge is, thus, translated into a relative lack of authority over the patient. Indeed, the physician's social charms are as important as his specialised knowledge: Elizabeth Drinker's criteria for judging Dr Bard of New York a good physician include his 'agreeable Manners and sensible Conversation' and that he was 'particularly attentive'. Social relationships were, and often still are, as important in underscoring the authority of the physician as is scientific knowledge. A similar argument can be made for contemporary medicine where the physician's authority rests on many factors apart from scientific knowledge, including a legal monopoly on the right to practice medicine, control of medical education and hospitals, institutional ties to medical research and to the pharmaceutical industry — in short, all the social, political, economic and ideological factors that constitute professional dominance.

Class. The care provided for William Drinker, the number of eminent physicians called upon to treat him, and the expensive and lengthy treatments recommended (including convalescent trips and horse riding) all point to the fact that the Drinker family was fairly wealthy. The working classes would not have been in a position to afford this medical care or to provide the patient with such undivided attention. Social class may also have prevented the spread of disease in the family, for the high living standards and nutrition of the family would have offset their continual exposure to the infection. Social class is an equally important determinant of both disease patterns and of access to medical care today.

mental diseases may be defined by medicine in terms no more concrete than a recognition that a collection of symptoms seem to form a coherent disease entity, although cause and treatment are obscure. A heart condition may be diagnosed on the basis of sophisticated technical measurements, while the cause of the condition remains a mystery. It is perhaps more useful to think of illness and disease as ends of a spectrum, reflecting at one end the experience of illness by the patient (and the patient's family) and at the other end the transformation of the illness into a disease through the mechanisms of classification, experimentation and the organised knowledge of the medical profession. Rather than there being a strict demarcation between these two aspects of ill-health, we shall see that at many points there are subtle and important overlappings between the subjective and the scientific; between the individual and the social definition of illness and disease.

Similar ambiguities and shadings of meaning appear when we consider the related concepts of health and disease.

Read Reference 1.2: Engelhardt, 'The concepts of health and disease'.

Can we view 'health' as an absolute concept, or should we rather see it as a personal or cultural ideal, which may vary between individuals and societies?

According to Engelhardt, how is disease both an explanatory and a normative concept?

What causal factors are included in Engelhardt's multi-factorial etiology of disease?

What is Engelhardt's view of the theories which emphasise either the physiological or the psychological causes of disease?

Can you think of contemporary examples? To what extent are moral judgments built into such diseases as schizophrenia, alcoholism, AIDS, and heart disease?

Medicine, according to Engelhardt, is a pragmatic approach to dealing with illness — it is as much a social activity, encompassing moral and political evaluations, as it is a scientific endeavour. The social and scientific aspects will vary in their influence, depending on the disease we are discussing. Even as modern society is prepared to accept that the alcoholic is sick, it also does not excuse the alcoholic from personal responsibility, and many people would withhold the sympathy they would readily extend for other illnesses. An even greater degree of moral opprobrium has been directed at homosexual victims of AIDS by opponents of their lifestyle, who see the disease as a form of moral (or divine) retaliation for immoral behaviour. But the belief that disease may in part be the result of inappropriate behaviour extends even closer to current social norms: victims of heart disease may well find their physicians and friends inquiring into their diet and exercise habits over the last twenty years, the assumption being that the heart patient is to some extent responsible for the disease.

We might be led to propose that there is an inverse relationship between scientific and social explanations of disease, and that as scientific knowledge of a particular disease increases, then appeals to social explanation, whether religious, moral, or political, would decrease. There appears to be some evidence for this view. Certainly the rise of scientific medicine and the germ theory of disease has been associated with a general decline in explanations of infectious disease in terms of divine retribution. (Although in both cases the cause is associated with the breaking of some law, in one case religious, in the other sanitary.) Yet the two explanations are not mutually exclusive, as Engelhardt emphasises. The isolation of the infectious agent for AIDS did not change peoples' moral explanations of the disease, nor would the discovery of a genetic predisposition to lung cancer be seen as excusing cigarette smokers from responsibility for their disease.

Read Reference 1.4: Jewson, 'The disappearance of the sick-man from medical cosmology'.

What does Jewson mean by the terms 'medical cosmology' and 'mode of production of medical knowledge'?

As an exercise redraw Jewson's Diagram 1, on the three modes of production of medical knowledge, inserting a sentence or two in place of each of his single phrases.

What institutional and professional changes accompanied and enabled the change from a person-oriented to an object-oriented medical cosmology?

How does Jewson argue that the concept of disease in each medical cosmology was related to the social organisation of the production of that medical knowledge?

In what ways can the doctor–patient relationship be seen as a major influence on the type of medical knowledge generated by the physician?

Drawing on Jewson's medical cosmologies and modes of medical production, how would you characterise modern Western medicine?

Jewson's analysis stops at 1870, although he suggests at the end of the article that the basic medical cosmology and mode of production — laboratory medicine — has not changed appreciably since then. Specialisation, and not any basic reorientation in cosmology, is responsible for the continuing expansion of medical knowledge. This is perhaps a sustainable argument, although it is important to note that from the late nineteenth century onwards there has been a concerted effort by the so-called clinical sciences to apply laboratory medicine to clinical practice — that is, to bring together laboratory medicine with hospital and bedside medicine. Nevertheless, it is apparent that Jewson's historical analysis matches criticisms of modern medicine that object to its emphasis on the disease entity and physico-chemical processes at the expense of a more patient-centered approach. But, clearly there is more to modern medicine than simply the laboratory research of medical investigators. General practitioners continue to practise medicine in ways reminiscent of, if not identical with, bedside medicine, while there is a renewed awareness of the multi-causal nature of disease. Perhaps we could use Jewson's categories to help us delineate different segments of the current medical system, and thereby see all three modes of production at work in Western medicine. There is some value in this approach, as we shall see in the following section on the therapeutic relationship, but we should keep in mind that Jewson is concerned to identify the dominant cosmology in any given period; he could argue that laboratory medicine remains the pinnacle of achievement — intellectually and professionally — in the medical profession, and that an object-oriented cosmology and physico-chemical approach to the patient permeates all medical practice, including that of the family doctor.

In the discussion so far on the social construction of health and disease we have opened up issues ranging from the interaction between the doctor and patient to the way broad social, political and economic values may structure medical knowledge and our definition of diseases. In the next two sections we shall explore these relationships in further detail: first, by studying the therapeutic relationship and second, by focusing on medicine as a social institution which echoes and reinforces dominant social values.

The Therapeutic Relationship

In this section we will focus our attention on one aspect of the social context of medicine — the therapeutic relationship or doctor–patient relationship. At the same time, however, we will constantly be drawn back into the broader context of the social

Read Reference 1.6: Turner, 'A Ndembu doctor in practice'.

Compare the diseases of neurasthenia and ihamba. What are the similarities between their causes — both the proximate or efficient cause and the underlying causes? Turner says that for the Ndembu 'death, disease, and misfortune are ... usually ascribed to exacerbated tensions in the social relations'. To what extent could this be said to apply also to neurasthenia in the late nineteenth-century United States?

Could neurasthenia and ihamba both be seen as diseases of modernisation?

What are the similarities and differences between the treatments for ihamba and neurasthenia? How is the relationship between doctor and patient important to the efficacy of the treatment?

'Therapy then becomes a matter of sealing up the breaches in social relationships simultaneously with ridding the patient of his pathological symptoms' (Turner). To what extent does this statement apply to the treatment for neurasthenia? Do Beard and Mitchell appear to have intervened in the patients' social relationships as actively as did Ihembi?

Why is it that, in the case of both the neurologist and Ihembi, it seems to have been important for the healer to have experienced the disease in the past?

Beard affirmed the efficacy of a placebo in the treatment of his patients. Could one consider Ihembi's sleight of hand with the extraction of the incisor as a similar professional 'trick'? What do they tell us about the therapeutic relationship?

Turner sees important lessons for Western psychiatry in Ihembi's treatment of Kamahasanya. What are they?

Both neurasthenia and ihamba would be considered psychological or psychosomatic diseases, and the importance of the social and psychological aspects of the therapeutic relationship are undeniable. But could we argue that the social construction of disease and treatment is less important in the case of diseases that we regard as exclusively physical (or somatic)? Certainly, the example of leprosy indicates the malleability of disease in the face of social expectations, although Waxler did not discuss the relationship between doctor and patient in her article. The following reference seeks to demonstrate the importance of the therapeutic relationship in the treatment of the common cold and influenza in Western society, in this case a suburb of London. It suggests that the medical explanations of the patients' ailments and the treatment recommended by the physicians cannot be understood entirely in terms of the paradigm of scientific medicine. The article also addresses an issue that was raised in our discussion of Jewson's three modes of production of medical knowledge. Jewson suggested that it is possible to see an evolution of medical cosmologies in which, presumably, the most recent cosmology replaces that which preceded it, even to the degree of shaping the type of treatment received by a patient from the family physician. Reference 1.7 demonstrates that the divisions between medical cosmologies, in terms of their application in everyday medical contexts, are not as strict as is assumed in Jewson's discussions of medical cosmologies or in standard comparisons of traditional and scientific medicine.

Read Reference 1.7: Helman, "Feed a cold, starve a fever"— folk models of infection in an English suburban community, and their relation to medical treatment'.

Is it possible to consider European folk models of disease as essentially similar in form to the medical cosmologies of traditional medicine?

Two further central concepts drawn from Parsons and the functionalist school of sociology have emerged in the sociology of medicine. First, sociologists claim that medicine is but one of several social institutions whose task it is to label unacceptable behaviour as deviant. For example, judges, priests and physicians have the power to determine whether an individual or a certain type of behaviour is deviant by appealing respectively to legal, religious and medical criteria. An alcoholic may be declared to be criminal, in a state of sin, or sick, depending on the social institution doing the judging. Second, they argue, as an extension of the first point, that medicine, law and religion should all primarily be seen as institutions of social control, for they establish norms, punish the deviant and try to encourage the deviant individual to adopt more acceptable behaviour. These are enormously fruitful concepts, although sociologists, anthropologists and historians have tended to use them as sufficient explanations of the social role of illness. Marxists, among others, have criticised these explanations for being static models, and for excluding the influence in medicine of social divisions such as class and political power.

One further sociological concept runs through these discussions — that of professionalisation. Embedded in the concepts of the sick role and social control is the idea that a select group of experts has the power to determine whether other members of the society are ill or not, and to stipulate what treatment is appropriate. This power stems from many sources, only two of which need be mentioned here: the claim to a body of expert knowledge — that is, knowledge not generally available to all individuals — and the sanctioning by society, or at least by the state, of exclusive professional control over that knowledge and its application.

In this section we shall explore the concepts of social control, deviance and professionalisation at both a general level and in the context of some case studies.

Read Reference 1.8: Ehrenreich & Ehrenreich, 'Medicine and social control'. (Some US medical institutions need a short explanation: Medicaid is a government health-care program for the poor; Medicare is a government program for the elderly; Blue Cross is a private insurance program for hospital care.)

Why do the Ehrenreichs regard criticisms of the unequal distribution of medical care as important, but insufficient?

What precisely do the Ehrenreichs mean by the phrase 'social control'?

What are the similarities between the 'sick role' and the 'welfare role'? What role do professionals play in each instance?

The Ehrenreichs discern two types of social control in the existing medical systems — disciplinary and co-optative. Describe what they mean by each type, and give some examples drawn from your own knowledge of the medical system.

How, according to the Ehrenreichs, have doctors maintained and strengthened their control of the medical system?

How does the concept of professional dominance relate to our discussion of the therapeutic relationship? To what extent do the Ehrenreichs see the process of healing inextricably bound up with an authoritarian relationship between doctor and patient, at least in the current medical (and political) system?

In what ways do different social classes in the United States experience medical care in different ways, and how does this contribute to social control?

How, according to the Ehrenreichs, do both liberal and conservative political approaches to health care succeed in extending social control?

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2

MEDICINE AND ITS CRITICS

Prepared for the course team by Jock McCulloch

Medicine and its Critics

Prescribed text: L. Doyal & I. Pennell, *The Political Economy of Health*, Pluto Press, London, 1979.

Medicine, like all branches of organised learning, has a philosophical foundation. Like the law and the church, it also has a distinct code of ethics which guides practitioners in their professional conduct. Access to medical care is widely regarded as a basic right synonymous with a civilised life. This has given medicine an importance above that of other professions. But it is because of its unique social character that medicine has attracted the attention of critics who largely ignore the social role of lawyers and priests.

The most eloquent of medicine's critics find fault not just with the occasional excesses of the profession in seeking material advantage, nor just in applying expensive technologies which only prolong suffering to the chronically ill. Critics such as Doyal, Illich, Navarro and Ehrenreich also find fault in the influence medical practice has upon existing social structures. To such writers, medicine is, above all else, a mode of political activity which can only be understood as an integral part of the political and cultural systems in which physicians practise. For the most sophisticated critics, medicine is a form of cultural work which shapes both the contemporary understandings of illness and its treatment and conceivable alternatives.

Read Reference 2.1: Dubos, 'Biomedical philosophies'.

How does Dubos depict medical philosophy in the pre-modern world of Europe? What are the ways in which the resulting approach to illness differed from contemporary Western medicine?

What is the Hippocratic tradition and what are its defining principles?

What is the 'Body Machine philosophy of medicine'? Is this view reconcilable with the twin principles of Hygieia and Panacea? How is it reconcilable with the Hippocratic tradition?

What are the advantages and limitations of the Body Machine model?

Physicians claim that their high status and material benefits derive from the importance of their skills to the communities in which they work. Medicine is usually defined in the way in which physicians choose to have it defined. According to physicians, the practice of medicine should stand above question because of its scientificity, and its sacred task of preserving life and reducing suffering. Any criticism of medicine is therefore an attack upon fundamental benefits relating to the sanctity of life and the surety of its knowledge claims. This argument has not, however, managed to insulate contemporary Western medicine from its opponents. Underlying all criticism of medicine is the primary problem of who decides what health, illness and disease are, what is significant about them, and how they should be treated. Which leads us to ask: Should any society accept unquestioningly the claims physicians make about their practice, and thereby accept ways in which the profession may structure the provision of health and the demands it makes upon public and private resources for research, insurance and treatment?

What are the differences Doyal identifies between developed and under-developed countries?

Write a brief summary of Doyal's views of the reproduction of labour power, noting carefully the role of the state.

How does the medical profession act as an agent of socialisation and of social control?

Medical practice is distinct from that of other similar bureaucracies — the law and the church — in its higher susceptibility to change. It differs in being open to the influence of fashion as one technique is suddenly abandoned for another or where a previously obsolete approach is revived to become a new orthodoxy. The surgical removal of an infected appendix or tonsils, which was routine for three decades, has now given way to a more conservative approach whereby surgery tends to be viewed as a last resort. In the Peoples' Republic of China acute appendicitis is rarely treated by the surgery which remains standard practice in Australia and Great Britain. Perhaps in time this approach will be superseded by the Chinese method of careful management and the draining of the infected organ. During the past ten years there have been a number of dramatic changes in surgical procedures involving women (e.g. in treating breast cancer), which have arisen from the politically more active role of women in the OECD states. Clearly, the fine structure of medical practice itself is open to the influence of the same social and political forces which shape the societies in which physicians ply their trade.

Of all the areas of medical specialisation, psychiatry is the most susceptible to changes in fashion. Over the past two decades US psychiatry has seen the invention and disappearance of a dozen schools, such as EST and Primal Therapy, each of which has sought to replace older philosophies and to become the only effective means for treating mental illness. Unlike other branches of medical knowledge, psychiatry is least able to justify its existence by reference to objective and measurable improvement in the condition of its patients. Psychiatric patients tend to become dependent upon therapy, and cases of demonstrable cure are exceptional.

Radical critics of medicine have tended to concentrate upon the profession's failures. That is why psychiatry and oncology (the study and treatment of cancer) have been major targets for radicals such as Navarro, Epstein, Illich, Doyal and Zola. Psychiatry has been attacked for facilitating the expansion of the role of the state, through public health agencies, into the private life of the family. Psychiatrists possess the power to decide who is normal and who, because they are designated as presenting a danger to the community, should be deprived of basic civil liberties. As such, psychiatry reproduces certain values about acceptable behaviour and belief. Its role is, therefore, political.

Changes in surgical preference and the sudden shifts in approach as illustrated by psychiatry suggest that medical practice influences, in a most intimate way, the values, prejudices and expectations of individuals whose lives as citizens and patients are fashioned by medical belief.

The contest between health and disease is finally about pain: the identification of its causes, its management and its elimination. And yet, there is little if any reference to pain and suffering in the writings of the'radical left' critics such as Doyal and Ehrenreich. The one critic to base his analysis of Western medicine upon its achievement or failure in regard to pain is Ivan Illich. This alone is sufficient to distinguish Illich and his work from that of his contemporaries. Illich's critique is also distinguished by the importance he attaches to the influence of medicine upon individuals' beliefs, self-perceptions and expectations about life.

Medical organisation allows the transfer of wealth and advantage. High technology, the hospital industry and the inflated salaries commanded by physicians further concentrate power and privilege into the hands of those who already own productive capital at the expense of the users of medical services. For Marxist critics such as Evan Stark, Navarro and Zola, Western medicine is an instrument for domination by the ruling class. Capitalism must stage-manage and control disease (most often produced by environmental conditions) while at the same time obscuring from sight the social and political factors which give rise to illness. Some Marxists assume that much illness is an artefact of the capitalist mode of production. Cultural critics of medicine view with suspicion the widening circle of social pathologies or deviant behaviours which are now defined in medical terms. This so-called medicalisation of Western societies finds its most important, if idiosyncratic, critic in Illich, who believes that resort to medical care most often does the patient more harm than good. Cancer is again the most frequently quoted case of what Illich terms 'clinical iatrogenesis'.

Critics such as Illich and Navarro choose to play down the achievements of the medical profession's success in reducing pain and in increasing the quality of life open to the sick and the injured. They ignore achievements in the treatment of the trauma of road-accident victims or soldiers in combat, where there have been major advances in reducing mortality rates. Marxists in particular turn a blind eye to such gains as those made in the management of diabetic coma, pernicious anaemia and abdominal surgery and to the success of antibiotics in the treatment of enteric fever and pneumonia. The refusal of radical critics to acknowledge such advances is indicative of the political nature of the debate in which they are engaged.

Read Reference 2.5: McKeown, 'Medicine as an institution'.

How does McKeown define the role of medicine and what changes to current practice does he wish to see?

How would McKeown respond to the criticisms made by Illich or Krause?

What are the areas of difference between McKeown and the other critics, and how would you explain them?

Read Reference 2.6: Wright, 'The radical sociology of medicine'.

You should also reread Reference 1.8.

What does Wright find to be a flaw common to Navarro, Krause and Ehrenreich?

Do you think the criticisms also apply to Doyal, McKeown and Illich?

How persuasive do you find this argument?

What does the mode of criticism of each of the six authors reveal about the role he or she would wish to see medicine play?

3

DRUGS IN SOCIAL CONTEXT

Prepared for the course team by Eveleen Richards

Drugs in Social Context

It was argued in Section 1, '*Medicine & Society*: An Introduction', that disease is a combination of social and cultural factors and physiological states, and that the therapies employed in the treatment of disease are also socially and culturally contingent. Thus, the ways in which medicines are defined and used are linked to our perceptions of disease. It is not possible to separate medication use from the context or belief system which suggests the best way to behave in the case of illness.

As we saw, the dominant model of disease in advanced technological countries is that of scientific medicine. This model, technical and reductionist in its emphasis, is conventionally contrasted with the non-scientific or folk criteria people use in making day-to-day judgments about being ill. These folk criteria are defined as primarily psychological, social and cultural — 'how people feel, look and act'. This informal or folk health belief system has its own pharmacology — the range and dosages of substances assumed good for various conditions — and accounts for the great volume of over-the-counter (OTC) remedies bought without prescription. These include not only those compounds defined as medicines by pharmacologists and government regulators (such as analgesics, digestives and laxatives), but also a very wide range of substances used as if they were medicines. Health foods, which enjoy very large retail sales in the United States, are the major instance.

To some extent, these two systems—technical and folk—overlap. Folk choices and uses of medicine are influenced by public education, media promotion and the advertising of the technological contents of scientific medicine. In turn, technical medicine has at times adopted some of the pharmacology of the folk culture, such as quinine, digitalis and aspirin.

Those studies which have been carried out in Western countries show that doctors see only a 'minute proportion' of illness, and that self-medication is the norm (see R. Blum, et al., *Pharmaceuticals and Health Policy: International Perspectives on Provision and Control of Medicines*, Croom Helm, Kent, 1981, pp.48-50; 121-31). Yet, little is known of lay conceptions of health and disease in advanced Western countries. Paradoxically, it has been asserted that we know more about the meanings of medicine use, and conceptions of health and disease, in exotic cultures and tribal societies than in advanced technological societies. This is because the provision and control of medicines in the latter have developed almost entirely within the context of the dominant model of technical, scientific medicine, which until recently has been taken as self-explanatory: being 'scientific', it is taken as true.

The central tenet of scientific medicine is the concept of specific aetiology. The belief that 'particular diseases have particular causes' crystallised in the late nineteenth century in the 'laboratory period' of medicine, with the establishment of the germ theory of disease. From this came the promise of specific therapy (i.e. the prospect of specific chemical weapons to deal with the specific pathogens) — the so-called 'magic bullets' which homed in on the target of their own accord and injured nothing else. The first of these, an arsenic compound known as Salvarsan, was developed in 1909 as both active and specific against the syphilis germ. Salvarsan revolutionised the treatment of syphilis and ushered in the era of chemotherapy — of antibiotics and synthetic anti-microbial drugs (see B. Dixon, *Beyond the Magic Bullet*, George Allen & Unwin, London, 1978).

public accountability. In the prototypical doctor–patient relationship, the patient is the passive consumer, and pharmaceutical marketing, which is targeted at the prescribing doctor not the consumer, reinforces and some would insist exploits, this relationship. In advanced technological societies, the doctor is the 'gatekeeper', determining what medicines a patient buys, or a hospital maintains in its dispensary (Blum et al., *Pharmaceuticals*, p.31).

To this end, the industry shapes the prescribing habits of doctors, through the usual promotional and advertising strategies but primarily through the maintenance of a vast army of sales representatives throughout the world, ranging from as high as one representative for every three or four doctors in countries such as Brazil and Mexico to one in eighteen in Great Britain (United Nations Centre on Transnational Corporations, *Transnational Corporations and the Pharmaceutical Industry*, United Nations, New York, 1979).

The intent is to establish and maintain 'brand loyalty' against the inroads of rival patents or non-patentable 'generics', which might be cheaper or more effective, or have less deleterious side-effects. The consuming patient is thus structurally excluded from this process of decision making and is dependent upon the drug selection of the prescribing doctor who is medically responsible, but not economically accountable, for his or her choice.

To some extent, the 'gatekeeper' role of the doctor is tempered by the great volume of OTC remedies purchased directly by consumers, and here the consumer might be seen to be a more active participant in the process. However, the provision and control of OTC remedies is determined by negotiation between the same interested parties — the industry, government regulators and medical experts — with little or no consumer input, and the industry again shapes consumption patterns through promotion to pharmacists and direct advertising to the public.

These factors have delayed the emergence of consumerism in the provision and control of medicines. However, in recent years the drug industry has become the subject of mounting public criticism, and there is increasing public concern over the proliferation of high-cost, sometimes dangerous or ineffective drugs and their ever-growing consumption. There is now a well-established body of literature in this area, some of which we shall explore in this section, but before we do that what are your own views on the question?

List the benefits and disadvantages of drug therapy.

Do the benefits outweigh the disadvantages?

Who, in your opinion, should take the blame for such disadvantages as you have enumerated: the drug industry, the pharmacists, the physicians, the consumers or the government regulatory bodies?

In order to understand the dimensions of the problem, consider the following statistics. The 1979 *Australian Health Survey* reported that 49.8 per cent of the population had taken medicine over the previous two days. A little under half of these had taken a non-prescription (OTC) medication. In 1978 Australians spent an estimated $640 million on pharmaceuticals (*Pharmaceutical Manufacturing Industry Inquiry Report*, AGPS, Canberra, 1979). It has been estimated that one hospital bed in every twenty is occupied by a patient with drug-induced disease. Between five per cent and eight per cent of admissions to hospital are precipitated by drugs and between ten per cent and thirty-one per cent of patients in hospitals experience side-effects from the medicines they are given. In the United States, an estimated one hundred to two hundred people die every day as a conseqeunce of the

Do you find anything to criticise in Waldron's account?

By what means, according to Waldron, does the drug industry shape the prescribing habits of doctors?

Is over-prescribing a problem to be dealt with most effectively by doctors themselves?

Read Reference 3.3: Silverman, 'The epidemiology of drug promotion'.

What differences did Silverman find between the promotional claims of drug companies in the United States and those in Latin American countries?

To what factors does Silverman attribute these differences?

How do the drug companies defend themselves against Silverman's charges of corporate irresponsibility and dangerously unethical behaviour?

Where does corporate responsibility lie — with the company's managers, its stockholders, its customers or with its government regulators?

Silverman argues that on the basis of its track-record the drug industry should not be left to control itself. Do you agree?

How should the drug industry be regulated and what solutions does Silverman offer?

In the United States, following on the thalidomide tragedy, the Food and Drug Administration's (FDA) mandate on drug regulation was extended and tightened by means of the Kefauver-Harris Amendments of 1962. These amendments require firms to provide documented scientific evidence of a new drug's efficacy as well as proof of its safety. Further, drug companies are required to submit detailed investigational plans, giving the results of animal tests, before any clinical research may be carried out on humans. And finally, the amendments imposed regulatory controls on the advertising and promotion of prescription drugs. In particular, drug firms are required to restrict advertising and promotional claims to those approved by the FDA in labelling and package inserts. But, while Silverman and Waldron argue that such government regulation is not sufficient to control the activities of the drug companies, some economists and industry spokespeople have been highly critical of the effects of the Kefauver-Harris legislation on the development and marketing of new drugs.

Read Reference 3.4: Brozen, Foreword to 'Drug regulation and innovation'.

Read Reference 3.5: Wade, 'Drug regulation: FDA replies to charges by economists and industry'.

What disadvantages, according to Brozen, have followed from the 1962 Kefauver-Harris Amendments? Are they primarily disadvantages to the drug industry or to the consumer?

Do you agree with Brozen that 'drug lag' is a disadvantage to consumers? In what circumstances might it be an advantage?

How well does the FDA answer criticisms like those of Brozen? Brozen and Milton Friedman argue that Americans would be better off if the Kefauver-Harris Amendments were repealed. Do you agree?

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4

ABORIGINAL MEDICINE

Prepared for the course team by Janice Reid

Aboriginal Medicine

Introduction

'The Australian problem' [a futuristic fable]

In the Year 2070, the first chroniclers were beginning to record the dimensions of 'the Australian problem'. Their accounts began in 2020, when the forces from the north landed in strength on Australia's shores, and the country capitulated. The foreigners closed Australia's parliaments, social services, business houses, schools, churches, theatres and sports-fields, transferred all private property to their own immigrant settlers, and permanently relocated the entire Australian population in tent encampments in the arid country areas.

By the time the Australians attracted the interest and concern of the chroniclers, their camps were in dispirited disarray. Ragged and rotting tents scarred the landscape. Although fifty years had passed since their establishment, the camps had none of the water, sewerage, sanitation or garbage-disposal facilities of the towns. The rations, available from distribution points in exchange for work tokens, were polished rice and weekly supplements of vegetables. Inspectors from the Health Ministry were concerned at the prevalence of malnutrition, gastroenteritis, anaemia, leprosy, tuberculosis, parasite infestations and respiratory tract infections. The lifestyle conditions such as diabetes and cardiovascular disease contributed heavily to the premature mortality of the adult population. The babies generally were dying from acute infections.

Emotional illness was widespread. Even the relatively well-balanced Australians—among them former doctors, teachers, managers, trades-people, politicians and students—passed the days in a depressed malaise, or buoyed up by intoxicants or the transient excitement of games of chance. There was some discussion among the authorities about whether the high suicide rate and psychological disorders were products of the Australian culture or were a post-invasion phenomenon. Most experts favoured a cultural explanation and rejected suggestions that the stresses of camp life might be implicated.

Early on, some camp-dwellers had aspired to lead and organize community improvement campaigns, but lost interest when officials, while giving their blessing, refused to relinquish control of any administrative or political functions. Field officers of the Department of Australian Advancement made many attempts to solicit the co-operation of the Australians in running projects devised by the Ministry for the betterment of the camps. The populace, however, evinced little interest in dog-farming, medicinal-herb cultivation and dry-rice agriculture. The Australians continued to reminisce perversely among themselves about study, books, free enterprise, salaries and job promotion.

The officials were kindly, but bewildered. They regretted the violent excesses of the early days of the invasion, but they could not understand the present recalcitrance of the Australians; their indifference to the government's exhortations to work the fields and improve themselves. Only the children, many of whom had no patience for the memories, values or traditions of their elders, had mastered the new tonal language and its alphabet of characters. Their English-speaking parents seemed either unable or unwilling to master these simple skills themselves. The adults consistently resisted the adoption of the introduced language, culture or agrarian lifestyle. They also undermined official efforts to recruit the young to a new ideology by covertly teaching them Australian history, English literature, writing and arithmetic. Even more troubling was the failure of the people to embrace the state religion, a synthesis of Hindu and Buddhist theologies. Most Australians irrationally retained more primitive Christian or agnostic beliefs and seemed foolishly unconcerned about their own enlightenment.

The spirit of the camps was no less a concern to administrative staff. They deplored the internecine strife among camp segments, and extolled the virtues of co-operation between families, whether or not they had known each other or come from the same social strata before settlement. And they despaired of the propensity of residents to 'go wandering' from camp to camp for no apparent reason, or, at best, to join relatives for archaic festivals, which the Australians called 'birthdays' and 'Christmas'. Perhaps the most disruptive force within the camps was the core of people who talked about their former houses, suburbs and jobs, and about 'going home'. These 'fomenters' were few in number, and so were watchfully left alone. However, the young dissident settlers in the towns who agitated for 'home rights' for the Australians were subject to the attentions of security services.

Spiritual healing is predominantly the domain of the traditional healer, who is expected to discern and deal with the underlying causes of illness (the 'why' of the condition) as well as the symptoms (the 'what'). Less commonly, ceremonial or individual curing is undertaken by senior men or women who, although not specialist healers, can utilise religious knowledge and powers to this end. The healer is believed to have mystical abilities which she or he employs to examine and treat a patient. The healer may be aided by spirits or possesses powerful objects acquired during her or his initiation. Sometimes a promising young man is guided and taught his profession by an older healer. More often a person gains the power of healing as the result of a dream experience or a visitation by the spirits of his or her ancestors or of his or her land.

The principal functions of the healer are to divine the identity of the person (i.e. the sorcerer, someone knowing the magical techniques which cause sickness) or the spirit beings who have attacked the patient. He or she uses this power to counteract their malignant influence. Treatment may consist of touch, massage, the extraction of objects inserted by a sorcerer, painting with ochre and other magical, or ritual techniques.

Read: 'Magic and sorcery', in R. Tonkinson, *The Mardudjara Aborigines: Living the Dream in Australia's Desert*, Holt, Rinehart & Winston, New York, 1978, pp.106-12.

(Those of you who have done the course *Nature and Human Nature* (HUS 203/4) will own a copy of this. Otherwise you will find it in multiple copies in the Deakin University library.)

In the literature on Aboriginal healing, as above, the indigenous practitioner is generally referred to as a man. It does seem from ethnographic writings that the role was generally reserved for men, though we cannot be sure of this since most anthropologists have been men and would not have had access to or the confidence of Aboriginal women. Today, there are certainly renowned women practitioners, but women's healing powers are generally exercised in the context of their nurturing and ceremonial roles.

Read Reference 4.3: Bell, 'Women's changing role in health maintenance in a central Australian community'.

The uniquely Aboriginal response to illness, disregarding for the moment the use today of Western health services, varies according to the nature of the condition, but two general patterns emerge. Trivial or transient conditions such as mild aches and pains, colds, cuts, bruises, broken bones and childbirth are an expected part of life. They are treated with rest, massage, family care and herbal remedies, or simply ignored in the knowledge that such ailments are generally self-terminating. If any thought is given to their aetiology they are usually attributed to 'natural causes'.

However, acute or debilitating chronic illnesses are another matter. If a person is so disabled that he or she is unable to function in the community and to carry out daily roles and duties, more serious measures will be taken. Often the healer will be asked to diagnose and treat the condition. The healer, patient and family all share a common view of the cause of serious illness. It differs markedly in its content from that of Western medicine, emphasising not microbes and physiological dysfunction, but relationships with other people and with the spiritual world. It is a unified or holistic model of illness and health rather than a mechanical or scientific one. Aborigines maintain that conflict between people and antisocial behaviour will result in sickness. Adultery, gossip, murder, jealousy and failing in one's duties towards others are serious social offences. Other offences include stealing the sacred objects or paintings of another group, trespassing or hunting without permission on another group's land, or profaning a religious ceremony. All of these transgressions lead to conflict, which is expressed either openly (as in an angry exchange or fight) or covertly by the use of sorcery.

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5

THE POLITICS OF CANCER

Prepared for the course team by John Mathews

Politics of Cancer

Highly recommended text: S. Epstein, *The Politics of Cancer*, rev. edn, Anchor/Doubleday, New York, 1979.

This book will be held in multiple copies in the library since it is difficult to obtain in Australia, though students are recommended to purchase a copy if they can.

In addition you should read your prescribed text, L. Doyal & I. Pennell, *The Political Economy of Health*, Pluto Press, London, 1979, especially ch.2.

Introduction

It was noted in Section 1, '*Medicine & Society*: An Introduction', that cancer provides an excellent case study for teasing out the relations between health and disease and society.

Cancer is a well-known and feared disease. The newspapers and popular media regularly give coverage to 'miraculous' cures and 'heroic' medical interventions. The subject is surrounded by myths. It is seen sometimes as a 'disease of affluence' that strikes without warning and explanation. Despite the massive media coverage of efforts to treat and cure cancer, there is a dimly perceived popular understanding that cancer can be prevented — but then this debate too is carefully orchestrated around the notion of 'personal responsibility' — that is, diet, smoking, exercise. The result is that there is very little debate over the regulation and control of the known cancer agents used in industry and released into the environment.

In this series of readings, the social construction of the disease cancer, of its causation and hence of its prevention, is examined using scientific, medical, economic and political perspectives. There is currently fierce debate over such topics as:

1 the size of the cancer problem (measured by mortality and by incidence), and whether it is growing larger or not;
2 the extent to which cancer is due to environmental agents (and hence the extent to which funds should be channelled towards preventive rather than curative programs);
3 within the prevention debate, the proportion of cancers attributed to 'lifestyle' factors and to 'occupational' factors (and hence the extent to which preventive programs should be pitched towards individuals or towards the regulation of industry);
4 the assessment of risk arising from exposure to carcinogens (and whether there is an 'acceptable' level of risk, or a 'safe' level of exposure);
5 the adequacy and relevance of animal and laboratory evidence in designating a material or product as being 'carcinogenic';
6 the optimal means of socially regulating the production, use, release and disposal of cancer agents in the community; and
7 the optimal means of measuring the impact of cancer on the community, and its causes.

It is not claimed that there are always easy or 'correct' solutions to these debates. The point is made in this section that it is fruitless to expect 'science' or 'medicine' to deliver a 'verdict' on the cancer-prevention problem. The problem is a social and political problem, and therefore its 'solution' involves social and political choices.

Epstein focuses on some of the forces behind the 'medicalisation' of cancer, in his discussion of the American Cancer Society (pp.456-64). Can you link this discussion to the wider debate surrounding the role of medicine as a dominant social practice?

Epstein examines the role of trade unions in protecting their members from workplace exposure to carcinogens, in the section on labour (pp.437-46). He is clearly sympathetic, but fails to cite a single example of a success story where a union has succeeded in controlling a carcinogen through negotiations with an employer. Compare his approach with that advocated by the ACTU (see Reference 5.5).

This book is the core reading for this section. It is long, but in many ways it is an outstanding example of the craft of tackling a technical subject. It reveals just how far social and political conflicts penetrate the 'technical facade', and in the process provides an exciting read.

Read Reference 5.1: Pott, 'Cancer scroti'.

This first reading provides some sense of an historical dimension. Occupational cancer has been recognised for nearly two centuries, and scrotal cancer — the so-called mule-spinner's disease, which arises from the spray of oil coming from the mule — is still an occupational hazard for textile-mill workers.

Note the argument for its relation to occupation as well as its cure.

Read Reference 5.2: Doyal et al., 'The politics of cancer'.

Cancer in Britain, which was initiated by Lesley Doyal, is in the same series as Doyal's *Political Economy of Health*, the prescribed text for this course. It was planned to be a transposition of Epstein's *Politics of Cancer* to Great Britain but ended up as a separate text written co-operatively by a series of British authors.

This short reading sets the criteria of the current debate on cancer. Doyal claims that there has been a swing to prevention. Do you agree? What are the reasons for such a swing? She also argues that 'the fact that the majority of cancers are largely environmental in origin is evidenced by the marked differences in cancer rates between different social groups' (p.2). What do you think of this argument? Does it show that 'cancer cannot be explained simply in natural or genetic terms'?

Further on, Doyal claims that 'issues of this kind are never resolved by reference to purely scientific considerations'. You will be familiar with this claim occurring in other examples of controversy, and you should bear it in mind as you work through this material. Do you agree or disagree, and what are the implications either way?

Finally, she labels two positions as 'establishment' and 'radical' — those of Peto and Epstein to which we now turn. Do you agree with her criticisms — for example, that the establishment position assumes that working-class people choose to lead less healthy lives?

This section of *Cancer in Britain* deals with political strategies to reduce exposure to carcinogens, and follows a discussion of what people can do as individuals. The points highlighted are:

1 identification and regulation of carcinogens;
2 public participation and democratic control;
3 freedom of information and access to knowledge; and
4 legal initiatives.

Consider how far these strategies concur with, or go beyond, those discussed by Epstein.

House of Representatives Standing Committee on Environment and Conservation. *Final Report of the Hazardous Chemicals Inquiry.* AGPS, 1982.
This Report of the Inquiry of the Federal Parliament's Standing Committee on Environment and Conservation into hazardous chemicals constitutes one of the few official discussions of carcinogens and their control in Australia. Three of the illustrated studies should be read—those on asbestos and cancer; on coke-oven emissions and cancer; and on the herbicide 245-T and cancer.

Howard, J. K. 'The prevention of occupational cancer: an ASTMS policy document—a review'. *Chemical Industries Association Background Paper*, June 1980.

Morris, R.J. *Cholera 1832.* Croom Helm, London, 1976.

Moss, R.W. *The Cancer Syndrome.* Grove Press, New York, 1980.
A critical account of the cancer establishment and its attitude to alternative therapies.

Nelkin, D. (ed.). *Controversy: Politics of Technical Decisions.* Sage, London, 1979.

Occupational Health and Safety Administration (OHSA). 'Identification, classification and regulation of potential carcinogens'. *US Federal Register*, vol.45, no.15, 1980, pp.5001-296.
This is the full text of the OHSA 'generic' cancer prevention policy. It has not, in practice, been implemented.

Rosenberg, C.E. *The Cholera Years: The United States in 1832, 1849 and 1868.* University of Chicago Press, Chicago, 1962.

Smith, F.B. *The People's Health 1830-1910.* Australian National University Press, Canberra, 1979.

Sontag, S. *Illness as Metaphor.* Penguin, Harmondsworth, 1977.
This is a most interesting essay on the diseases tuberculosis and cancer: the first the major killer of the nineteenth century, and the second a major killer in the twentieth century. Susan Sontag examines the social and literary symbolism of the diseases and attempts to cut through this to reach the real needs of patients.

Studer, K.E., & Chubin, D.E. *The Cancer Mission: Social Contexts of Biomedical Research.* Sage, London, 1980.

Taylor, R. *Medicine out of Control: The Anatomy of a Malignant Technology.* Sun Books, Melbourne, 1979.
Has a useful critical section on medical approaches to cancer.

US Surgeon General. *The Health Consequences of Smoking—Cancer.* US Department of Health & Human Services, 1982.
The regular reports of the US Surgeon General on smoking and its health effects have been instrumental in raising awareness on this issue. This is the first of these reports devoted exclusively to cancer.

US National Toxicology Program. *Third Annual Report on Carcinogens.* US Department of Health & Human Services, 1983.
US legislation on toxic substances control requires the Secretary of DHHS to publish an annual report containing 'a list of all substances (i) which either are known to be carcinogens or which may reasonably be anticipated to be carcinogens and (ii) to which a significant number of persons residing in the United States are exposed'.
This is the third in the series, and it is the best and most complete schedule of carcinogens available at this time.

6

THE MEDICALISATION OF CHILDBIRTH

Prepared for the course team by Belinda Probert

The Medicalisation of Childbirth

> The main change in the social and medical management of childbirth and reproductive care in industrialised cultures over the last century has been the transition from a structure of control located in a community of untrained women, to one based on a profession of formally trained men. Thus, a process of professionalisation has been accompanied by a transfer of control from women to men. (A. Oakley, 'Wisewoman and medicine man', in J. Mitchell & A. Oakley (eds), *The Rights and Wrongs of Women*, Penguin, Harmondsworth, 1976, p.18.)

Having a baby in Australia in the 1980s will, for the great majority of women, involve the same basic landmarks. First, a general practitioner will confirm the pregnancy and advise the urgent 'booking' of a hospital bed for the confinement. He or she will then pass the woman, now a 'patient', on to an obstetrician for the first of many visits for antenatal care. These visits will involve a variety of tests (blood and urine tests, physical examinations, ultrasonic scans, etc.) intended to monitor the health and development of the foetus. At the onset of labour the woman will probably be admitted to hospital, where she may be offered pain-killing drugs. If labour fails to commence at the time expected by her doctor it may be artificially induced. Finally, the baby will probably be delivered by a male obstetrician, with a variety of interventionist techniques at his disposal. Between 50 per cent and 84 per cent of women will experience post-partum 'blues', and between 7 per cent and 24 per cent postnatal depression (see A. Oakley, *Women Confined*, Martin Robertson, Oxford, 1980, p.135).

The rationale for such a 'medicalised' approach to childbirth is couched in terms of its beneficial effects on the health (and comfort) of both the baby and its mother. Derek Llewellyn-Jones, for example, in his widely read book, *Everywoman*, asserts that 'antenatal care has resulted in a very considerable reduction in maternal deaths during childbirth ... For antenatal care to be effective, the patient must go to her doctor as early as possible in pregnancy, and be seen at regular and increasingly frequent intervals during pregnancy' (D. Llewellyn-Jones, *Everywoman*, 2nd edn, Faber, London, 1978, p.172).

Historical Changes

In recent years there have been a number of historical studies of different aspects of the management of childbirth. They have highlighted at least three particular changes characteristic of modern practices which cannot simply be ascribed to 'medical progress'. The first concerns the transformation of childbirth from something traditionally identified as 'women's work' to an event controlled by men. In Great Britain, for example, the position of midwives was already being usurped by 'man-midwives' in the eighteenth century. The rise of the general practitioner and the exclusion of women from licensed medical practice exacerbated the trend. Poorer and more isolated women continued to be cared for by midwives; in Townsville, for example, in 1890, 73 per cent of births were still attended only by a midwife (see W.B. Nisbet, 'The education of midwives', *The Australasian Medical Gazette*, June 1891, pp.270-1). In both Great Britain and Australia midwifery has survived as an overwhelmingly female profession, subordinate to largely male specialist supervision. In the United States, on the other hand, midwifery had been completely eliminated by 1930. Only one hundred years after men had been kept away from birth on the grounds of impropriety they had come to dominate the event.

Science, Technology and Childbirth

Childbirth has today become safe for mothers and their babies. 'In Victoria, for example, 17.9 infants died for every 1000 born in 1967; only 10.1 for every 1000 born in 1978' (J. Lumley & J. Astbury, *Birth Rites Birth Rights*, Nelson, Melbourne, 1980, p.97). The maternal death rate has also declined dramatically since the 1930s. Dr Llewellyn-Jones claims that:

> It has become safe because of better training of all levels of staff. It has become safe because of technological advances, including the ready availability of blood, the control of infection, the electronic monitoring of pregnancy and labour. It has become safe because women have chosen to give birth in an appropriate place where these facilities are available. (D. Llewellyn-Jones, 'Pregnancy and childbirth', *Australian Family Physician*, vol.8, 1979, pp.463-4.)

Ann Oakley has argued that historically the 'medicalisation' of childbirth (the replacement of midwives by formally trained doctors; the development of new techniques and technologies for intervention, such as forceps; and the hospitalisation of birth) did not have any beneficial effects. In fact in 1932 the British Ministry of Health concluded that by far the most important reason for maternal death was mismanagement on the part of the doctor. A study in the United States in 1933 judged 41 per cent of maternal deaths to be attributable to doctors' errors of judgment and technique (A. Oakley, 'Wisewoman', p.47).

In order to support his claim for the beneficial role of doctors and hospitals today, Dr Llewellyn-Jones relies on statistical correlations between increases in professional training and technological advances, and improved outcomes for mothers and babies. Correlations in themselves do not prove, however, that the former is causing the latter. Other writers, such as Davidson and Rakusen, argue that the lowest infant and maternal mortality rates are to be found in those societies which have the highest standard of living — in other words, that the cause is to be found in improvements in diet and housing. Davidson and Rakusen go so far as to claim that 'routine ante-natal care has never been shown to have a positive effect on outcome of pregnancy' (N. Davidson & J. Rakusen, *Out of Our Hands*, Pan, London, 1982, p.20).

How would you evaluate such a claim?

Davidson and Rakusen's arguments can also be seen to raise doubts about the usefulness of any aggregate statistics for different countries (or even states). Such aggregates disguise wide variations in, for example, infant mortality rates between different socio-economic groups or between ethnic and racial communities.
The almost universal assumption that medicine is good for you has meant that very few of the medical procedures now routinely used in childbirth (induction, foetal monitoring, Caesarean section, drugs for pain relief, etc.) have been evaluated in properly designed trials. Doris Haire argues that obstetrical intervention in childbirth is causing infant death and brain damage in the United States, the country which 'leads all developed countries in the rate of infant deaths due to birth injury and respiratory distress' (see D. Haire, 'The cultural warping of childbirth', *Journal of Tropical Paediatrics and Environmental Child Health*, June 1973, p.173).

Read Reference 6.3: Llewellyn-Jones, 'Pregnancy and childbirth'.

Read Reference 6.4: Davidson & Rakusen, 'How effective is ante-natal care?'

Read Reference 6.5: Haire, 'The cultural warping of childbirth'.

Finally, there are several authors who have sought to explain the pattern of recent changes in the management of childbirth in terms of men's strategies for controlling women. It has been widely alleged that the medical profession tends to see both male and female patients as diseases rather than as individuals. However, Ann Oakley argues that 'the evidence is accumulating that the processes of medical education and professionalization generally produce an ideological formula for the treatment of women which is different from that of men' (A. Oakley, 'Wisewoman', p.54).

Why have men taken control of childbirth, according to Oakley? Do you agree? If not, what kind of explanation would you find persuasive?

Would things be different if most obstetricians were women?

It is impossible to consider the development of new technologies without examining the widely accepted justifications for their use, which leads us to the role of science. Science has provided an immensely powerful rationale both for the importance of 'experts' and for increased technological intervention in childbirth—a rationale which, as we have seen, is open to serious question, even in its own terms.

Some students of scientific discourse would go further and argue that science is, in fact, both value laden and ideologically constructed. Feminists, for example, have shown how science has been a particularly important ideology in defining gender relations, since the central theoretical justification for arguing that women are inferior has always been biological. 'Medicine, as the definer of biology, holds the key to its "scientific" interpretation, and thus its cultural consequences' (A. Oakley, *Women Confined*, p.13). Ehrenreich and English have suggested that in the United States the rise of science in the late nineteenth century corresponds to the rise of a new social class—a the middle class. Members of this class sought to legitimise their claims to objective expertise in many areas by asserting the superiority of their scientific training. 'Specialized "expert" occupations, accessible only after lengthy training, would provide them a secure occupational niche and a share of power far out of proportion to their numbers' (B. Ehrenreich & D. English, *For Her Own Good*, p.71). Medical practice was thus transformed into 'scientific medicine'. Traditional women healers, such as witches and midwives, were gradually excluded from medicine on the grounds of their non-scientific knowledge and practices.

Why has medical science had such a powerful claim to the truth (see B. Ehrenreich & D. English, *For Her Own Good*, ch.3)?

Not surprisingly, childbirth is a peculiarly important site for the working of patriarchal ideology and science. It is, undoubtedly, a biological event. Moreover, it involves all those distinctively female biological organs which were once thought to define women's essence. Ehrenreich and English have described how, in the second half of the nineteenth century, medical theory had 'put woman's mind, body and soul in the thrall of her all-powerful reproductive organs' (B. Ehrenreich & D. English, *For Her Own Good*, p.120). Depending on the school of thought, either the uterus or the ovaries could be blamed for 'all possible disorders', both physical and psychological. As Ann Oakley says, '"Science" has hidden curricula of moral evaluations that masquerade as fact: it is these "facts" that must be probed to expose the typical paradigms of women as reproducers that characterize the culture of the contemporary industrial world' (A. Oakley, *Women Confined*, p.5).

robbing them of autonomy and authority' (A. Oakley, 'Wisewoman', p.57). Others (e.g. Nancy Chodorow) have argued, from a psycho-analytic perspective, that a masculine bias against motherhood is incorporated into masculine personality, as part of the social construction of masculine gender within the family.

To describe the way in which historically men have taken over the management of childbirth from women is not to explain it. Why should men, who previously shunned childbirth as women's business, come to dominate it in the eighteenth and nineteenth centuries? Was it that scientific medicine (which happened to be exclusively male, for reasons that have nothing to do with science or childbirth) could only succeed by eliminating non-scientific practitioners (who happened to be female)? Were the benefits to men largely financial and professional and not sex-specific?

Whatever the fundamental dynamic of gender inequality, modern childbirth practices reveal a number of ways in which male dominance has been, and is, secured. The medicalisation of childbirth has been historically inseparable from the growth of male control and the exclusion of women from any power over the event. This involved both the exclusion of women (midwives) from the birth, the exclusion of women from the higher medical professional echelons and, finally, the exclusion of mothers themselves from any active role in the birth of their own baby.

Women's increasingly passive role was further secured in a number of ways. All the power of science was brought to bear to legitimise the omniscience of the medical specialist. Antenatal care and confinement were transferred from home (the woman's sphere) to clinics and hospitals, an environment where doctors' orders take precedence over clients' preferences. As Davidson and Rakusen conclude:

> One reason why pregnant women are so vulnerable in their dealings with the medical professions is that, so often, the relationship takes place in settings which enhance the power of doctors and diminish the power of women. Hospitals in particular are places where any sense of security that a woman might have tends to be left behind at the hospital entrance. Once inside, she is on someone else's territory, in an alien environment, surrounded by illness—which even serves as a reminder of what could happen to her if she doesn't do, or agree with, what the doctor says. (N. Davidson & J. Rakusen, p.158.)

Oakley, A. *Becoming a Mother.* Martin Robertson, Oxford, 1979.

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7

TOWARDS A SOCIAL HISTORY OF THE HOSPITAL

Prepared for the course team by Kevin White

Towards a Social History of the Hospital

Introduction

This section discusses the interlinked questions of the development of both the hospital and the medical profession in modern society. It does this against a background of the broader question of what is history. To illustrate this question two approaches — both purporting to be history — to studying the history of medicine are presented. The first approach claims that historical investigation is the careful marshalling of objective data that may be biographical, documentary or institutional. The second approach suggests that we construct historical data from our own perspective. These two approaches are systematically contrasted throughout this section in two major subsections: first, very briefly in a discussion of public health and then more extensively in an analysis of the 'history' of two Australian hospitals; and second, in the much broader framework of the development of modern society in the nineteenth century.

This section concludes that doing history is an inherently political act in which data, concepts and explanations are 'constructs' developed by and dependent on the perspective of the researcher.

Approaches to the Social History of Medicine

Broadly speaking two approaches to the study of the social history of medicine can be delineated. I want to sketch them briefly and draw out their implications for the study of the history of medicine. To a large extent if you adopt one of them you cannot adopt the other. Let me show you why. The first approach to the social history of medicine, and to history in general, sees historical data as self-evident information to be analysed by the historian. The data is self-evident in that the past consists of a series of stepping stones that lead inevitably to the present. The present, more advanced state of society can be traced backwards through great institutions, great ideas and great people whose contributions to our welfare are seen as self-evident. The present is seen as the indubitable outcome of the historical process towards truth, enlightenment and a better society.

The second approach argues that historical data do not just exist 'out there' for us to go and find. We have to know what it is in the past that we are looking for — that is, what is relevant to us today — before we can find it. In other words, for those who adopt the second approach, history itself is 'constructed' in the light of a given set of criteria and assumptions about what is relevant and who the significant actors were; and in full recognition that these criteria and assumptions are themselves the result of historical processes. In particular the second approach requires that such phenomena as 'scientific knowledge', 'technology' and 'rationality' also be subjected to social and historical explanation rather than being taken as 'self-evident' as they would be using the first approach. The second approach agues that those historians who, for example, focus on parliaments, constitutions and ideas may leave out the common people, obscure the contradictions of history and take for granted what is counted as 'science' today. The

Despite this wider background, Inglis is limited in his explanation by the 'scientificity' of medicine. Inglis continually tells us that it was only with the development of the germ theory of disease that people's health improved. Thus he is emphasising 'technical' events and processes. Further, because doctors are the centre of the health care system today he presumes that it must have been the same in the past. His perspective, grounded in the present, has implications for what will count as history. In particular, he will be led to emphasise science and technology and the role of doctors even if there are alternative ways of writing about nineteenth-century medical practice. By seeing the past as leading inevitably to the present he must search the past for signs and precursors of contemporary events.

The way in which health care is provided in our society is one which emphasises science and technology. It is controlled by the medical profession and disregards the environmental impact on our health. This leads Inglis to write a particular type of medical history. For example, he provides a long and good discussion of the public health movement, and the enormous impact that public health initiatives had on combating devastating diseases, especially cholera and typhoid. He points out that doctors were largely uninvolved with the public health movement and often actively hostile to it. But Inglis firmly believes that modern health is built on the back of modern medicine, and that means doctors. He thus rejects those 'facts' in his history that do not support the view that it was 'scientific' medicine and the medical profession that advanced health. This assumption about the self-evidence of scientific medicine shapes and forms his view of the past. One last illustration will suffice. Carbolic acid was used to clean our cesspits by sanitary engineers and Inglis acknowledges that it may have played a part in improving people's health. However, even if it had medical outcomes he argues that it was not really a medical advance because it was not done by doctors.

So Inglis provides what we could roughly call a 'social' history of the hospital involving actors and events — the government, the doctors, the rise of new social groups like professions — inside and outside the hospital. He stops being 'social' when he starts to explain why debates about the role of the hospital quietened down, why the doctors were allowed to run them and why governments started to fund them. Inglis says that the hospital became part of the community because the medical profession discovered the germ theory of disease which allowed it to start practising in a scientific way and thus to save people's lives. What Inglis is doing is using his concerns and interests in the present and identifying their sources in the past. For him medicine is about the application of science and technology to human illness and disease. It is the development of medicine that is responsible for our present health status and the reason that we give doctors so much prestige.

Inglis's approach takes for granted the scientific basis of medicine. He sees science and medicine as beyond social relationships and presumes that scientific, technological and biological phenomena have an independent existence from human beings, and are responsible for the shape society takes.

The first approach can be further illustrated by discussing J. Templeton's study of Melbourne's second hospital, Prince Henry's (J. Templeton, *Prince Henry's: The Evolution of a Melbourne Hospital 1869–1969,* Robertson & Mullens, Melbourne, 1969). Like Inglis, Templeton includes considerable discussion of intra-hospital disputes between doctors and nurses, disputes between doctors and administration, and attempts to gain public funding. But what the book leaves out — what indeed the book cannot examine because Templeton's world view asserts that medicine is inevitably what it is today because of the driving force of science — is that the hospital was a homeopathic institution. Allopathy (modern medicine) and homeopathy were two competing theories of health and illness in the nineteenth century, and were very evenly balanced in terms of adherents, practitioners and some would argue success rates (even that homeopathy by doing less harm was more useful). It is not that Templeton fails to discuss the relationship between allopaths and homeopaths, for she does. What is disappointing is that no attempt is made to decipher the political, social and economic forces that resulted

Read Reference 7.3: Vogel, 'The invention of the modern hospital'.

Social Approaches to History

It is obvious that technical knowledge has a role to play in the way we conceive and preconceive the world — this is not at issue. What is at issue are those approaches that give technological and biological factors a primary role in explaining social change, thereby displacing other explanations. F. Cartwright, for example, has argued that increased survival rates in nineteenth- and early twentieth-century surgery had more to do with increased social hygiene and the disappearance of the horse from the roads — and thus the reduced risk of infection in accident cases — than to improved methods of surgery (see F. Cartwright, 'Antiseptic surgery', in F.N. Poynter (ed.), *Medicine and Science in the 1860's*, Welcome Institute of the History of Medicine, London, 1968, p. 86).

Similarly, approaches that emphasise technical knowledge in the development of the hospital leave the social aspects of their development unwritten. Hospitals developed in unique social situations. Most importantly, they were developing at a time when traditional community support systems were breaking down. This occurred as urbanisation increased in the eighteenth and nineteenth centuries. People — both rich and poor — become dependent on strangers to help them in times of need. Thus a respectable class of people started to use an institution that had previously been the preserve of the lower classes and outcasts. This changed the way people thought about hospitals; and in turn it meant that hospitals attempted to treat patients more humanely (see M.J. Vogel, *The Invention of the Modern Hospital, Boston 1870–1930*, University of Chicago Press, Chicago, 1980, pp. 1–4). The success rate of hospitals also started to improve as doctors played a larger part in their administration. This was because the doctors gained control of hospital admissions procedures and only admitted short-term or curable patients. Thus hospitals began to work less like places to go to die and more like places that could make you well.

Read Reference 7.4: Wright & Treacher, 'The problem of medical knowledge'.

Thus the second approach to the history of medicine examines the social, political and technical processes surrounding the rise of the medical profession during the nineteenth century. Recent researchers, in particular Willis (*Medical Dominance*), argue that the medical profession has risen to a position of dominance in the health sphere not because of its scientificity, nor because of technical advances, but because it has organised itself as an occupational group to exclude or control other workers in the field. Willis illustrates his argument by showing how medical practitioners subordinate (i.e. bring under their control) some practices (e.g. midwifery to obstetricians), limit the practices of other health practitioners (e.g. optometrists are not allowed to deal with diseases of the eye) and exclude certain occupations from legitimate health practice (e.g. chiropractors).

Willis's three case studies, illustrating the dominance of medical practitioners over other health practitioners, are written against a background which emphasises the major paradox (and critique of the first approach to the history of medicine) first fully developed in Thomas McKeown's publication *The Role of Medicine* (Princeton University Press, Princeton, NY, 1979). McKeown argues that the medical profession organised itself and achieved high social, political and economic status in the late nineteenth and early twentieth century before it had developed a coherent knowledge base. By fully applying this insight Willis escapes the technological determinism of the other major book on the medical profession in nineteenth-century Australia, T. Pensabene's *The Rise of the Medical Practitioner in Victoria*. Willis's point is that while technology does change and develop, both the way in which it is applied, and the organisation of the labour force administering it, is always the outcome of social and political struggle.

A Social History of the Hospital: Urbanisation and Bureaucratisation

We can also start from another perspective. Prior to 1750 hospitals did not exist. Certainly societies before ours made provision for the young, the sick and the elderly but they did not do it in hospitals — they did it in temples, monasteries or workhouses. These are independent institutions, not approximations to hospitals. Hospitals only started to exist in the late eighteenth and early nineteenth centuries as a result of the development of a complex, differentiated society. By this I mean that it is only in the late eighteenth century and nineteenth century that distinct institutions developed to perform separate tasks in society. Central to this massive change in society was the separation of the workplace from the dwelling place. The home had been the centre of production and consumption, but with the development of modern society it became the site of personal, familial needs: in a word it became private. Tasks which had been performed in the home were taken over by specialised public institutions in the society. The factory became the place of production, the school of education, the prison of discipline and the hospital the place of medicine. Other institutional specialisations took place at the same time. The law and judiciary became separate from the Church, as did the means of political governing. Rulers depended for their authority not on God but on the people.

The two strands of these massive changes in society — 'the great transformation' as it has been called (see K. Polanyi, *The Great Transformation*, Beacon Press, Boston, 1944) — are the Industrial Revolution and the French Revolution. The first showed that nature could be transformed and made to serve people; the second that society could be shaped in any way people desired — it was not set in place by God. Society was transformed from a largely rural, uneducated, irreligious or superstitious community into a complex, urban, secular and specialised set of contractual relationships. These two revolutions dynamised eighteenth-century Europe, in particular Britain, and created a huge class of dispossessed, agrarian workers who were thrown off their lands when it became clear that it was more profitable to raise sheep than people.

This occurrence, known as 'the enclosures', was essential to the development of the British textile industry and its immediate effect was the creation of huge cities. Prior to the Industrial Revolution it is thought that no city (not even the largest of antiquity) reached a population of one million. People were forced off the land and into the cities, where they formed the basis of the proletariat or working class. Hospitals, as a response to increasing urbanisation and industrialisation, had the specialised task of separating not just the sick from the society, but of confining the unproductive from the productive. Moreover, they sought to force those who were not sick (the malingerer, the bludger) back to work by excluding them from the institution. Thus the hospital developed in the context of broad social changes in the community.

With the development of industrialisation and of an urban poor there was also the development of an industrial, commercial and bureaucratic middle class. This class both supplied and demanded doctors, both as a middle-class occupation and as a status symbol of consumption. They thus demanded of doctors a better level of service. The development of hospitals provided a medical training ground, using the poor, so that better services could be provided to the middle and ruling class (see J.W. Holloway, 'Medical education in England 1830–1858: A sociological analysis', *Medical History*, vol. 49, 1964, pp. 299–324).

Tied to the development of this middle class, with its belief in the power of science and its belief that individuals had to look after themselves, were hospitals as meeting grounds of different classes of people. In the hospital the urban poor could be brought into contact with their social betters and learn the more refined habits of life. Thus it is no coincidence that much of the thrust for the development of hospitals came from the Quaker and Protestant middle classes who saw the hospital as an arena for moral education. They brought together different classes and, importantly, allowed for classification: to separate the deserving from the undeserving poor; the malingerer from the sick; the hopeless from those who could be helped. Hospitals thus represented a more fine-toothed

> register. (M. Foucault, *Discipline and Punish*, A. Sheridan (tr.), Vintage Books, New York, 1979, p. 190.)

So we can characterise modern organisations as systems of surveillance built on the collation and retrieval of information. Inside the organisation the file is the key to the intensification of surveillance.

What I am describing is probably more commonly known as bureaucracy and is derived from Max Weber's work. For Weber the essential characteristic of Western societies is their movement toward the rationalisation of all human conduct. By this Weber means that society depends less on personal connections and more on structured, rule-following activities. To Weber bureaucracy is the institutional manifestation of this process. He is also profoundly ambiguous about this process: it is both stable and reliant (he doesn't say that it is necessarily efficient) and alienating and depersonalising. It thus provides a standardised outcome of decision making for a large number of cases, independently of the characteristics of those particular cases. It is against this background, and the development of modern society, that the development of the hospital, and of medical knowledge, must be located.

What I want to suggest is that the hospital brings together and exemplifies these two characteristics of modern society: the development of rationalisation embodied in bureaucratic institutions (like the factory, the school and the hospital) at a macro-social level and the development of disciplines of the person (of the internalisation of ways of behaving) at the micro-social level of people's day-to-day life.

Let me put it in the shortest way possible: the development of modern capitalist society had a profound impact on the way in which people see themselves and the in which way people are administered.

The Hospital and Medicine in Modern Life

The development of capitalism, and particularly the development of the factory system of production, required that people developed appropriate psychological characteristics. At the level of day-to-day life capitalism required the internalisation of moral norms about honesty, punctuality and obedience. One commentator has clearly expressed this:

> New virtues arose for the individual. Honesty was no longer the old community honesty dependent on surveillance [by other members of a small, tightly knit group] and lack of opportunity for theft. Punctuality — never needed before — became a test of responsibility, and self-control. ... Diligence, once a matter of merely self-interested necessity, now became a normatively-prescribed moral quality. (B.R. Wilson, 'Morality in the evolution of the modern social system', *The British Journal of Sociology*, vol. 36, no. 3, 1985, p. 320.)

The development of medicine and its associated institutions was central to this new personality. Indeed the sanitary revolution of the nineteenth century played a crucial role in the structuring of this new world and constituting new norms of action. This development can be encapsulated in the phrase '*homo hygienicus*: the healthy person'. *Homo hygienicus* is the development of the idea that the individual should be responsible for his or her own health and strict adherence to diet, exercise and cleanliness will achieve this. It thus helped smooth the introduction of new patterns of behaviour. *Homo hygienicus* was to the personality as the scientific, technical machine was to production (see A. Labisch, 'Doctors, workers and the scientific cosmology of the industrial world', *Journal of Contemporary History*, vol. 20, no. 4, 1985, pp. 599–615).

Remember again the outcome of the Industrial Revolution. Traditional modes of life built around agrarian communities were forcibly destroyed by the enclosures. Along with the material destruction of village life went the destruction of village knowledge. The wise woman and the folk healers were displaced; access to traditional healing

well: indeed this destruction is a key part of medical socialisation. What predominates over all is the disease.

In this context, as Jewson puts it, the sick person disappears (see N.D. Jewson, 'The disappearance of the sick man'). He traces this process through three stages: bedside, hospital and laboratory medicine. Prior to the eighteenth century the sick person was a whole human being with a consciousness, who because of his or her elite social position dominated the doctor. The doctor had to provide what the patron demanded.

With the development of hospital medicine, this relationship was reversed and medicine became object-oriented. The patient's perception of his or her condition was subordinated to the medical practitioner's preconceived pattern of how the disease should behave. Further the new idea that disease was a discrete, isolatable entity not only dissolved the patient's right to report on it but ruled out of court those practitioners who took the patient's perspective. Instead of there being one doctor for each individual patient there was now a framework in which all individual experiences of the same disease become the one case. Thus doctors were not required to relate to their patients.

This also had the effect of dissolving the individual characteristics of each doctor. The doctor's position no longer relied on his or her personal abilities, empathies or sympathies but on his or her status as a scientific practitioner. So the characteristics of the healer became irrelevant to the status of the doctor, and the characteristics of the sick person were irrelevant to their status as sick person.

Thus we have a double process of alienation and rationalisation. First the person is separated from their bodily functions and second all individuals can be treated in the same way independently of their characteristics. A new scientific medicine located in a bureaucracy administering and surveying a population in the interests of rational planning has developed.

Conclusion

The hospital does not exist as an institution separate from society. Rather it is shaped and formed by cultural, political and economic movements. In turn it interacts with society. Thus the hospital is the product of a society that has developed separate institutions to perform specific tasks. By the nineteenth century distinct social institutions had developed: schools, factories, courts and hospitals. These new institutions were in turn a response to the development of cities and to a new middle class that both produced and consumed the services of the hospital. The development of the hospital was also linked to the development of a capitalist society in which productive labour had to be separated from unproductive labour, and the malingerer from the sick. And it was the product of an increasingly bureaucratised and administered society.

This perspective contrasts strongly with the one which sees the hospital as a straightforward development of an institution established in Ancient Greece. It is also one in which we have to make decisions about what 'history' is; about what 'facts' are; and recognise that the description of the past and the selection of data are political activities.

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READINGS

1

MEDICINE & SOCIETY: AN INTRODUCTION

Cecil Drinker

THE TUBERCULOSIS OF WILLIAM DRINKER

1.1

No event in the life of the Drinker family better illustrates 67
the character of the group than their devotion during the long illness of William Drinker. This eldest son, a docile, cheerful youth who went through his share of infections, 'bloody fluxes,' and the like, reached young manhood without giving any unusual evidence of delicacy or of chronic illness. He worked for his father, keeping accounts, collecting money, performing general clerkly duties, which at times, later in life, he resumed.

Billy's tuberculosis, for so we easily recognize it today, became active in 1788 when he was twenty-one. The entries in Elizabeth Drinker's Journal for 1786 are irregular and the volumes for 1787 and 1788 were burned, so that there is no systematic record of the first years of illness. On 3 July 1789, William Drinker and Ben Wilson sailed in the ship *Mary* for Baltimore, a voyage for William's health, with Ben as a companion. Eighteen days later E.D. heard from him 'but there is no joy, sons alloy—his being indispos'd after his arrival makes me desirous of soon hearing from him again.' No more appears until:

'1791 June 17 sixth day fore-noon our d[r] Son William left us for Germantown, where his Sisters now reside—he intends for bucks county &c,—in search of the greatest blessing that mankind can enjoy in this world, next to a good conscience—the latter I hope he in good measure possesses, the former may it please the Lord to grant, is my dayly prayer.'

On 22 June 1791, there is the following entry, evidently directed at William:

'J D. J S. and Peter Yarnal din'd with us—P Y. says, that some time ago he, by coughing, broak a small blood vessel, and discharg'd 1/2 pint blood, he had been very unwell for some time before, but has been much better 68
since—he further says that some years ago, he was so ill with a cough and fever &c that when he set of for New-England, his friends here never expected to see him again—but the riding aboat, the change of Air, and his manner of living in New england occasion'd such an alteration as was realy superising, he return'd home I think he said well—the rye bread and Indian bread, with y[e] preserve'd barbaries put into water for drink, prov'd very salutary—barbaries are very plenty there—when I told Peter that y[e] Doctor had advis'd thy going to New hamp-

he lost y^e^ use of his limbs, so as not to be able to walk alone, or to button his Jacket, he was four months confin'd to his Chamber,—in the spring he rode out in a Close Carriage, seem'd to geather strength in y^e^ Summer. in y^e^ fall 91. he went on Horse-back towards new England— but was stop'd at a place call'd Rye 30 miles beyond New-York, with a fever and spitting of blood—hir'd a Chaise and Man to bring him back to N—Y—where he was ill at Henry Heydocks, brought up two quarts of blood from his lungs in 3 days. D^r^ Jones was sent for, who call'd in D^r^ John Bard[2]; Rob^t^ Bowne wrote an acc^t^ to H D. of Billys having broke a blood vessel, and of his dangerous situation, he and self, set off the next day for N Y. Nancy was to have gone with us, but having sleep't none the preceeding night, was rendred uncapable by the head ach—John and she follow'd up the next day—I fully expected to have found my dear Boy a Corps on our arrival at N Y—the journey to me was in truth an anxious one—we walk'd from the Eliza^th^ Town ferry, and on approaching H H^s^ house I look'd up to the Chambers windows which I found was rais'd up, as I expected, supposing my son was laying in y^e^ front Chamber, on crossing y^e^ Street, we were mett by H H jun^r^ who coming up to me, said "friend Drinker Billy is better" 'tho while on y^e^ journey it had frequently occur'd to me, that "while there was life, there was hope," and that I might hear on our arrival there, that William was better, yet I had so little expectation of it, that when I heard it, I seemd in a torpid state, uncapable of takin in the full force of y^e^ words, and prehaps it was better for me that it was so—William who expected our coming, had fortified himself all in his power, to see us, the discharge of blood had ceas'd for near 24 hours, he had been twice bleed in his Arm, before we came, and twice after upon a small appearance of a return of y^e^ complaint, he had a hard cough, which was much against him, he keep'd his bed for 3 weeks by D^r^ Bards direction—by that means and other judicious percrecptions the cough wore off, and he graduly became better—'tho amazinely week;—Nancy stay'd with me 4 weeks, she then returnd home, meet her Sister Molly on y^e^ road coming to assist me, as they expected Nancys return—Molly was 5 week with us—The perticular care of our good Doctors Bard and Jones, with good nurseing and the kindness of the family we were with—brought William so forward as to attempt a journey homewards— My husband had visited us two or 3 times, H S D once

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2. Elizabeth Drinker, 11 April 1799: 'From Claypooles paper of this morn^g^ "Died, a few days ago, John Bard, Esq^r^ late an eminent Physician of this City." under the New-York head—dear good Old Man, more might have been said, he was a facetious chearful, happy old Gentleman, the many hours I spent in his Company, during my Sons illness at New-York in the Year 91, his agreeable Manners, and sensible Conversation has left an impression, not to be forgotten by me or my Son William, to whom he was particularly attentive in his very dangerous illness—D^r^ Bard, if I recollect aright, was then 78. years of age, if so, he must have been at the time of his death about 86.'

here have good reason to believe—It is now 3 days since he vomited any blood, tho' a little now and then may be discover'd in the Phlegm which he spits up, but that is very seldom and very trifling—He has thro' the whole had very little Fever, and been almost wholly free from pain, his Countenance is much less changed than I expected, indeed it is very little changed—The want of Sleep has been the most trying circumstance since the discharge of Blood ceased, even Anodynes were ineffectual, but last Night he was favour'd with several hours' refreshing Slumber—I have seen him this morning and as he was inform'd that I was going to write to you, he observed it was in my power to give you a comfortable Account and desired his dear love to his afflicted Aunt & to his dear Sisters and Brothers—

'What seems to have reach'd William's Case & stopp'd the Bleeding was what is call'd Jerusalem Earth,[3] the Doctor's call it an absorbent Earth, it is they say innocent, that is, if it don't help it wont hurt him—a Widow Gomez of this Place was kind enough on hearing of the Case to send some of this Earth—Indeed Friends here have been affectionately attentive to our son & this worthy family remarkably so—. 73

'I must close as the time for the Post's setting off draws nigh, my wife I trust is yet enjoying a sweet Sleep—

'Her dear love I know

would be and mine is to you all—

Henry Drinker'

II. New York, 9 October 1791, Henry Drinker to Mary Sandwith and the children. This letter first tells of the arrival of Nancy, the second daughter, to assist in the nursing and then acknowledges the receipt of letters brought by Nancy and her husband.

'. . . The Letter from Doct.r Rush is a Testimony of his kind attention, the hints it contain'd have been communicated to the two Physicians here, who have express'd their satisfaction therewith and concurrent sentiments in divers respects.—I wish the first opportunity taken to offer my thankful acknowledgements to the Doctor for this Friendly instance of his attention to our dear son's Case and sympathy with us under the present affliction—

'William has been, from the Accounts rec.d on our arrival here and our own observations since, preserved thro' the whole course of his disorder, in much, and perhaps I may with propriety say, in a remarkably calm, quiet and steady frame of mind, nothing appearing like a restless, uneasy or impatient disposition, much company or conversation has been forbidden him, yet to our comfort we have to observe in what at intervals drops from him, his mind appears to

3. I am unable to find Jerusalem Earth in the contemporary materia medica. In Buchan's *Domestic Medicine* an 'Astringent Powder' is listed which must have been similar to the 'Earth' taken by William. It was composed of equal parts of alum and Japan earth and was used for internal haemorrhages, large doses being the rule. In the case of bleeding from the lungs, such medication would be wholly ineffectual. Possibly Dr. Bard, a very wise old man, knew that William must take something and felt the Jerusalem Earth as little likely to do harm as anything which could be suggested.

remember my dear wife that in this matter there is a Husband a Sister & four other children nearly interested—they wish not to lessen or weaken thy attachm.t to our dear William, but they wish thy cares & concern for him & them may be continued to their comfort for years to come . . . from thy loving Husband

Henry Drinker'

IV. New York, 18 *October* 1791, *Elizabeth Drinker to Henry Drinker.*

'Dear Henry

'. . , our dear Son has just gone to bed after setting up above 6 hours, he thinks he coughs less setting up than lyeing—I think he has in a smal degree increas'd in strength, but not much—he spit blood once on sixth day last [four days before] none since untill this day—he has sildom cough'd this afternoon without a little blood mixt with the phlegm, ye Doctors dont appear to think much of it, as it is not what they call fresh blood—ye first that he brought up this day, was blackish and appeard to me to be the scab or scale that cover'd the wound and a little blood has ooz'd out after it—perhaps there may be no more, the Doc.r Says his pulse are calm and good—he takes small quantities of nourishment frequently in ye day—he had a good night sleeps light and easy—takes 18 or 20 drops laudanum from which I have preceiv'd no bad effects, we are lessening ye dose 2 or 3 drops every night—25 is the most he has taken since I came—ye change of weather may have had some effect on him—Nancy or myself lay in the same bed by him, ye other in a Cot close by . . . thy

E: Drinker'

We must not forget that at this time Billy's tuberculosis was undoubtedly active, with tubercle bacilli in his sputum and every opportunity for the infection of others. In these early days, it was often the custom during serious illness for the nurse to lie in the bed of the patient—a custom frequently mentioned in the Journal, particularly in connection with William, with whom his mother, father, or one of his sisters often slept, so that his least need might be answered at once. It was their very good fortune that no other member of the family contracted the disease.

V. New York, 19 *October* 1791, *Elizabeth Drinker to Henry Drinker. This letter is in answer to Henry's of* 17 *October.*

'My dear . . . the Doc.rs were here 1/2 hour ago, but as Billy was sleeping I did not introduce them into his chamber, but mention'd, thy having talk'd with 'em concerning blisters, I just hinted it, they did not appear to take much notice of ye hint, so at present I shall leave

desires we may persist in our present method.—As I can write but little on any subject, but what concerns Billy, and to make something out like a letter, I think I will give an account of our movements for 24 hours, which have been for a week past pritty regular.—I will begin at this pesent time, when I am generaly writing, Nancy is in bed by her dear brothers side, and about an hour hence, as I have several little matters to do about the room) I expect to retire to a little Cot Bed about two feet distance from my Children—William has taken 20 drops liquid Ladonum, which appears to agree very will with him, his Nights are what may be call'd good, cough very sildom in ye coarse of ye night and much less in ye day, than some time ago—he wakes perhaps 2 or 3 times when his Sister gives him something to take, and soon lays down again; I rise between—6 and 7. or 7—from 7 to 12 give William 3 doses red bark. his allowance of nourishment is given a tea-cup nearly full at a time every hour or perhaps longer, of Tapioca, Butter-milk or Runnet-Whay, between those—or sometimes in stead, he takes a good pear, or 4 or 5 prunes, about 8 every even.[g] he receives an injection, which every other night, produces the desir'd effect, his bed is made up comfortably every night, without his rising from it—he is free from pain. and in pritty good Spirits—Nancy is well,—the dear couple are now both asleep— . . . thy affectionate E: Drinker—'

Being bled

A cartoon by J.Rowlandson, London, 1804. From the Boston Medical Library

Gentlemen of the faculty as others, to put the Horses & Carriage into an Elizabeth Town-Boat, and we proceed to the point in another, when a fair wind & suitable weather encourages our moving forward—indeed we have gone so far as to think of 5th day next, should the Weather & Wind favour our proceeding at that time, expecting we might get as far as Rahway on the first day,—in all which it is intended to proceed with much care & caution—I wish J. Downing and J. Skyrin [the sons-in-law] would look out for a Couch or Couchee with Glasses and otherwise tight and suitably fitted for William that my Horses could be put too and sent forward to meet us when you hear from me that we are actually set out—'

Four days later, on 3 December, they set out and were home in Philadelphia on the 6th. After reaching home Billy evidently did very well for a time. There is no mention of him until the spring of 1792, when he is spoken of as 'weak and languid,' but he rides horseback and walks with his mother and sisters. In 1793, in August, just at the beginning of the great yellow fever epidemic, the family being then in Germantown, William came home with 'the Influensia.' This was a short bout of fever and did little harm. . .

He goes on through the summer, takes horseback rides 83
and curious prescriptions, such as gum arabic, nitre and 'conserve of roses powder'd and mixt.' But the bloody sputum returns, and invariably his doctors order bleeding.

The year 1794 and most of 1795 passed in this way, with an attack of malaria in August of the latter year. William was very ill during this seizure, his illness being complicated with diarrhoea, due possibly to the incessant 84
purges he took, but not becoming, according to Dr. Kuhn, an 'inveterate decentry, though much of that nature.' He recovered slowly, though about 25 August the situation was very serious.

During the remaining years of the Journal, 1796–1807, William continued an invalid, never able to bear exposure and complaining often of cough and soreness in his 'breast.' After 1795, there was no more blood spitting and he slowly became stronger, this in spite of much bloodletting and violent medication.

June 7, 1803: 'W D. rode this Afternoon [on horseback] near 20 miles, moore than he has done for many years, never since ye year 91. when he was taken ill at Rye beyond New-York—'

William lived until 1821 and was fifty-four at the time of his death. The cause of it we do not know, very possibly not tuberculosis, since by 1807 he seemed reasonably well, though still taking exceptional care of himself.

It is interesting to inquire whether the treatment of this young man's tuberculosis really represented the best that the medicine of his time could offer; and to get at this, one

Their delicacy, which is increased by sickness, is liable 86
to be offended at every stage; and, lastly, they sooner relax in their exertions to prolong their lives than men.'

In these long journeys the consumptive traveller must avoid fatigue: 'Too much cannot be said to enforce this direction. It is the hinge on which the recovery or death of a consumptive patient frequently turns.' Travel should be toward New Hampshire or Vermont in the summer and to Georgia or South Carolina in the winter. Finally: 'To render travelling on horseback effectual in a consumption, it should be continued with moderate intervals from *six* to *twelve months*. But the cure should not be rested upon a single journey. It should be repeated every *two* or *three years*, till our patient has passed the consumptive stages of life.[10] Nay, he must do more; he must acquire a *habit* of riding constantly, both at home and abroad; or, to use the words of Dr. Fuller, "he must, like a Tartar, learn to live on horseback, by which means he will acquire in time the constitution of a Tartar."' In order to meet the fact that in consumption weakness may be so great as to preclude his favourite prescription, Rush gives a graded series of outdoor exercises to fit different situations. These are:

'1. Rocking in a cradle, or riding on an elastic board, commonly called a chamber-horse.
2. Swinging.
3. Sailing.
4. Riding in a carriage.
5. Riding on horseback.
6. Walking.
7. Running and dancing.'

To these strong opinions of Dr. Rush, agreed with certainly by the other physicians in charge of his case, one may trace William's horseback riding.

Bleeding from the lungs in tuberculosis, as was Billy's experience in New York, is evidence that the disease 87
has made considerable progress. Today it is treated by months of rest in bed, with a simple but highly nutritious diet. William 'kept his bed for 3 weeks' following the haemorrhage and after that was usually up each day. In two months he travelled to Philadelphia and then, though mostly confined to the house, was evidently up and about. Rush did not regard blood spitting, or even a large haemorrhage, as especially alarming. 'The haemoptysis' [bleeding from the lungs], he says, 'is either a local disease, or it is the effect of general debility of the whole system . . . It is only in persons who labour under chronic debility, that haemoptysis is necessarily followed by consumption.'

10. Rush believed the 18th to the 36th years to be the period of danger from pulmonary consumption. The greatest incidence today is in the period between the 20th and 39th years.

the disease. With Koch's discovery, tuberculosis came to be regarded as a spreading bacterial infection, to be treated by rest, fresh air, and plenty of food. Attendants understood the danger of contracting the illness and how to guard intelligently against it.

Pulmonary tuberculosis is still a widespread disease, but with proper treatment of patients, and with better knowledge of the living conditions in which the disease flourishes, it is beginning to be less common. Comparatively few people of the class represented by William Drinker have pulmonary tuberculosis today, and, if they do have it, there is every chance of recovery.

William was evidently quite resistant to the disease. In many ways, he was well treated. The family resources permitted change and travel, and allowed him to regulate his employment as his health permitted. But he never underwent a single prolonged session devoted to getting well—that is, never in the modern way. He was incessantly up and dragging about, and, if he felt particularly ill, there was bleeding and drastic medication.

The more one learns of the dominating position of disease in these earlier days, the more one respects the fundamental toughness and powers of resistance of the human body. Changes in the virulence of certain diseases, such as syphilis and tuberculosis, with gradual reduction in their malignancy, have undoubtedly helped the race. But unfortunately, as one infectious disease mitigates, another brand new one springs up to take its place.

Fortunate it is for us, in our perpetual struggle against disease, that the human organism is tough and resistant; and that, with a steady improvement in national health, we may even expect this natural toughness to augment rather than to decline.

Cecil K. Drinker *Not so long ago: a chronicle of medicine and doctors in colonial Philadelphia,* Oxford University Press, New York, 1937, pp. 67-90.

H. Tristram Engelhardt, Jr

1.2

THE CONCEPTS OF HEALTH AND DISEASE

Health and disease are cardinal concepts of the biomedical sciences and technologies. Though the models of health and disease may vary, these concepts play a defining role, indicating what should and what should not be the objects of medical concern. The concepts are ambiguous, operating both as explanatory and evaluatory notions. They describe states of affairs, factual conditions, while at the same time judging them to be good or bad. Health and disease are normative as well as descriptive. This dual role is core to their ambiguity and is the focus of this paper. In this paper I shall examine first the concept of health; second, the concept of disease; and third, I will draw some general conclusions concerning the interplay of evaluation and explanation in the concepts of health and disease.

I. HEALTH

Health is a normative concept but not in the sense of a moral virtue. Though health is a good, and though it may be morally praiseworthy to try to be healthy and to advance the health of others, still, all things being equal, it is a misfortune, not a misdeed, to lack health. Health is more an aesthetic than an ethical term; it is more beauty than virtue. Thus, one does not condemn someone for no longer being healthy, though one may sympathize with him over the loss of a good. Further, it is not clear exactly what is lost when one loses health.

The norms of health are difficult to compass within one homogeneous concept, in particular within an independent definition which does not define health negatively, as the absence of disease. The World Health Organization attempted a positive definition, that "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."[1] But such a definition of health packs the ambiguity of the concept of health into the ambiguity of a concept of well-being. Further, this concept of well-being suggests the notion of a satisfactory lifestyle, including successful adaptation to one's environment. Yet, even here the norms are obscure. What is a good adaptation? Is a good adaptation possible in a complex industrial society for those with I.Q.'s of less than 80? Are such persons ill? Further, if health is a state of complete physical, mental and social well-being, can anyone ever be healthy? Does health become a regulative ideal, one to which one strives, but which one can never fully achieve? On the other hand, if no one is truly healthy, is everyone ill? Are health and disease exclusive or overlapping concepts?

These quandaries arise primarily out of the evaluatory, not the explanatory, dimension of the concepts of health and disease. Health could, for example, be defined as the ability to perform those functions which allow the organism to maintain itself, all other things being equal, in the range

Diseases are, in fact, 133
not only multifactorial, but multidimensional, involving genetic, physiological, psychological, and sociological components. The presence of these various components does not merely entail a superimposition of modifying variables upon basic disease structures. Rather, it implies that diseases have a basically relational, not a subject (i.e., substance)-predicate (accident) nature. That is, there is not necessarily a *bearer* for every disease, a substrate for each type of disease.

This view of disease emerges from consideration of the complex of etiological structures involved in modern "disease entities." Diseases such as asthma, cancer, coronary artery disease, etc., are as much psychological as pathophysiological in that the likelihood of such illness is closely bound to experienced stress and the availability of support for the person stressed.[23] They are thus sociological as well. The result is a multidimensional concept of disease with each dimension – genetic, infectious, metabolic, psychological and social – containing a nexus of causes bound by their appropriate, usually different, nomological structures. The multiple factors in such well-established diseases as coronary artery disease suggest that the disease could be alternatively construed as a genetic, metabolic, anatomic, psychological, or sociological disease, depending on whether one was a geneticist, an internist, a surgeon, a psychiatrist, or a public health official. The construal would depend upon the particular scientist's appraisal of which etiological variables were most amenable to his manipulations. For example, the public health official may decide that the basic variables in coronary artery disease are elements of a lifestyle which includes little exercise, overeating and cigarette smoking. He may then address these social variables and consider such diseases to be, as Stewart Wolf suggested, ways of life.[24]

Where does this put us with regard to models of disease? The adoption 134
of either a medical or psychological model is a pragmatic choice to focus on a particular cluster of variables and their correlations in order to make certain explanatory, predictive, and controlling maneuvers. But, to isolate these distinguishable dimensions of diseases, is to separate that which is distinguishable but of one fabric. The question of the correct model is either a pragmatic question or a misunderstanding. All diseases can be construed as both medical and psychological; only a confirmed Cartesian would hold that the models are totally separable, while only a monist would hold that they are not distinguishable. To assert that there is not a somatic substrate for psychological events is to assert that psychological life takes place nowhere in this world, that it is the enterprise of an at least partially nonembodied spirit. If human experience and action is to 135
be integrated in and for this world, it must occur somewhere in this world. On the other hand, those psychological generalizations which coordinate mental events in terms of drives and inclinations are distinguishable as such from models free of such intentional predicates and generalizations.[27] If mind and body are not two substances but two distinguishable levels of human significance, concerning which generalizations of different characters can be made, as indeed does appear to be the case, then medical and psychological models of disease should be complementary, not competitive. They should complete what would otherwise be one-sided assertions concerning a particular model.

the other. Rather, it must be thought of as the circumstance requires. The circumstances are represented by the patient, the physician, the public health man, the medical scientist, the pharmaceutical industry, society at large, and last but not least, the disease itself."[32] But the disease in itself is in the end the disease as it exists for us who both experience illness and explain it. Disease as an explanatory account is bound to the circumstances of that account. In short, explanatory accounts are not things; things are what explanatory accounts explain and disease is a mode for explaining things – in particular, ill humans.

The portrayal of particular diseases involves pragmatic judgments which ontological nosologies reified or stereotyped. C. S. Peirce argued that "*In order to ascertain the meaning of an intellectual conception one* 137
should consider what practical consequences might conceivably result by necessity from the truth of that conception; and the sum of these consequences will constitute the entire meaning of the conception."[33] That is, evaluation enters into the enterprise of medical explanation because accounts of disease are immediately focused on controlling and eliminating circumstances judged to be a disvalue. The judgments are in no sense pragmatically neutral. Choosing to call a set of phenomena a disease involves a commitment to medical intervention, the assignment of the sick role, and the enlistment in action of health professionals. To call alcoholism, homosexuality, presbyopia, or minor hookworm infestation diseases, involves judgments closely bound to value judgments. Granted, there is a spectrum from broken limbs to color blindness along which interest in construing a constellation of phenomena as a disease varies. The pain and discomfort of either a broken limb or a schizophrenic break invite immediate medical aid, while issues of color blindness or dissocial behavior lie at the other end of the spectrum. But all along the spectrum, the concept of disease is as much a mode of evaluating as explaining reality.

Commitment to the concept of disease presupposes that there are phenomena physical and mental which can be correlated with events of pain and suffering, so that their patterns can be explained, their courses predicted, and their outcomes influenced favorably. Further, the pain and suffering cannot be the immediate outcome of circumstances which are directly the subject of free choice. They must result from psychological or physiological laws; that is, they must be open to statement in the form of laws, not moral rules. Medicine is the application of scientific, not moral generalizations. Thus, involutional melancholia, duodenal ulcer, and pneumothorax due to gunshot count as diseases, while ignorance, greed, and political violence do not, insofar as the ignorant are capable of learning, the greedy of virtue, and the violent of pacific action. Thus, mental deficiency, kleptomania, and paranoid reactions do count as diseases.

Of course, a broad concept of diseases including both mental and physical models opens one to greater influence by social values. Yet, social judgments are involved in not considering such events as childbirth to be diseases, even though they are associated with considerable morbidity and in fact mortality. Socially desirable goals help draw the lines.[34] The same is true with regard to aging and what then counts as disease and health. The acceptable physical state of an 80-year-old would 138
be disease for a 20-year-old. Yet, will that always be the case as more can be effected through geriatrics? Diseases are, as Lester King has indicated, patterns which we structure according to our expectations.[35]

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Nancy E. Waxler

1.3

LEARNING TO BE A LEPER: A CASE STUDY IN THE SOCIAL CONSTRUCTION OF ILLNESS

People who feel ill often first discuss their symptoms with family members or friends and then later go to a physician who questions, evaluates, and perhaps prescribes treatment. In the course of this exploration the "trouble" itself is transformed from vague and disconnected symptoms to a labeled condition, that is, an illness that others in the society understand to have a particular explanation and social meaning. Thus, social negotiations turn symptoms into social facts that may have significant consequences for the sick person. 169

In this chapter we shall look at several aspects of this "social labeling" process.[1] In particular, we shall stress that the definition of a specific disease and associated social expectations often depend as much on the society and culture as on the biological characteristics of the disease itself. People diagnosed as having a particular disease learn "how" to have it by negotiating with friends and relations as well as with people in the treatment system; this process is affected by society's beliefs and expectations for that disease. Finally, society's definition of and expectations for a particular disease are sustained by social and organizational forces that may have little to do with the disease itself as a biological process.

Leprosy is a disease in which the process of social transformation is clear. Leprosy has a known cause, an effective treatment (but no cure), and thus a predictable outcome. From the perspective of the medical model, if the patient is treated quickly and regularly, the bacillus is controlled and the patient will recover; routine and scientifically neutral treatment is all that is required. But Westerners and many Asians – even those who have never seen a leprosy patient – may suspect that scientific treatment of the biological phenomenon misses the point. Often leprosy is feared; lepers are shunned; we say of a deviant community member, "He's like a leper." Doctors in Indian hospitals refuse to see cases; attendants in Ceylonese hospitals refuse to change dressings; wives begin divorce proceedings when husbands are diagnosed as lepers; patients leave their villages to become urban beggars. In some societies, then, routine treatment is neither given nor received. Responses to the disease by patient, family, and doctor are strongly influenced by social expectations and not simply by the biological characteristics of leprosy. 170

If the social transformation of the disease has such profound effects on those who experience it, then we must ask how a biological phenomenon has taken on such a definition. Is there some inherent quality of the disease – perhaps its communicability, threat to life, its disfiguring effects – that determines social expectations? Or are social definitions of particular diseases specific to certain societies and historical circumstances? Finally, why are certain social definitions perpetuated, for example, the terrible fear of leprosy, in the face of a known cause and effective treatment?

toms of leprosy, especially in the early stages, are mild and unremarkable. Anesthetic skin (causing secondary problems such as accidental burns), raised patches resembling eczema, skin ulcers that do not heal, for example, are usual; the unremarkability of the symptoms often contribute to late treatment. Only after many years without treatment do leprosy patients experience severe malformation and dysfunction of the kind that might be readily recognized by the layperson.

Currently the most common treatment is sulfone drugs administered over a long period. In Sri Lanka, for example, leprosy patients are expected to continue treatment for a minimum of five years following diagnosis. No one terms these drugs a "cure," and presumably no cure will be known until the causal factors are understood more clearly. These drugs are known to arrest the growth of the bacteria, however, and to cause a drop in the bacteria count in most but not all patients; after three months the disease is usually no longer communicable. For patients whose disease has progressed to the stage of physical malformation, surgery is also used.

The World Health Organization[3] estimates the worldwide prevalence of leprosy to be about 10 million cases or 0.8 per thousand. Ninety-four percent of these cases are in tropical Africa and Asia. Of the total number of estimated cases, only one-third are registered with a health agency and only one-fifth are being treated. Although Westerners usually think of leprosy as a problem "over there," an average of 100 new cases of leprosy was reported each year in the United States during the twenty-year period following World War II; of these, approximately one-half were foreign-born residents.[4] In the Commonwealth of Massachusetts, an average of one case of leprosy per year has been reported since 1970.

If we construct a picture of the "typical" leprosy patient from the medical facts, then, we see a man or woman whose symptoms are mild enough to be unrecognizable to the layperson, who sometime in the past may have lived or worked closely with a leper. During the time the disease was harbored it is relatively unlikely that it was passed along to others. If the disease is diagnosed early and treated regularly with the appropriate drugs, the patient's symptoms will disappear and the disease will be arrested if not cured, leaving no visible signs.

This should be the "medical career" of the typical leprosy patient today. Even in many African and Asian countries, treatment is available and known to ordinary villagers, and thus it is quite possible for a leprosy patient to receive early outpatient treatment, exhibit few visible symptoms, and carry on ordinary social activities. Why is it possible, then, for lepers in Nigeria to follow this career and for Indian lepers, on the other hand, to experience profound changes in their whole life, to lose their occupations, their wives, their children, their very identities? That is, how and why does the moral definition of the disease vary across cultures?

Is leprosy universally stigmatized?

It is easy for Westerners to assume that leprosy is stigmatized in all societies. If we attend to Conrad's novels, the Bible, even "Jesus Christ Superstar," we could conclude that, everywhere, lepers are shunned. This assumption has been made without question by a number of authors who have then offered a functional hypothesis about stigma. These authors suggest that because leprosy is universally stigmatized, stigma must func-

a leper, however, even in a population where best estimates indicate that the prevalence is 0.37 per thousand.[9] One might expect that the Sri Lankan leper's life experience would be similar to the Indian's, including rejection and mobility. Our interviews of lepers receiving outpatient treatment indicate that this is not so.[10] Instead, we found that leprosy patients, after diagnosis, remain in their own homes and carry on the same occupation that they had before the disease appeared. The schoolteacher continues teaching; the housewife continues cooking and caring for children; only one man, a baker, left his job, he reported, because the physical symptoms prevented him from doing his work.

Families of patients remain intact as well. Those who were married before diagnosis remained married; several more were married after the disease appeared. Only one man reported, "When I went to the Kurunegala hospital they said I had leprosy and sent a telegram to my wife saying that I was being transferred to the leprosy hospital. When people at home read the telegram my mother-in-law wanted my wife to get a divorce but my brother-in-law said, 'Wait and see.' Then the hospital sent some booklets about leprosy saying it was O.K. and they changed their minds about the divorce."

Thus, there is little of the overt rejection reported in India. Yet life is not entirely unchanged for Sri Lankan lepers. Most patients, in fact, withdraw from society to some extent; they stigmatize themselves. When asked what advice they would give to other patients, our leprosy patients said, "Do not move around the village," "Do not visit others' homes unless it is absolutely necessary." They apply similar advice within their own families (and usually follow this advice), saying, "Use separate eating utensils and sleep separately." And there is general but not unanimous agreement that it is better *not* to tell nonfamily members about the illness; "Others will be afraid," "Others might stop visiting, even stop working with us." Leprosy patients, then, are fully aware of the stigma of the disease; their response is to avoid possible rejection by mild withdrawal and secrecy.

Yet often the secret of leprosy cannot be kept forever. When villagers discover that someone they know has leprosy, their first response is fear and rejection; but that often disappears over the years and relationships return to normal. One patient reported that when the villagers found out about his illness, "They went to the Montessori school my son was attending and asked the teachers to separate him from the others. Then the children began to harass my son. So I wrote a letter to the rural development society telling them they could call any doctor and give me an examination. They didn't do that but the harassment of my son stopped after that. I know the doctors would not say I had leprosy because the treatment is kept secret and they wouldn't tell what it was." For this man stigmatization early in the course of his illness also meant that villagers stopped using his well for bathing. "But now (seven years later) they use the well again and relations are back to normal."

Although the general population in Sri Lanka seems to favor rejection and isolation of lepers, the actual experience of many of these patients is quite different. Families accept the patient, marriages continue, and, over the years, neighbors who might have been afraid at first resume normal relations. Patients themselves sometimes withdraw into their families and avoid unnecessary nonfamily contact. This is not true, naturally, for all those with leprosy, but the general pattern, relative to the Indian one, is of acceptance or at least tolerance.

that lepers are not universally stigmatized. Thus it is unlikely that the social definition of leprosy arises entirely from biological qualities of the disease itself, that is from its degree of contagion or visible symptoms. Instead, stigma may be linked to particular historical and cultural conditions, specific to each society. 177

How does the moral definition of leprosy develop?

How does a disease come to be feared and stigmatized in some cultures, yet remain an unremarkable fact of life in others? This is obviously a complicated question to which there can be no single answer. We might, however, find some answers in historical conditions or in the cultural and social matrix in which the disease is embedded. Many explanations are buried in the past; in India the extreme stigma of leprosy is certainly not new. Nineteenth-century Hawaii, however, provides one well-documented case in which the moral definition of leprosy is related to specific historical, economic, and social circumstances.[17]

In the 1840s in Hawaii, and elsewhere in the West, leprosy had almost disappeared, and when it did occur was considered to be a hereditary household disease. It was of minor importance, not stigmatized, a disease that most people did not encounter. Soon after mid-century, however, Hawaii's economic and social situation began to change, reflecting the worldwide movement of people at the height of colonialism. Europeans moved out to the colonies; Americans traveled for purposes of trade. Chinese began to move the other way, to Hawaii to work on the plantations and to the American West during the gold rush. In 1851 the first group of 180 Chinese immigrants arrived in Hawaii, and by the 1860s the movement of Chinese to Hawaii had become a flood.

The Hawaiians believed that the Chinese had brought leprosy. In the 1850s Hawaiian authorities noted an increase in leprosy, but newspaper reference to leprosy "was purposely omitted . . . for fear of injuring . . . commercial development."[18] By 1862 it could not be ignored and was publicly described as a major outbreak of the disease. This raised several questions in the minds of Hawaiians, and in the minds of health officials around the world. If Hawaii had suddenly experienced a serious increase in leprosy, could one still cling to the idea that leprosy was hereditary? And if it were not hereditary, who carried the disease?

In 1865 Hawaii's official response to the outbreak of leprosy was quarantine of lepers, implying a belief in contagion. This was confirmed in 1874 by Hansen's discovery of the bacillus, *Mycobacterium leprae*. Within one or two decades, at a time of vastly increasing population movements, world opinion shifted from belief in inheritance to belief in contagion.

The Chinese who were believed to have brought leprosy to Hawaii and the western United States were "industrious, painstaking, persevering and frugal – qualities which in Caucasian Protestants undoubtedly would have been considered virtues."[19] Yet they were also viewed by white people, in that age of social Darwinism, as natural cultural inferiors. Further, they provided cheap labor, and their industriousness perhaps threatened poor Westerners who wanted work. Thus, "while there were many demographic – environmental factors at work other than the coincidence of Chinese immigration with the leprosy outbreak in Hawaii that might have triggered the epidemic, the Chinese, nevertheless, almost immediately came to bear the full brunt of responsibility, a stigmatization of them that soon reached monstrous proportions."[20] 178

of a relatively unknown disease into a socially and morally threatening phenomenon. In this case the moral definition of the disease came from and was reinforced by the moral and social definition of those believed to carry it.

The association between particular historical events and the appearance of leprosy in Hawaii may explain why leprosy became a stigmatized disease there. In other cultures quite different circumstances may influence the moral definition of the disease. We can look again at Africa for evidence of another definitional process, the introduction of stigma by Western medicine.

In northern Tanzania, as we have indicated, there was traditionally little stigma attached to leprosy; patients lived with, ate with, slept with their families. Leprosy was an unremarkable disease. But in 1966 the Geita Leprosy Scheme was inaugurated, focusing not only on case finding and treatment but also on public education. Talks were given to school children in grades 5, 6, and 7 once every two years; key members of the community were also reached, although the general public was not directly educated about the disease. Information on cause, symptoms, mode of transmission, treatment, and social problems was included in each additional effort; thus Western medical notions about leprosy were introduced into the traditional system, largely through the children.

A survey conducted five years later showed how effective this educational effort had been. In response to almost all information questions about the disease, "The majority of the school children expressed the modern view of leprosy as being caused by certain bacteria and by physical contact with a patient, whereas the adult population and the leaders associated leprosy more frequently with such factors as heredity, witchcraft. . . ."[26] Whereas the educational program "stressed that there is no need to isolate the patient provided certain basic rules of hygiene are maintained, and that there is no reason to discontinue marriage to a leprosy patient,"[27] there was a surprising finding. School children, targets of this education, opposed the idea of leprosy patients sharing food and sleeping space with family members, and objected to leprosy patients marrying. "Another illustrative example of attitudes derived from health education is that of the sellers at the Sengerema market who, after a health education session by the Geita Leprosy Scheme some years ago, for the first time in Sengerema's history, urged their colleagues suffering from leprosy not to enter the market again."[28] Thus, together with scientific medicine's facts about causation and treatment, other attitudes had inadvertently been added to the society; the new idea of infection had presumably led Tanzanians to recommend avoidance and even rejection of people with leprosy.

In Tanzania, we see what could be the beginning of a new moral definition of leprosy, introduced without intent by public health educators. A somewhat similar phenomenon seems to have occurred in Nigeria[29] and elsewhere[30] when Western modes of treatment – isolation in leper colonies – were introduced by Christian missionaries. In neither instance is there evidence that the general public's attitude toward leprosy underwent a radical shift toward stigmatization. Yet what we see in this century in Tanzania and Nigeria may appear, in the next century, in a more institutionalized form.

The cases of Hawaii and Africa provided examples of two different processes through which an ordinary disease may take on a particular social and moral definition. In Hawaii it appears that the status of those

stigmatizes lepers. Some report experiences with families or communities that confirm the existence of fear and even rejection. And some leprosy patients accept the public definition of the disease by withdrawing to the haven of the Carville hospital, where they are allowed to live the remainder of their lives. Yet those who make this choice do not willingly accept the beliefs about leprosy that are associated with stigma, beliefs about extreme contagion, deformity, and incurability.

Instead, patients who voluntarily withdraw from society support another segment of the patient population, those whom Gussow and Tracy call "career patients."[34] It is these career patients who take on a peculiarly "American" role, one that is undoubtedly respected by the public. They become professional educators, acting as representatives of all lepers in an attempt to change the public's view of the disease. They give talks at Rotary clubs, organize seminars, speak about leprosy on the radio, conduct tours of the leprosy hospital, publish *The Star*. The content of their educational attempts is a new set of beliefs about leprosy, beliefs that are designed to replace the "old" ideas that justified stigma.

The career patients' educational program about leprosy "attempts to demythologize leprosy by emphasizing the historical, social and medical errors and confusions which surround it."[35] They suggest that the leprosy of the Bible and the leprosy of today have been erroneously linked. To support this argument, educational materials refer only to the new name, Hansen's Disease, officially applied to leprosy by the International Congress of Leprosy in 1948. In fact, the word "leprosy" appears nowhere in *The Star* which, instead, is liberally sprinkled with *HD*s. Suggestions of communicability are downplayed, with leprosy usually described as being only mildly contagious. Those patients who tend to become the educators are usually not incapacitated and thus provide good evidence that leprosy is not the horrible affliction the Bible describes. The assumption behind this new ideology, promoted by the career patients, is that American society's fear of leprosy will wither away as the public learns the "truth" about the disease. No longer will lepers feel wrongly labeled and no longer will they be stigmatized.

In a sense, these career patients are America's version of the Ethiopian beggar. Their response to leprosy is consistent with American values on activism, self-sufficiency, and change; when they see a problem, especially a problem for themselves, they try to solve it. They do not respond like the Ethiopian fatalists. At the same time, however, from the point of view of the public, they are not "normal." They are still lepers, whose role as educators depends on existence of the disease itself. "At the present time this status [as career patient] appears to be the only legitimate one the leprosy patient has available to him for life in open society."[36]

Lepers in the United States learn to be the kind of lepers Americans expect. To confirm the lay American's fears of leprosy, they withdraw, avoid, protect themselves, and protect others. But they do these things reluctantly and temporarily, until their active educational efforts succeed in changing public opinion. In the meantime, those who go openly into the outside world go labeled as "leper," fulfilling our expectations that lepers are indeed "different."

There is a world of difference between the Ethiopian leper begging in front of the train station and the American leper showing a film to the Lions' club. But underlying that difference is a more basic similarity: Lepers learn how to be lepers from the beliefs and expectations their soci-

treatment to leprosy patients, collecting funds mainly from the industrial West and funneling money to nonindustrial tropical countries. Second, in many (but not all) of these nonindustrial countries, leprosy was strongly stigmatized. One might expect that, once an effective treatment became known and once the missionary organizations began to provide this treatment, the stigmatization of leprosy would decline. Changes in definition 185
of the disease might be slow, might take decades, but with effective and available treatment fear and thus stigma would disappear, even in India and Ethiopia.

Yet they have not disappeared. In fact we suspect that the organizations most committed to treating and curing may have, inadvertently, had a part in perpetuating the stigma of leprosy, through a complex and circular relation between the expectations that some societies have for people with leprosy and the organizational constraints and requirements for the leprosy organizations' own survival.

"Normals" in the community prefer to have deviant people of many sorts removed from view and cared for by others. Just what threatens the community varies with the form of deviance. For example, the mentally ill may threaten us because they behave in ways that make interactions with them unpredictable and stressful. Blind people threaten us because they may become inconveniently dependent on the sighted. People with leprosy threaten us not only with (supposed) infection but also with the terrible sight of their malformed faces and hands. The stigma of disease, then, is a convenient belief for communities that would prefer to rid themselves of "abnormal" and sometimes difficult people.

Leprosy organizations have taken the responsibility for the care of lepers from "normals" and have in many societies done just what the community wants, removed the leper from view. Inpatient facilities are often completely contained villages providing not only treatment but also employment, education, and recreation. There is often no need for a leprosy patient to leave this "asylum" and, in fact, it is sometimes physically difficult to do so because leprosy hospitals are often found on islands (e.g., in Sri Lanka and the Philippines) or in the remote countryside. In fact, organizations justify the isolation of leprosy patients by reference to the community's stigmatization of lepers. "Some are rejected by their homes and families . . . for some there is, humanly speaking, no hope; their disabilities mean that they will be dependent for the rest of their lives. The Mission cares for such as these also."[41] Removal of lepers from the "normal" community serves to confirm the idea of stigma. People in Sri Lanka may say, "If lepers must be sent to a remote island for treatment then there must be something very terrible about them and their disease." Stigma is thus confirmed.

Leprosy organizations have not only removed threatening people from community view, they have also demanded little change on the part of "normals" by focusing their work largely on treatment and rehabilitation rather than on prevention or on public education to reduce stigma. The American Leprosy Mission for example, made its largest allocation 186
of funds (43 percent of its $1 million budget) for medical and rehabilitation work.[42] Treatment of lepers particularly in inpatient facilities places no burden on the community to change its image of the threat of leprosy.

Thus, leprosy organizations, by building permanent inpatient hospitals and stressing treatment of stigmatized patients rather than change in the public's view of the disease, have acted "for" the normal community. In

and "we must rid the world of this scourge . . . " are common descriptors. In the brochure that reports the change of name from "leprosy" and "leper" to "Hansen's disease," to avoid "a cruel pejorative term that does grave injustice to the dignity and worth of a person," the term "Hansen's disease" is nowhere used; instead, consistent reference in all Foundation materials is to "leprosy." Second, not only is leprosy terrible, but in some vague way it may touch upon Westerners (the donors). For example, "Leprosy is found in almost every country of the world, a world made small by modern means of travel. . . . Tourists, students, businessmen, government officials freely intermix on the highways of the world. No longer can the well-being of mankind in one part of the globe be separated from the well-being of men everywhere."[49] Thus, the terrible disease may not be confined to the poor of the tropics and out of our sight, but may attack our neighbors, relatives, even ourselves.

These brochures show what the foundations are doing. Their service is described as extraordinary, requiring devotion and great risk. Numerous articles in *The Star,* the publication of the U.S. Public Health Service hospital at Carville, describe people like "Dr. Emilia Ode, . . . a woman who has given seventeen years of devoted service to a hospital in the heart of African Equatorial forests."[50] There are people, therefore, who have taken on the special burden of working with leprosy patients. As the American Leprosy Mission brochure suggests, "Christians have pioneered leprosy work. From the days of Jesus and the Apostles, Christians have had a special concern for victims of this disease and have ministered to those so afflicted when no one else would. Even today, in many places, patients are dependent upon the Christian Church for medical care."[51] In fund-raising brochures many pictures and vignettes describe the unusual people who have chosen to carry on the unending and often unrewarding work with leprosy patients.

Westerners, vaguely threatened by a terrible disease, and certainly somewhat guilty about but very willing to turn the care of such patients over to others, can do only one thing: give donations. As the American Leprosy *Bulletin* suggests, the fact that immunity to standard drugs is occuring more frequently " . . . is nothing short of terrifying, simply because, to date, there is absolutely no other drug which is readily available, as free of negative side effects, as inexpensive and as effective as DDS has been up until now. . . . The quality of care must be raised until a high proportion of cases are found early and treated regularly. Five dollars per year is not enough. Thirty dollars is a more reasonable figure, but in many areas adequate care cannot be given for less than fifty to sixty dollars per patient per year."[52] All one needs to do, then, to be relieved of the burden of dealing with stigmatized people, is to give money, in this case, to keep the disease out of sight in the poor tropical countries.

Much of what is stated in these messages is, according to current scientific knowledge about leprosy, factually wrong. Leprosy is not a terrible or life-threatening disease, nor a real threat to Westerners. Service to lepers, like all service, requires devotion, but the degree of risk is not great. In fact, in a growing number of countries service to lepers is provided by government health service employees in the same way as it is for other diseases. It is apparently true that the immunity of some bacilli has become a problem that must be handled by greater expenditure and/or better planning based on epidemiological knowledge.[53]

Why do foundations dealing with leprosy arouse fears and suggest stigma – particularly in the face of scientific and experiential knowledge

ety's support in order to survive. Both the organizations' actions (removing leprosy patients from society) and their ideologies (in the form of public educational materials) sustain the idea that leprosy is horrible and threatening, requires treatment by "special" people, and is an enormous, often hidden, and unending problem. These actions and beliefs, though not based on medical facts, are consistent with the normal community's definitions of the disease and thus receive most sympathy from prospective donors. To continue their work, then, the organizations that "own" leprosy must sustain the stigma of leprosy.

We have examined leprosy because it provides a clear example of the social transformation of disease. In some societies leprosy is transformed into an illness that has serious implications for the social career of the sick person. Similar transformations might occur with other diseases. The effects may be milder and the social transformations less obvious, but if we examine the beliefs, practices, and experiences of patients who suffer from other diseases, we should see similar processes.

One such medical problem is blindness. Using either medical or legal definitions, most "blind" people can actually see, yet we tend to think of all blind people in stereotypical categories, often as "helpless," and we find it personally much easier not to have to interact with a blind person because "relationships with the blind are often strained and infused with ambiguity."[54] The lack of nonverbal communications through gestures and reciprocal smiles, etc., makes such interactions tense. The constant threat that the blind person will become overly dependent on the sighted leads us to fear such contact, even to stigmatize the blind. Just as with leprosy patients in India or Ethiopia, the normal community finds it more convenient and comfortable to avoid contact with blind people by providing funds for agencies that will remove the blind from view and take charge of the problem.

As Scott suggests, although agencies for the blind "uphold the desirability of the restorative approach to rehabilitation, most of them follow an accommodative approach in practice."[55] Thus, rather than helping blind people by offering mechanical devices or training that might allow them to return to their former jobs, they are often retrained for jobs originally devised for the totally blind. In time, blind people may be effectively removed from society, to participate in sheltered workshops, special "blind" social activities, even segregated homes. Agencies succeed, then, in transforming people from sighted people who have trouble seeing to blind people with residual vision. And ideologies develop around this accommodative approach justifying continued resocialization and even removal from normal society. As one theory suggests: ". . . with the death of the sighted man the blind man will be born."[56] The agencies that survive are the ones that confirm the community's willingness to stigmatize blind people. They provide services and accompanying ideologies that justify removing "difficult" people from our midst.

The social definition of illness has an obvious effect on doctors. For example, not only must they treat the leprosy bacillus, they must also recognize and deal with the culture's beliefs about the disease. In India and Sri Lanka they must find the hidden patients and convince those in treatment to return for more. In Hawaii and Louisiana doctors must care for and also justify the continued hospitalization of large proportions of leprosy patients with inactive diseases who do not want to go home.[57] The social and cultural context in which the disease exists must be seen as part of the disease process itself.

24. Ibid.
25. Meyer, R. W. "Report of the Agent, Board of Health at the Leper Settlement, Molokai, Hawaii," in *Appendix to the Report on Leprosy of the President of the Board of Health to the Legislative Assembly*, Honolulu, Hawaii, 1886, p. CXXXIX. Mouritz makes a similar observation: "The name 'Mai Pake' may, no doubt, have originated on the interrogation by a native of a Chinaman, 'What is this disease?' The Chinaman would probably answer, 'I don't know the Hawaiian word but there are plenty of people sick with the disease in my country.' I think this origin of the word is more probable than the explanation given that the disease was called 'Mai Pake' because the Chinese brought it." Mouritz, "Report of the Superintendent," p. XXXIX.
26. van Etten and Anten, "Evaluation of health education," p. 405.
27. Ibid., p. 417.
28. Ibid., p. 408.
29. Shiloh, "A case study of disease and culture in action."
30. "There was . . . no stigma attached to the disease amongst the Austrailian Aboriginals until segregation became law and sufferers were taken from their families and isolated. It seems that the Aboriginal people have known and coped with the disease at least since the influx of immigrants from leprosy endemic areas in the middle of the last century – and had no fear of it." Editorial, *The Medical Journal of Australia*, 1977, *2*(11):345–7.
31. Giel and van Luijk, "Leprosy in Ethiopian society," p. 194.
32. Ibid., p. 190.
33. Ibid., p. 196.
34. Gussow, Z., and Tracy, G. "Status, ideology, and adaptation to stigmatized illness: a study of leprosy," *Human Organization*, 1968, *27*:316–25, p. 322. These authors assert that in the West the stigma of leprosy is a myth perpetuated by treatment agents. This "myth" is taken quite seriously by the patients themselves; whether it is actually true is not important for our analysis here.
35. Ibid., p. 320.
36. Ibid., p. 324.
37. Gussow and Tracy, "The use of archival materials," p. 700.
38. Ibid., p. 703.
39. "Set apart." London: *The Leprosy Mission*, 1978.
40. Gussow and Tracy, "The use of archival materials," p. 702.
41. "Set apart."
42. American Leprosy Missions. *Annual Report*, 1977.
43. Bloombaun, M., and Gugelyk, T. "Voluntary confinement among lepers,"*Journal of Health and Social Behavior*, 1970, *11*:16–20.
44. Scott, R. A. *The Making of Blind Men*. New York: Russell Sage, 1969, p. 93.
45. Hassleblad, O. W. "Leprosy . . . present-day understanding." *American Leprosy Mission*, n.d.
46. American Leprosy Missions. *Bulletin*, Fall 1978.
47. Because most leprosy hospitals have church and missionary affiliations, their organizational goals are mixed, combining concern with provision of medical care with interests in teaching Christian values and doctrine. However, as more Asian and African countries have obtained independence and as nationalistic feelings have become strong, negative reaction to the presence of missionaries has increased. In India and elsewhere it is now necessary for missionary groups to show that they provide concrete medical (or other) services in order to remain in the country. Thus continued control of leprosy (and other) hospitals is crucial if the Christian missionary work of these organizations is to continue.
48. *Hansen: Research Notes*, 1975, *6*(1–2):202.
49. Hassleblad, "Leprosy."
50. *The Star*, 1976, *35*(3):4.
51. Ross, W. F. "Questions people ask about leprosy." American Leprosy Missions, n.d.
52. American Leprosy Missions, *Bulletin*, Fall 1978.
53. Some have suggested that drug-resistance requires development of a new treatment strategy that will interrupt transmission in large populations of leprosy patients. One part of this strategy, ironically, may be the need to provide "facilities for the hospitalization of a larger number of patients than at present during the first few months of treatment. This will require building or remodeling of facilities. . . " Lechat, M. "Sulfone resistance and leprosy control," *International Journal of Leprosy*, 1978, *46*:64–7.
54. Scott, *The Making of Blind Men*, p. 17.
55. Ibid., p. 90.
56. Ibid., p. 81.
57. Bloombaum and Gugelyk, "Voluntary confinement among lepers."

Elliot G. Mishler, et al., *Social contexts of health, illness, and patient care*, Cambridge University Press, Cambridge, 1981, pp. 169–194.

N. D. Jewson

1.4

THE DISAPPEARANCE OF THE SICK-MAN FROM MEDICAL COSMOLOGY

Abstract. The sick-man may be said to have disappeared from medical cosmology in two related senses during the period 1770–1870. Firstly, as control over the means of production of medical knowledge shifted away from the sick towards medical investigators the universe of discourse of medical theory changed from that of an integrated conception of the whole person to that of a network of bonds between microscopical particles. Secondly, as control over the occupational group of medical investigators was centralized in the hands of its senior members the plethora of theories and therapies, which had previously afforded the sick-man the opportunity to negotiate his own treatment, were replaced by a monolithic consensus of opinion imposed from within the community of medical investigators.

Introduction

It is the objective of this paper to analyse the changing structure of relationships which generated and sustained the diverse systems of medical cosmology characteristic of Western European societies during the period 1770–1870. The paper will proceed along the following lines. Firstly, the notion of medical cosmology is introduced, and those aspects of medical cosmologies which are of interest indicated. Secondly, the concept of the mode of production of medical knowledge is defined. Three specific modes are identified and discussed, viz. Bedside Medicine, Hospital Medicine and Laboratory Medicine. Thirdly, the three types of medical cosmology associated with each of the three modes of production of medical knowledge are described. Fourthly, a distinction is drawn between person and object orientated cosmologies in terms of their central organizing concepts. Fifthly, it is suggested that the transition from Bedside Medicine through Hospital Medicine to Laboratory Medicine was accompanied by a shift in cosmological form away from a person orientated towards an object orientated cosmology.

The Concept of Medical Cosmology

Medical cosmologies are basically metaphysical attempts to circumscribe and define systematically the essential nature of the universe of medical discourse as a whole.[1] They are conceptual structures which constitute the frame of reference within which all questions are posed and all answers are offered. Such intellectual gestalt provide those sets of axioms and assumptions which guide the interests, perceptions, and cognitive processes of medical investigators. They set out the first principles of problem orientation, explanatory strategy, methodology, and acceptable results which are not so much tested as celebrated in the intellectual activity of their adherents. Medical cosmologies are an indispensable first order of relevance and relation which enable their adherents to make sense of and to act within the world. They provide an overall definition of the field and a preliminary affirmation of its form. Hence cosmologies are not only ways of seeing, but also ways of not seeing. Cosmologies prescribe the visible and the invisible, the imaginable and the inconceivable. They exclude in the same moment as they include.

Cosmologies should not however be conceptualized as static normative frameworks—rather they are ongoing sets of possibilities, not so much states of know-

to cite one or two specific centres of innovation and development as examples. However the leading medical school of the continent in the last third of the 18th century was probably that in and around the University of Edinburgh.[8] Elsewhere I have described the system of production of medical knowledge prevailing in England during this era.[9]

The vision of the sick-man institutionalized within the tenets of Bedside Medicine was that of a conscious human totality—a viewpoint that transcended, not merely united, the distinctions of psyche and soma found in modern medicine.[10] The two major growth points of Bedside Medicine were phenomenological nosology and speculative pathology.[11] Both activities generated a large number of often mutually contradictory theories, and as a result medical knowledge consisted of a chaotic diversity of schools of thought. The definition of the field was diffuse and problematic, disciplinary boundaries weak and amorphous. The fundamental premisses of the subject were a matter of dispute and debate. Rivalry between the proponents of the various theories was commonly conducted at the level of personal abuse and dogmatic polemic.

Within this disarray, however, a common set of cosmological principles may

Diagram 1: Three Modes of Production of Medical Knowledge

	Patron	Occupational Role of Medical Investigator	Source of Patronage	Perception of Sick-man	Occupational Task of Medical Investigator	Conceptualization of Illness
Bedside medicine	Patient	Practitioner	Private fees	Person	Prognosis and therapy	Total psycho-somatic disturbance
Hospital medicine	State; hospital	Clinician	Professional career structure	Case	Diagnosis and classification	Organic lesion
Laboratory medicine	State; academy	Scientist	Scientific career structure	Cell complex	Analysis and explanation	Biochemical process

be discerned. Controversy centred around differing interpretations of the same open ended model of bodily processes. Thus, for example, despite differences in the specific contents of their theories, nosologists constructed their pathological

Diagram 2: Medical Cosmologies, 1770–1870.

	Bedside Medicine	Hospital Medicine	Laboratory Medicine
Subject matter of Nosology	Total symptom complex	Internal organic events	Cellular function
Focus of Pathology	Systemic—dyacrasis	Local lesion	Physico-chemical processes
Research Methods	Speculation and inference	Statistically oriented clinical observation	Laboratory experiment according to scientific method
Diagnostic Technique	Qualitative judgement	Physical examination before and after death	Microscopic examination and chemical tests
Therapy	Heroic and extensive	Sceptical (with the exception of surgery)	Nihilistic
Mind/Body Relation	Integrated: psyche and soma seen as part of same system of pathology	Differentiated: Psychiatry a specialized area of clinical studies	Differentiated: Psychology a separate scientific discipline

theory of 'organicism' compared the composition and disposition of the organs of the body with the parts of a moving clock. Once in motion both clockwork and living organisms run out their cycles according to inexorable mechanical laws.[18]

Laboratory Medicine was first established within the German university system in the middle decades of the 19th century.[19] The transformation in cosmology precipitated by this innovation was founded upon the application of the concepts and methods of natural science to the solution of medical problems.[20] The two major areas of development were histology and physiology. Numerous discoveries concerning the properties of tissues were organized into a coherent synthesis by the cell theory. The latter proposed that the ultimate structural and developmental units of all living animals and plants are the cells. Following the announcement of this theory intensive studies were made of the processes of cellular function and reproduction. Progress in physiology was largely the result of the deliberate introduction of the theories and techniques of physics into the study of living organisms, pioneered by a small group of young scientists at the University of Berlin.

Pathology also was totally reconstituted. It was asserted that observational anatomy would never explain the causes of disease. Hence the new pathology was built upon the findings of experimental physiology. Since the cell was the fundamental unit of life, then it must also be the locus of disease. Life thus became the process of interaction within and between the cells, disease a particular form of these physical and chemical processes. However, despite the success of the cellular pathology it was not accompanied by a cellular therapy. Scientific analysis swiftly dispatched the traditional remedies but offered few alternatives in their place. Nevertheless the foundations were laid for a new kind of clinical medicine. Scientific medical investigators were equally dissatisfied with the speculative systematists and the pathological anatomists. The first they regarded as unscientific and the second they believed had reified the concept of disease. All that could actually be discovered in the ailing body were cells disturbed in their functions. Medical knowledge could only advance therefore as part of a general enquiry into the complete range of cellular processes, both normal and abnormal. Clinical diagnosis was reorganized around the application of a series of chemical tests of body substances designed to identify morbid physiological processes. Medical practise became an appendage to the laboratory.

Although the medical investigators of the mid-19th century German universities 231
varied in the sophistication of their theoretical models, all shared a strictly materialist interpretation of biological phenomena. A crusade was launched to rid biology of all vitalist concepts. The attention of the medical investigator was directed away from the living totality, away even from gross anatomical structures, towards the fundamental particles. The search was instituted for the ultimate units of analysis rather than the highest levels of synthesis. Thus the analogy chosen by Schwann to illustrate the cellular theory was drawn from the realms of organic chemistry. He argued that, even if there is no actual relation between the process of crystal formation and cell formation, they are of the same order of phenomena [21].

From Person to Object Orientated Cosmology

The eclipse of Bedside Medicine by first Hospital and then Laboratory Medicine 232
represented a shift away from a person orientated toward an object orientated cosmology. This assertion will be demonstrated by an examination of the relationship between the ideational form of medical cosmology and the social organization of medical innovation in each of the three modes of production identified above.

In the era of Bedside Medicine the patron consisted of a small coterie of patients drawn from the ruling class. The role of medical investigator was not differentiated from that of practitioner to any significant extent. Hence the relations of production were formed in private practice and centred around the collection of fees by

by the sweeping claims of the array of heroic remedies accompanying each system of pathology. Thus in effect the patient appeared in the cosmology of Bedside Medicine in a guise similar to that in which he appeared to himself, i.e., as an individual and indivisible entity. 234

Secondly, the constraints of the career system directed the creative imagination of medical investigators towards individual interpretation of the basic canons of medical theory. Consequently Bedside Medicine was characterized by a large number of competing and mutually exclusive systems, all of which could claim legitimate descent from the generally accepted principles of medical cosmology. Occupational success was dependent upon the ability to attract the interest and approval of a client or patron. Medical men sought to advertise their services by means of the allure of their own personal collection of speculations and concoctions. It was necessary for their theories to be sufficiently familiar to accord with the ideologies and expectations of the sick, whilst simultaneously sufficiently exotic to hold out an exclusive and compelling promise of cure. This multiplicity of interpretations upon a common theme was sustained by the number and variety of potential audiences which were open to the medical investigator. A range of overlapping and interlocking subcultures among the affluent sick sustained an equally various assortment of theories and therapies. Hence the social organization of Bedside Medicine stimulated the production of innumerable superficial novelties each derived from a common set of assumptions—a characteristic blend of individual display and popular conservatism. The apparent confusion, ambiguity, and the interminable controversy of Bedside Medicine were not a function of crisis within medical cosmology but rather a key feature of its normal operation.

In the era of Bedside Medicine, then, social interaction within the consultative relationship consisted of a complex process of calling forth, testing, and managing personal identities. This exchange of confidences took place, in part, through the medium of medical knowledge itself. In effect the contemporary concepts of nosology and pathology facilitated a dialogue between the sick and medical personnel which served the purposes of each by elucidating information concerning the personal qualities of the other.

Hospital Medicine represented the first major step towards the institutionalization of an object orientated medical cosmology. Two aspects of this transformation will be identified and discussed. Firstly, at the same time as the sick-man found himself unequivocably subordinated to the medical investigator, the focus of medical knowledge moved away from the person of the former towards esoteric entities defined in accordance with the perceptions of the latter. Secondly, as control over the occupational group of medical investigators was centralized in the hands of its senior members the profusion of speculative systems characteristic of Bedside Medicine was replaced by an ongoing consensus upon matters of theory and therapy.

During the Revolution the traditional institutions of medical innovation, associated with the ancien regime, were suppressed and (after an interval during which they too were abolished) the hospitals were reconstituted at the centre of the French medical system. A two tier system of medical practice was devised in which hospital clinicians became the new elite of the profession. The thousands of poor and destitute sick housed within the hospitals had little opportunity to exercise control over the activities of the medical staff. The powerlessness of the patients, combined with an enormous size of the hospital system, provided the clinicians with an inexhaustible fund of acquiescent research material. Clinicians thus gained control over and autonomy within the technical process of production of medical knowledge. A 'collegiate' system of occupational control had emerged within the community of medical investigators [25]. 235

The introduction of Laboratory Medicine to German society may be illustrated by the example of Prussia.[28] The role of patron was undertaken by a unifying and modernizing state. Though bitterly resented by local elites which had previously controlled the universities, in the early 19th century the Prussian state centralized the academic selection procedures and played a far greater role in evaluating candidates. This policy was intended to improve German national prestige and power within European society. Hence university personnel likely to attain a continental reputation for their contributions to the advance of knowledge, rather than a local reputation for their pedagogic or therapeutic skills, were adopted as protégés by the Ministry of Education. In this manner a new breed of laboratory based medical investigators was created. Two distinct, and often mutually hostile, career systems emerged: that of research worker and that of medical practitioner. The former monopolized access to the laboratory facilities which rapidly became the essential means of production of the new medicine. Research workers grew into a self conscious and self confident elite, whose distinctive occupational ideology emphasized the value of scientific work for its own sake irrespective of its practical applications. The state, wishing to detach itself from the centrifugal forces asserted by local interests, increasingly relied upon the advice of the leaders of the scientific community when distributing rewards and resources for intellectual endeavour. Thus, by making use of the state machine, medical investigators were enabled to assert the primacy of their disciplinary interests over institutional, educational and professional ones.[29]

The conceptualization of sickness and health developed by the early 19th century French clinicians had been limited by the exigencies of their occupational task, which restricted their gaze to morbid events occurring within gross anatomical structures. The imagination and curiosity of laboratory scientists were not bound within these restrictions, however.[30] For them the study of illness became part of a much wider investigation into the organization and functions of organic matter.[31] Morbid events were no longer regarded as a discrete area of enquiry but were studied in the context of a general analysis of both normal and abnormal physiological processes. Indeed the scientific revolution in medical knowledge may be said to have undermined the very existence of medicine as a distinct discipline in its own right. Medicine ceased to be a subject defined by its explicit and exclusive contents, and became instead an applied science, consisting of a pragmatically derived range of disciplines and techniques, distinguished by its specific purpose.

The realignment of the boundaries of the medical investigator's quest were but one part of a general metamorphosis of work tasks characteristic of the shift from Hospital to Laboratory Medicine. The occupational activity of medical investigators henceforth took the form of the extension of certified knowledge rather than the servicing of clients. The authority of the research worker was a function of his capacity to manipulate abstract symbols and concepts. A study of the emergence of occupations based on scientific knowledge must take cognisance of this transformation which is rooted in the nature of the activity itself. This development represented a significant gain in the social detachment of the medical investigator from the sick. It enabled him to conceptualize the sick-man as a material thing to be analysed, and disease as a physico-chemical process to be explained according to the blind inexorable laws of natural science. Thus whilst Hospital Medicine had dissolved the integrated vision of the whole man into a network of anatomical structures, Laboratory Medicine, by focusing attention on the fundamental particles of organic matter, went still further in eradicating the person of the patient from medical discourse.

This increase in social distance was accompanied by the erection of strong boundaries between the sick and medical investigators. Indeed the character of social relationships in the era of Laboratory Medicine gave the community of medical investigators the appearance of an insulated intellectual cocoon. Specifications for membership were exacting and exclusive. Significant communication

about the causes and cures of illness was confined to the members of the group, legitimate publication outlets being reduced to a closely guarded few. The use of technical jargon and concepts served as a ritual mode of differentiation between the established and the outsiders.

The centralized homogeneous system of occupational control existing within the scientific community insured that the same set of cognitive maps and methodological prescriptions were adopted by all medical investigators. Novelties which earned their authors rewards were those which extended and articulated established principles rather than challenged and reformed them. This is not to suggest that the cosmology of Laboratory Medicine was static but rather that the ongoing
239 development of its potentialities occurred at the level of specification rather than interpretation. Thus the primary mode of development of medical knowledge became the creation of new specialisms rather than the reinterpretation of dominant cosmological concepts.[32] However specialization in the era of Laboratory Medicine was constituted upon quite different epistemological foundations to that of Hospital Medicine. The division of intellectual labour was based not upon the injunction to study particular organs and diseases but upon the conceptual demarcations derived from scientific disciplines. Thus, for example, the problems encountered in medical practice rapidly declined as a legitimate point of departure for the discourse of medical investigators.

Ben-David and his followers have seen in the process of differentiation of knowledge into specialities and sub-fields the key to the extraordinary creativity of 19th century German science. Ben-David argues that a fierce struggle for career rewards within the university departments constrained the young and the ambitious to innovate by means of launching new fields of study. When these disciplines had matured and been institutionalized within the academic system the pioneers were first in line to collect the chairs and institutes that accompanied scientific success. At the same time Ben-David also emphasizes that the decentralized pluralistic structure of the German university system facilitated this process of subject fission. Turner has pointed out however that more significant than the mere intensity of competition was a shift towards a new kind of competition dominated by cosmopolitan and disciplinary, rather than local and institutional, criteria.

This new kind of occupational competition created a new pattern of relationships among medical investigators. The scope of occupationally relevant role performance was henceforth narrowly and specifically defined. Occupational activity took a form comparable to a game situation in which precisely identified objects are manipulated within a closely prescribed area of play according to imposed, universalistic and impersonal sets of rules. Medical investigators accounted for themselves in stereotyped and formal modes of communication which discouraged the expression of moral qualities or biographical particulars. Occupational competence was evaluated according to foreknown and general standards. This is in sharp contrast to Bedside Medicine in which occupational activity took the form of the manipulation of nebulous and elusive personal identities within an ill defined area of play around negotiated, ad hoc, and particularistic sets of expectations. In Bedside Medicine the medical investigator had sustained an ambiguous multifaceted relationship with the sick-man; in Laboratory Medicine the medical investigator maintained a clear-cut monodimensional relationship with his occupational peers. Not only had the persona of the audience altered, but also the form of the relationship. In Laboratory Medicine the interaction between research worker and audience was reduced to a circumscribed network of limited and specific exchanges. The work situation of the medical investigator thus restricted
240 his involvement with the object of study—i.e., the suffering of the sick and dying—to its extrinsic utility in obtaining career objectives. Hence the research worker's intellectual detachment was a function of his ulterior occupational motivation.[33]

The career struggle among medical investigators was fought out through the manipulation and appropriation of scientific knowledge, the patterns of intellectual property rights playing a key part in determining the patterns of deference shown in interaction among occupational peers. The formal organization of the medical cosmology of Laboratory Medicine provided a vehicle for the institutionalization and reinforcement of a range of status obligations and role identities within the scientific community. Thus the process of innovation in medical knowledge was inspired by a belief in and a search for a single rational order in both the physiological processes of organic matter and the social inequalities among medical investigators.

Conclusion

This paper has attempted to formulate an albeit brief and incomplete sketch of one or two of the concepts which, it is hoped, may prove fruitful in the sociological explanation of changes in the perception and conceptualization of the human body by medical personnel during the course of the industrialization of western societies. Many important aspects of such a study have been neglected or glossed over here of course. Thus, for example, no analysis has been made of the processes of change within and between modes of production of medical knowledge; no reference has been made to the interaction between the production of medical knowledge and other types of cultural endeavour; no examination has been made of the relationship between intellectual production and other 'practices' within the social formation, such as the economy and polity; and so on. Attention has been drawn, however, to the changing appearance of the sick-man within pathological theory and to the changing relationship between the sick-man and medical investigators. In the era of Bedside Medicine the sick themselves determined the course of medical knowledge. The student was under the control of the object of study. The triumph of blind physico-chemical law over the idiosyncratic personal experience of the sick-man within the worldview of the medical investigator did not occur until the latter had achieved a degree of detachment from the demands of the sick.[34] This increase in social distance may be discussed in the context of transformations in the relations of production of medical knowledge.

Notes

1. The notion of medical cosmology bears a close resemblance to Althusser's 'problematic', see L. Althusser and E. Bailbar, *Reading Capital* (trans. Ben Brewster, New Left Books, London, 1970) esp. pp. 25–8, and also L. Althusser, *For Marx*, (trans. Ben Brewster, Allen Lane, The Penguin Press, 1971). In recent years a number of authors have formulated comparable concepts. Thus Walton and Gamble have remarked on the similarity between Althusser's 'problematic' and Kuhn's 'paradigm', P. Walton and A. Gamble, *From Alienation to Surplus Value* (Sheed and Ward, London, 1972), p. 111. Parallel ideas are to be found in Bordieu's 'intellectual field', Foucault's 'discursive formation', Bernstein's use of 'code', and so on. None of these terms have been adopted here, however, in order to avoid responsibility for and discussion of the wider theoretical contexts within which they are located.
2. Cf. Goffman's analysis of the part played by the medical model of mental illness in the interaction between psychiatrists and the inmates of mental hospitals, E. Goffman, *Asylums* (Penguin Books, 1968) pp. 281–336.
3. The concept of the mode of production of knowledge raises fundamental theoretical issues that cannot be pursued in the present context. Recent interest in the notion has been stimulated by the work of Althusser and Balibar, *op. cit.*. 'To conceive Marx's philosophy in its specificity is . . . to conceive knowledge as production', (*Reading Capital*, p. 34). The analysis offered in this paper however in no way could or would claim to be Althusserian.
4. It should be noted, after Althusser, that the raw materials of intellectual production are never direct sense impressions of an objective 'given' reality. Raw materials consist of ideas, observations, intuitions etc. that are themselves the outcome of previous productive transformations.
5. Cosmology is a concept which refers to the totality of theoretical and empirical activity, and therefore embraces elements (4), (5) and (6) in their entirety.

6. It should be noted that it is not being asserted that each of the Western European societies discussed developed each of these modes of production in a determinate sequence of development. Rather it is suggested that the medical world of Western Europe as a whole was dominated by each of these modes of production in turn, and that during the periods indicated particular medical schools represented the leading example of the mode then dominant.
7. This nomenclature has been widely used by medical historians. However the terms are rarely defined in a systematic manner or associated with the concept of the mode of production of knowledge.
8. Relatively little modern historical or sociological work has been done on the medicine of the Scottish Enlightenment, though there has been recent interest in the science of the period, see for example *Hist. Sci.* Vol. 12, Part 2, No. 16, June 1974, articles by J. B. Morrell, 'Reflections on the History of Scottish Science'; S. Shapin, 'The Audience for Science in Eighteenth Century Edinburgh'; J. R. R. Christie, 'The Origins and Development of the Scottish Scientific Community 1680–1760'. From a growing literature on this subject the following are also of particular interest, J. B. Morrell, 'The University of Edinburgh in the late Eighteenth Century: Its Scientific Eminence and Academic Structure', *Isis*, 62 (1971), pp. 158–71; S. Shapin, 'Property, Patronage and the Politics of Science: The Founding of The Royal Society of Edinburgh', *B. J. Hist. Sci.* vii (1974), pp. 122–41, J. R. R. Christie, 'The Rise and Fall of Scottish Science', in M. Crossland, (ed) *The Emergence of Science in Western Europe* (MacMillan Press, London, 1975). On medicine itself see A. C. Chitnis, 'Medical Education in Edinburgh 1790–1820 and Some Victorian Consequences', *Med. Hist.*, Vol. XVII, April 1973, No. 2; V. B. Bullough, 'The Causes of the Scottish Medical Renaissance of the Eighteenth C ntury', *Bull. Hist. Med.*, 1971, Vol. LXV, No. 1. Useful historical sources include: A. C. Grant, *The Story of the University of Edinburgh During Its First Three Hundred Years*, (London, 1884, 2 vols.): J. D. Comrie, *A History of Scottish Medicine*, (2 vols., 2nd ed., London, 1932). It should perhaps be noted that in some respects the Edinburgh School was unrepresentative of Bedside Medicine in that it incorporated such apparently 'advanced' or 'modern' elements as clinical facilities, training in practical skills, relatively high integration of physic and surgery, instruction in natural science, etc. However it is suggested that, when considered as a cosmological totality, Edinburgh stands out as the last of the great schools of Bedside Medicine. Thus, for example, on the significance of the 18th century clinical facilities at Edinburgh see M. Foucault, *The Birth of the Clinic*, (trans. A. M. Sheridan Smith, Tavistock Publications London, 1973), chapter 4.

9. N. D. Jewson, 'Medical Knowledge and the Patronage System in 18th Century England', *Sociology*, Vol. 8, No. 3, Sept. 1974, pp. 369–85.
10. Cf. Merleau-Ponty's notion of the 'body-subject', M. Merleau-Ponty, *The Phenomenology of Perception*, (Routledge and Kegan Paul, London, 1962).
11. General discussion of the theories of Bedside Medicine may be found in: L. S. King, *The Medical World of the 18th Century* (Chicago, Chicago University Press, 1958); L. S. King, 'George Cheyne, Mirror of Eighteenth Century Medicine', *Bul. Hist. Med.* Vol. 48, No. 4, Winter 1974, pp. 517–39; T. B. Brown, 'From Mechanism to Vitalism in Eighteenth Century England', *J. Hist. Biol.*, Vol. 7, No. 2 (Fall 1974) pp. 179–216; W. R. LeFanu, 'The Lost Half Century in English Medicine', Bull. Hist. Med., Vol. XLVI, 1972, pp. 319–49; J. Schiller, 'Queries, Answers and Unsolved Problems in Eighteenth Century Biology', *Hist. Sci.* xii (1974) pp. 184–99; G. S. Rousseau, 'Sowing the Wind and Reaping the Whirlwind: Aspects of Change in 18th Century Medicine', "in P. K. Korshin *Studies in Revolution: Aspects of Change in English Intellectual History 1640–1800.* (London: The Scolar Press, 1972)." L. J. Rather, *Mind and Body in Eighteenth Century Medicine* (London Wellcome Historical Medical Library, 1965).
12. On metaphor see; W. A. Shibles, *Metaphor*, (Language Press, White Water Wisconsin, 1971); D. Schon, *Displacement of Concepts* (Tavistock Publications, London 1963).
13. See, for example, the system of pathology invented by the Scottish physician John Brown: G. B. Risse, 'The Brownian System of Medicine: Its Theoretical and Practical Implications', *Clio Medica*, Vol. 5, 1970 pp. 45–51; G. B. Risse, 'The Quest for Certainty in Medicine: From Brown's System of Medicine in France', *Bull. Hist. Med.*, Vol. XLV, No. 1, 1971, pp. 1–13.
14. On the rise of Hospital Medicine in France see; M. Foucault, *op. cit.* E. W. Ackerknecht, *Medicine at the Paris Hospital* 1774–1848 (John Hopkins Press, Baltimore, 1967); I. Waddington, 'The Role of the Hospital in the Development of Modern Medicine: A Sociological Analysis', *Sociology*, Vol. 7, No. 2, May 1973, pp. 211–24; G. Rosen, 'Hospitals, Medical Care and Social Policy in the French Revolution', *Bull. Hist. Med.*, Vol. XXX, 1956, pp. 124–49; G. Rosen, 'The Philosophy of Ideology and the Emergence of Modern Medicine in France', *Bull. Hist. Med.* Vol. 20 (1946) pp. 328–39; L. S. King, 'Medical Philosophy 1836–1844', in L. G. Stevenson and R. R. Multhauf, (ed.), *Medicine, Science and Culture* (John Hopkins Press, Baltimore, 1968) pp. 143–59; E. W. Ackerknecht, 'Elisha

Bartlett and the Philosophy of the Paris School', *Bull. Hist. Med.*, Vol. 24 (1950), pp. 43–60; J. Ben-David, *The Scientist's Role in Society: A Comparative Survey* (Prentice Hall, New Jersey, 1971), chapter 6; R. Fox, 'Enterprise and the Patronage of Research in France 1800–70'. *Minerva*, XI (1973), pp. 442–73.

15. Cf. Foucault's point that Bedside Medicine related to 'health' whereas Hospital Medicine related to 'normality'. M. Foucault, *op. cit.*, p. 35.
16. The mood of the new medicine was caught perfectly in Georget's remark, 'You should paint diseases rather diseased people'. E. W. Ackerknecht, *op. cit.* p. xi.
17. The only exception to the trend towards therapeutic restraint was in surgery, where new and radical operations were devised and carried out. Surgeons had acquired greater power and autonomy vis-a-vis both patients and other practitioners as a result of the promotion of the hospitals after the Revolution. In an era without anaesthetic and antiseptic techniques the new range of major operations were invariably agonizing and fatal. That they were attempted at all is evidence of the remarkable transformation of the doctor/patient relationship. See E. W. Ackerknecht, *op. cit.* Chap. XII.
18. For a description of Rostan's views see T. S. Hall *Ideas of Life amd Matter* (2 vols. Chicago, University of Chicago Press, 1969), Vol. 2., pp. 251–254.
19. C. A. T. Bilroth, *The Medical Sciences in the German Universities*, (MacMillan, New York, 1924); A. Flexner, *Medical Education: A Comparative Study*, (MacMillan, New York, 1925); A. Flexner, *Universities: American, English, German*, (Oxford University Press, 1930); J. Ben-David, *op. cit.* chapter 7; J. Ben-David, 'Scientific Productivity and Academic Organization in 19th Century Medicine', *A.S.R.*, Vol. 25, (1960) pp. 823–43; E. Mendelsohn, 'The Emergence of Science as a Profession in 19th Century Europe, 'in K. B. Hill (ed.), *The Management of Scientists*, (Beacon Press, Boston, 1964); D. M. Knight', German Science in the Romantic Period', and W. V. Farrar, 'Science and the German University System' in M. Crossland *op. cit.*
20. On the development of medical knowledge in mid-19th century Germany see; E. Mendelsohn, "Physical Orders and Physiological Concepts: Explanation in 19th Century Biology', *B. J. Hist. Sci.*, Vol. 2, No. 7 1965; E. Mendelsohn, 'Cell Theory and the Development of General Physiology', *Archiv's Int. d'Hist. Sci.*, 1963, No. 65; E. Mendelsohn, "Biological Forces in the 19th Century: Some Problems and Sources', *Hist. Sci.* Vol. 3, 1964; F. Schiller, 'Concepts of Stroke Before and After Virchow', *Med. Hist.*, Vol. 14, 1970; F. Schiller, 'Physiology's Struggle for Independence in the First Half of the Nineteenth Century', *Hist. Sci.* Vol. 7, 1968; E. W. Ackernecht, 'Cellular Theory and Therapeutics', *Clio Medica*, Vol. 5 No. 7 April 1970; E. W. Ackerknecht, *Rudolf Virchow– Doctor, Statesman, Anthropologist*, (Madison, University of Wisconsin Press, 1953); L. J. Rather, *Disease, Life and Man: Selected Essays by Rudolph Virchow*, Introduction by L. J. Rather, (Stanford University Press, Stanford 1959); E. Benton, 'Vitalism in 19th Century Scientific Thought: A Typology and Reassessment', *Stud. Hist. Phil. Sci.*, Vol. 5, No. 1, 1974 pp. 17–48; D. H. Galaty, 'The Philosophical Basis of mid-19th Century German Reductionism', *J. Hist. Med.*, Vol. xxix, No. 3, July 1974, pp. 295–316; M. Teich, 'On the Historical Foundations of Modern Biochemistry', *Clio Medica* Vol. I, 1965, pp. 41–8; T. O. Lipman, 'Vitalism and Reductionism in Liebig's Physiological Thought', *Isis*, Vol. 58, 1967; P. M. H. Mazumdar, 'Johannes Muller on the Blood, the Lymph, and the Chyle', *Isis*, Vol. 66 No. 232 June 1975, pp. 242–53.

21. T. S. Hall, *op. cit.* p. 265.
22. The concepts of object and person orientation are derived from Bernstein's work on socio-linguistic codes, see B. Bernstein, *Class, Codes and Control*, Vol 1 (Routledge and Kegan Paul, London, 1971) pp. 133, 165–6, 184–7. The interest of Bernstein's analysis lies in his attempt 'to explore how symbolic systems are both the realizations and regulators of the structure of social relationships', *op. cit.*, p. 194. However, the notions of person and object orientation are not necessarily used in this paper in the same manner as Bernstein has employed them elsewhere.
23. On concepts of life and matter see T. S. Hall, *op. cit.* esp. 365–82.
24. In terms of the very useful typology of systems of occupational control proposed by T. J. Johnson, *Professions and Power*, (London, Macmillan, 1972) this situation may be described as one of 'oligarchic patronage' (see chapter 5).
25. See T. J. Johnson, *op. cit.* Chap. 4.
26. See E. W. Ackerknecht, *op. cit.*, (1967) chapter IX.
27. See E. W. Ackerknecht, *op. cit.* (1967) chapter XIV.
28. See R. S. Turner, 'The Growth of Professional Research in Prussia 1818–1848; Causes and Consequences', *Historical Studies in the Physical Sciences*, Vol. 3, 1971, pp. 137–82.
29. In terms of Johnson's typology of systems of occupational control, 'cosmopolitan mediation', *op. cit.*, chapter 6.

30. 'Division of labour only becomes truly such from the moment when a division of material and mental labour appears... From this moment onwards consciousness *can* flatter itself that it is something other than consciousness of existing practise, that it *really* represents

something without representing something real: from now on consciousness is in a position to emancipate itself from the world and proceed to the formation of 'pure' theory . . .', K. Marx and F. Engels, *The German Ideology*, (Lawrence and Wishart, London, 1970) pp. 51–52.

31. For an analysis of the contrasting worldviews of present-day scientists and practitioners see P. Elliot, 'Professional Ideology and Social Situation,' *The Sociological Review* Vol. 21, No. 2, May 1973, pp. 211–28.
32. Cf. The mode of scientific innovation M. J. Mulkay terms 'branching' in 'Three Models. of Scientific Development' *The Sociological Review* Vol. 23, No. 3 August 1975, pp. 509–526.
33. It is not suggested, of course, that the medical investigators of Laboratory Medicine were any more inhumane, or even instrumentally orientated, than those of Bedside Medicine. Rather the form of the relationships in which they were located constrained them to act, think, and feel in characteristic ways.
34. Cf. N. Elias, 'Problems of Involvement and Detachment', *B.J.S.*, VII, 1956, pp. 226–252.

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N.D. Jewson, 'The disappearance of the sick-man from medical cosmology, 1770-1870', *Sociology*, vol. 10, 1976, pp. 225-244, excerpts.

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1.5

THE USES OF A DIAGNOSIS: DOCTORS, PATIENTS AND NEURASTHENIA

IN 1869 George M. Beard suggested a common origin and the designation 'neurasthenia' for a staggering variety of symptoms that had long taxed the ingenuity and the patience of physicians. A pioneer specialist in neurology, Beard made his reputation in New York City by treating the functional nervous disorders, that is, those for which no gross pathology could be found.[1] Neurasthenia was one of these, a disease characterized by profound physical and mental exhaustion. It was also a protean condition that might attack any organ or function. Its characteristic symptoms included sick headache, noises in the ear, atonic voice, deficient mental control, bad dreams, insomnia, nervous dyspepsia, heaviness of the loin and limb, flushing and fidgetiness, palpitations, vague pains and flying neuralgia, spinal irritation, uterine irritability, impotence, hopelessness, and such morbid fears as claustrophobia and dread of contamination.[2]

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To a modern observer, as to a contemporary critic, Beard appears to have 'greatly overloaded his subject.'[3] But by suggesting a common pathology, prognosis, history, and treatment for such varied behavioral attributes, Beard was attempting to bring order to the chaotic field of the functional nervous disorders. In the absence of clear anatomical changes, or hard and fast tests, such conditions not only tested the physician's diagnostic skills, but invited the disbelief of friends and relatives. Beard acknowledged that neurasthenia was subjective, its symptoms 'slippery, fleeting, and vague.' But he insisted that it was as real a disease, with as genuinely somatic a course, as smallpox or cholera. 'In strictness,' he wrote, 'nothing in disease can be imaginary. If I bring on a pain by worrying, by dwelling on myself, that pain is as real as though it were brought on by an objective influence.'[4]

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Beard had not discovered a new disease, as even he acknowledged. But until his premature death in 1883, he labored to secure for neurasthenia an

1. The best analysis of Beard's career is Charles E. Rosenberg, 'The place of George M. Beard in nineteenth-century psychiatry,' *Bull. Hist. Med.*, 1962, *36*, 245–259. See also Henry Alden Bunker, Jr., 'From Beard to Freud: a brief history of the concept of neurasthenia,' *Med. Rev. Rev.*, 1930, *36*, 108–114.

2. George M. Beard, *A practical treatise on nervous exhaustion (neurasthenia): its symptoms, nature, sequences, treatment*, 2nd ed., rev. (New York, 1880), pp. 11–85. See also George M. Beard, *American nervousness: its causes and consequences* (New York, 1881), pp. 7–8.

3. 'The question of the existence of neurasthenia,' *Med. Rec.*, 1886, *29*, 185–186.

Work on this article was greatly assisted by fellowships from the Radcliffe Institute and the Peter B. Livingston Fund. I am indebted to Phyllis Ackman, Martin Duberman, Nathan G. Hale, Jr., Dolores Kreisman, Charles E. Rosenberg, Barbara G. Rosenkrantz, Bennett Simon, and Martha Vicinus for their comments on earlier drafts and to Catherine Lord for research assistance. I also want to thank Dr. G. Octo Barnett and James Vaccarino for permission to use the medical records of the Massachusetts General Hospital, 1875–1900.

honored place in the medical lexicon. Motivated in part by personal need —he had wrestled with the symptoms of the disease in his youth—Beard was able to transform his own struggles into a disease syndrome that struck a responsive chord among his contemporaries. By interpreting diverse physical and mental symptoms as the common consequence of an excessive expenditure of nervous energy, he brilliantly blended scientific theories about the nature of the nervous impulse, the conservation of energy, and biological evolution into a plausible disease entity.

Beard defined neurasthenia as an 'impoverishment of nervous force. . . . "Nervousness" is really nervelessness.' Physicians in the late nineteenth century believed that each individual possessed a fixed amount of nervous energy, determined mainly by heredity, which acted as a messenger between various parts of the body. Neurasthenia resulted when demand exceeded supply; even a tiny excess could cause the entire system to break down. Immoderate toil or worry, lack of food or rest, could induce an acute attack or even a chronic condition. The exhaustion of any one bodily system—the brain, for instance—could by the principle of reflex irritation spread to the reproductive and digestive systems, causing a total breakdown. Two popular metaphors—the overloaded electrical circuit and the overdrawn bank account—graphically illustrated the process for layman and physician alike.[5]

Just as physicians considered nervous energy limited, they believed that contemporary society placed inordinate demands on that supply. The dy-

namism of the Gilded Age, so welcome in other respects, thus became a source of social and psychological as well as physical stress. Beard drew on evolutionary theory to support his belief that nervousness was peculiarly an American phenomenon. In his long list of causes, he gave special attention to the periodical press, steampower, the telegraph, the sciences, and the increased mental activity of women. By encouraging men and women to experience life more fully, these five characteristic features of nineteenth century civilization—most advanced in America—placed too many demands on their limited supplies of nervous energy. Civilized society also demanded repression of the emotions, a refinement from which savages were exempt, and thus additionally drained human energies.[6]

Beard thought his work had initially been ignored, but by 1880 he contended that the subject 'after long standing and waiting at the doors of science, has, at last, gained admission.' A large popular and technical literature supported his claim. A tract by S. Weir Mitchell, the Philadelphia neurologist who developed the rest cure for neurasthenia, choicely titled *Wear and Tear*, sold out in ten days and went through five editions between 1871 and 1881; his *Fat and Blood* did even better. In the late 1880s a *Journal of Nervous Exhaustion* appeared briefly. And in the 1890s, two Shattuck lecturers, charged with enlightening members of the Massachusetts Medical Society on diseases prevalent in the Commonwealth, chose neurasthenia as their subject. When Beard's one-time partner, A. D. Rockwell, brought out a new edition of Beard's treatise for physicians in 1901, he noted that 'neurasthenia is now almost a household word.' Whether

4. Beard, *Nervous exhaustion* (n. 2), pp. 85, 80.

5. George M. Beard, *Sexual neurasthenia (nervous exhaustion): its hygiene, causes, symptoms, and treatment, with a chapter on diet for the nervous*, ed. A. D. Rockwell (New York, 1884), p. 36; cf. pp. 61–62 and Beard, *American nervousness* (n. 2), p. 9.

6. Beard, *American nervousness* (n. 2), pp. 96–192.

accurate or not, he continued, the diagnosis proved 'often as satisfactory to the patient as it is easy to the physician.'[7]

Even as Rockwell wrote, Beard's classic formulation of neurasthenia as a syndrome characterized by a deficiency of energy had begun to break down. The diagnosis had become so widespread, its use so imprecise, that many physicians believed it had outlived its usefulness. One called it the newest garbage can of medicine.[8] No longer able to provide a coherent explanation for the symptoms it had once readily encompassed, neurasthenia lost ground in the first two decades of the twentieth century both to demonstrably organic ills and to conditions increasingly assumed to be of psychological origin. New diagnostic tests made it possible to distinguish a number of conditions characterized by exhaustion, among them anemia, pulmonary tuberculosis, incipient paresis, lead poisoning, and Addison's disease together with other endocrine disorders.[9] Just as the diagnosis fever had earlier given way to more precise formulations, so exhaustion came to be viewed less as an essence than as a symptom.

A preference for psychological interpretations of the psychoneuroses was also apparent by 1900, a consequence mainly of the discovery of unconscious mental states. Pioneer psychopathologists like Pierre Janet and Sigmund Freud proposed psychodynamic interpretations of many physical and psychological symptoms formerly assumed to be of somatic origin. Thus Janet substituted the term *psychasthenia* for neuroses in which obsessions and phobias predominated. He attributed these to reduced psychic energy and discarded neurasthenia because he found no evidence of any physiological etiology. Freud retained the term, but wished to limit it to the relatively infrequent cases of physical exhaustion brought on by masturbation or nocturnal emissions. He considered it an actual neurosis as distinct from the more common psychoneuroses that psychoanalysis did so much to elucidate.[10] American physicians debated these concepts and, although some still accorded neurasthenia a limited place, Beard's earlier synthesis was effectively demolished by 1920.[11]

In retrospect it is clear that what was called neurasthenia actually comprehended a range of conditions that included depressive, obsessive, and phobic states later classified as psychoneuroses; mildly psychotic and borderline states; palpable physical ills that could not then be adequately diagnosed; and a host of symptoms that are today considered psychophysiological. Leonard Woolf was quite correct when he called neurasthe-

7. Beard, *Nervous exhaustion* (n. 2), p. xix; Edward Cowles, 'Neurasthenia and its mental symptoms,' *Boston med. surg. J.*, 1891, *125*, 49–52, 73–76, 97–100, 125–128, 153–157, 181–186, 209–214; Robert T. Edes, 'The New England invalid,' *Boston med. surg. J.*, 1895, *133*, 53–57, 77–81, 101–107; Beard, *Nervous exhaustion*, 4th ed., rev. and enl. A. D. Rockwell (New York, 1901), p. 3. Numerous references to neurasthenia may be found in the several series of the *Index-catalogue of the library of the Surgeon General's office.*

8. Quoted in A. A. Brill, 'Diagnostic errors in neurasthenia,' *Med. Rev. Rev.*, 1930, *36*, 123.

9. I. S. Wechsler, 'Is neurasthenia an organic disease?' *Med. Rev. Rev.*, 1930, *36*, 115–121; I. S. Wechsler, 'The psychoneuroses and the internal secretions,' *Neurol. Bull.*, 1919, *2*, 199–208; Edes (n. 7), pp. 78–80.

10. On the shift in diagnostic styles, see Henri F. Ellenberger, *The discovery of the unconscious: the history and evolution of dynamic psychiatry* (New York, 1970); and Nathan G. Hale, Jr., *Freud and the Americans: the beginnings of psychoanalysis in the United States, 1876–1917* (New York, 1971), esp. pp. 71–173.

11. See, for example, Charles L. Dana, 'The partial passing of neurasthenia,' *Boston med. surg. J.*, 1904, *150*, 339–344, and G. Alder Blumer, 'The coming of psychasthenia,' *J. nerv. ment. Dis.* 1906, *33*, 336–353. Widely used in World War I, the term *neurasthenia* largely disappeared in the United States by the 1930s and reappeared in the 1968 diagnostic manual of the American Psychiatric Association. See John C. Chatel and Roger Peele, 'A centennial review of neurasthenia,' *Am. J. Psychiat.*, 1970, *126*, 1404–1413.

37 nia 'a name, a label, like neuralgia or rheumatism, which covered a multitude of sins, symptoms, and miseries.'[12]

This modern diagnostic nemesis has recently attracted the attention of historians precisely because it so neatly illustrates the interplay of scientific theory and cultural values in the fashioning of a disease entity. Concentrating on physicians' generalizations about the disease, scholars for the most part have considered neurasthenia within the framework of intellectual history. The best of these studies securely anchors Beard's work in the medical and social structures of the Gilded Age, taking seriously his now dated explanatory model as a measure of the intellectual temper of the time.[13] Others, unable to see past the colorful etiology of the disease, have claimed that the term *neurasthenia* 'stood for conflicting . . . ideologies,' and, on the patient's part, was 'a reservoir of class prejudices, status desires, urban arrogance, repressed sexuality, and indulgent self-centeredness.'[14]

However imprecise the label *neurasthenia* now appears, it is surely unfair to doctors and especially to patients to view illness purely as an intellectual construct. To ignore the clinical context in which disease is identified is to miss the distinguishing feature of medical practice. For it is in the consulting room, the hospital clinic, and at the bedside that the daily drama of diagnosis and treatment takes place. There the patient offers up the symptoms that have already caused sufficient distress to prompt the encounter. As a psychoanalyst reminds us: 'For the patient illness is always an uncanny experience. He feels something has gone wrong with him, something that might, or certainly will, do him harm unless dealt with properly and swiftly. What "it" is, is difficult to know.'[15]

In what is frequently a highly charged atmosphere, the physician's primary task is to identify 'it,' to transform the diffuse symptoms of his patient into a condition that can be rationally understood and treated. To such an encounter each party brings his own preconceptions about illness, expectations of the other, and more or less enduring personality traits, shaped by class and social position as well as individual need. If the physician fails to make sense of the patient's troubles—or to relieve them—
38 neither he nor his patient will retain much confidence in his skill. If the interpretation is unacceptable, the patient may take his business elsewhere.

In the late nineteenth century, neurasthenia proved a satisfactory label to doctors and patients alike. By incorporating into a disease picture a host of behavioral symptoms, many of which would otherwise have been deemed self-willed and thus deviant, the diagnosis legitimized new roles for physicians and their patients. For patients, it provided the most respectable label for distressing, but not life-threatening, complaints, one that conferred many of the benefits—and fewest of the liabilities—associated with illness. Certainly it was preferable to its nearest alternatives—hypochondria, hysteria, and insanity, not to mention malingering.

12. Leonard Woolf, *Beginning again: an autobiography of the years 1911 to 1918* (New York, 1964), pp. 75–76.

13. Rosenberg (n. 1). Cf. Chatel and Peele (n. 11), Bunker (n. 1), and S. P. Fullinwider, 'Neurasthenia: the genteel caste's journey inward,' *Rocky Mount. social sci. J.*, 1974, 2, 1–9.

14. John S. Haller, Jr., and Robin M. Haller, *The physician and sexuality in Victorian America* (Urbana and Chicago, 1974), pp. 5–43.

15. Michael Balint, *The doctor, his patient and the illness*, 2nd ed. rev. (London, 1964), p. 41. This work is an excellent introduction to the psychological aspects of general medicine.

At a time when psychiatry was limited to the institutional care of psychotic patients, those who specialized in the functional nervous disorders were actually providing psychiatric services for many patients. Thoughtful clinicians understood that deep-rooted personality needs often influenced the onset of an illness, and that the relationship between doctor and patient affected the patient's capacity to recover. Although their suspicion of psychology kept them from exploring this relationship fully, physicians sometimes acknowledged that they ministered to the soul as well as the body. As confessors, they concerned themselves with all aspects of the patient's behavior. Neurasthenia was thus an important chapter in the expansion of the medical sphere that has characterized modern American society.

As a diagnosis on the borderland of medicine and psychiatry, neurasthenia augmented therapeutic approaches in both fields. Medicine had reached an ambiguous stage when the disparity between actual achievement and future promise was especially great. Scientists, by correlating clinical and pathological data, had identified the basic diseases in modern form by mid-century. As typhus and malaria replaced the symptomatic designation fever, it became possible to search for pathogenic microorganisms. The first such organism was identified in 1876, but two decades elapsed before the great medical discoveries yielded practical results. In the meantime, death rates remained high and the art of therapeutics perilously low. Recognizing that there were few specific remedies, medical leaders repudiated many traditional therapies as unavailing or positively harmful. This therapeutic nihilism, although an advance over the heavy drugging of the past, left the practitioner in a peculiarly vulnerable position. For, as the authors of guides for aspiring physicians noted, patients expected medicines and even specific courses of treatment. If they did not receive them from members of the regular profession, they might patronize adherents of medical sects who still offered a holistic view of disease, or one of the numerous vendors of patent medicines.[16]

The laboratory cast of mind of professional leaders at the end of the century further highlighted the practitioner's impotence. In this era of extreme somaticism, a respectable disease required a specific and identifiable etiology, pathology, and therapy. The discovery that microorganisms caused specific diseases contributed to this outlook. So did insistence on a localized pathology exemplified in Rudolf Virchow's famous dictum: 'There are no general diseases . . . only diseases of organs and cells.' In their efforts to make medicine an exact science the most prominent physicians often overlooked—and certainly underrated—the importance of clinical medicine. Their emphasis on basic research in chemistry, bacteriology, and anatomy, so productive in other respects, did little to help either the ambitious practitioner or the anxious patient in their mutual quest.[17]

Neurasthenia offered the practitioner a way out of this therapeutic dilemma. The new label, with its implied precision, emphasized what

16. Richard Harrison Shryock, 'The interplay of social and internal factors in modern medicine: an historical analysis,' in *Medicine in America: historical essays* (Baltimore, 1966), pp. 307–332; Richard Harrison Shryock, *The development of modern medicine: an interpretation of the social and scientific factors involved* (New York, 1947), pp. 248–303.

17. Cf. Erwin H. Ackerknecht, *Rudolf Virchow: doctor, statesman, anthropologist* (Madison, 1953). For a critical view of the laboratory approach to medicine, see Knud Faber, *Nosography: the evolution of clinical medicine in modern times*, 2nd ed. rev. (New York, 1930), esp. pp. 68–71, 76, 87.

physicians could do for their patients rather than their impotence. At a time when physicians felt comfortable only with clearly organic disorders, a diagnosis of neurasthenia permitted some to address themselves to less tangible clinical issues and to provide an essentially psychological therapy under a somatic label. The diagnosis and its treatment helped physicians to justify a traditional role, threatened by the one-sided emphasis on science, of providing advice and comfort to patients and their families. In view of the impoverished state of medical therapeutics in the late nineteenth century, this was by no means an insignificant achievement.[18]

Conditions of weakness had long been known to physicians by a variety of names, among them debility. But the emphasis on weakness of the nerves coincided with the rise of neurology as a medical specialty in the years after the Civil War. Knowledge of the brain and nervous system advanced rapidly in Europe after 1860 as experimental physiologists demonstrated that fixed parts of the brain controlled specific motor activities.

Important clinical advances, especially J. Hughlings Jackson's work on epilepsy and Jean-Martin Charcot's delineations of several classic neurological disorders, followed. By the late 1860s, important teaching and hospital positions in neurology had been established in England, France, and the German-speaking world, a sign that the specialty had come of age.[19]

Beard and Mitchell belonged to the pioneer generation of physicians who established neurology on a firm professional footing in the United States. Concentrated in large cities on the eastern seaboard and Chicago, they began in the 1870s to found the journals and societies that constitute the core of a professional identity. In their bid for recognition, the neurologists encountered resistance from general practitioners opposed to specialization of any kind, and outright hostility from the medical superintendents of asylums for the insane who since the 1840s had claimed exclusive authority over the care of the mentally ill. At a time when all experts considered insanity a disease of the brain, neurologists legitimately claimed competence in the field of mental as well as neurological disorders. But because the two fields had developed separately in the United States, ambitious young specialists like Beard found it necessary to challenge what amounted to the superintendents' monopoly in caring for the mentally ill. Rivalry between competing specialists was particularly intense during the 1870s and 1880s. In the struggle for professional status and monetary rewards, neurasthenia helped the neurologists build up their clienteles. Since the organic nervous disorders were relatively rare, specialists welcomed patients with less tangible ills who crowded their waiting rooms. Some earned sizable fees for this work; Weir Mitchell reputedly made $70,000 in a good year, much of it in consulting fees.[20]

Professional needs help to explain the advantage of a new diagnosis. But to discern how and why neurasthenia was used, one must turn from

18. On the ambiguities of medical practice in the late nineteenth century, see Charles Rosenberg, 'The practice of medicine in New York a century ago,' *Bull. Hist. Med.*, 1967, *41*, 223–253.

19. There is no adequate history of neurology in English. But see Erwin Ackerknecht, *A short history of psychiatry*, trans. Sulammith Wolff (London and New York, 1959).

20. On early American neurology, see Charles L. Dana, 'Early neurology in the United States,' *J. Am. med. Assn.* 1928, *90*, 1421–1424; Louis Casamajor, 'Notes for an intimate history of neurology and psychiatry in America,' *J. nerv. ment. Dis.*, 1943, *98*, 600–608; and Barbara Sicherman, 'The quest for mental health in America, 1880–1917,' (Ph.D. diss., Columbia University, 1967), pp. 35–45, 231–239.

the institutional to the clinical setting. The typical neurasthenic patient presented the physician with a rich variety of symptoms. A diagnosis by exclusion, neurasthenia could be established only after a thorough physical examination and appraisal of the patient's actual, as distinct from stated, discomfort had ruled out any other condition. (Beard once listed forty-eight ailments with which it might be confounded.)[21] Once satisfied that 41
the patient had no organic disease, the physician must decide what label to attach to the condition.

Neurasthenia had most often to be distinguished from hysteria and hypochondria, the other major functional nervous disorders. Hysteria, long the most frequent nervous disease of women, had become in Weir Mitchell's view 'the nosological limbo of all unnamed female maladies. It were as well called mysteria.' The typical hysteric manifested bizarre symptoms—convulsive fits, trances, choking, tearing the hair, and rapid fluctuations of mood. Where languor characterized the neurasthenic, Beard considered 'acuteness, violence, activity, and severity' the essence of hysteria. Moral considerations as well as the physician's empathy for particular patients undoubtedly influenced diagnostic decisions in ambiguous cases. Where neurasthenics seemed deeply concerned about their condition and eager to cooperate, hysterics were accused of evasiveness—*la belle indifference*—and even intentional deception. Physicians sometimes contrasted the hysteric's lack of moral sense with the neurasthenic's refined and unselfish nature. 'The sense of moral obligation [in the hysteric] is so generally defective as to render it difficult to determine whether the patient is mad or simply bad.' By contrast, patients suffering from 'impaired vitality' were 'of good position in society . . . just the kind of women one likes to meet with—sensible, not over sensitive or emotional, exhibiting a proper amount of illness . . . and a willingness to perform their share of work quietly and to the best of their ability.'[22]

Hypochondria had been the most common diagnosis for men with ill-defined complaints. Once a medically respectable disease, by the 1870s hypochondriasis had acquired the connotation of an imaginary illness. Neurasthenics and hypochondriacs both displayed inordinate interest in the vagaries of their bodies, but physicians considered the former more often the victims of circumstances, or lack of prudence, while the difficulties of the latter, if not dismissed entirely, appeared to be distinctly 42
self-induced.[23]

Although nineteenth century physicians and historians alike have written at length about women's ill health, the subject of illness in men has

21. Beard, *Sexual neurasthenia* (n. 5), pp. 32–33; and Beard, *Nervous exhaustion* (n. 2), pp. 86–117. For contemporary views on this type of illness, see Gerald Chrzanowski, 'Neurasthenia and hypochondriasis,' in Alfred M. Freedman and Harold I. Kaplan, *Comprehensive textbook of psychiatry* (Baltimore, 1967), pp. 1163–1168, and David Mechanic, 'Social psychological factors affecting the presentation of bodily complaints,' *New Engl. J. Med.*, 1972, *286*, 1132–1139.

22. S. Weir Mitchell, *Rest in nervous disease: its use and abuse*, in E. C. Seguin, ed., *A series of American clinical lectures*, 1 (New York, 1875), p. 94; Beard, *Nervous exhaustion* (n. 2), p. 103; A. S. Myrtle, 'On a common form of impaired vitality,' *Med. Press Circular*, 1874, *17*, 375–376. Cf. Carroll Smith-Rosenberg, 'The hysterical woman: sex roles and role conflict in 19th-century America,' *Social Research*, 1972, *39*, 652–678; and Ilza Veith, *Hysteria: the history of a disease* (Chicago, 1965).

23. Esther Fischer-Homberger, 'Hypochondriasis of the eighteenth century—neurosis of the present century,' *Bull. Hist. Med.*, 1972, *46*, 391–401.

been neglected.[24] Yet neurasthenia seems to have been a particularly useful label for men. If women were sometimes expected, and perhaps even encouraged, to be weak and sickly, an ethos of fortitude made it difficult for men to exhibit weakness of any kind. Illness, in all its presumed objectivity, was one of the permissible exceptions. It is significant, therefore, that several physicians—mistakenly—considered neurasthenia a male disease, a striking assertion at a time when the profession rarely lost an opportunity to decry the ill-health of American women.[25] While acknowledging that neurasthenia afflicted women more often than men, Beard was especially eager to legitimize it as a diagnosis for men. He insisted that hypochondria, which he defined as 'groundless fear of disease,' was extremely rare; the label too often covered the diagnostician's failure to detect the real trouble.[26]

Neurasthenia then was the diagnosis of choice for men and women whose diffuse symptoms might otherwise have been dismissed as hypochondria or hysteria. As a new diagnosis, neurasthenia escaped the pejorative connotations associated with its nearest alternatives. Doctors had often suffered from neurasthenia themselves—Beard estimated that physicians constituted one-tenth of his clientele—and empathized with similarly distressed patients.[27] Certainly many of its putative causes—overwork or the too solicitous care of sick relatives—resulted from an excess of essentially admirable traits.

Neurasthenia was also preferable to a diagnosis of insanity, then con-

sidered an incurable disease. Despite their rivalry, American neurologists and superintendents agreed with Beard that neurasthenia was 'the door that opens into so many phases of mental disease.' It was a warning signal, which, if unheeded, might lead from a temporary physical breakdown to a permanent state of melancholia. Edward Cowles, the influential superintendent of McLean Asylum, went so far as to suggest in his Shattuck lecture of 1891 that 'all people of previously sound health and constitutions, who become insane with ordinary functional mental disorders, have their psychoses dependent upon neurasthenic conditions of the organism.'[28]

Neurasthenics suffered from many of the symptoms of those hospitalized for insanity, including loss of mental control, depression, morbid fears, and obsessions. Presumably the persistence and severity of these symptoms helped to separate the insane from the neurasthenic, but diagnostic criteria were by no means clear. Class considerations, the tolerance of physicians for particular symptoms, and the ability of family members to care for patients undoubtedly influenced diagnostic decisions, then as now. Like

24. Cf. Ann Douglas Wood, ' "The fashionable diseases": women's complaints and their treatment in nineteenth-century America,' *J. interdisc. Hist.*, 1973, *4*, 25–52; Carroll Smith-Rosenberg and Charles Rosenberg, 'The female animal: medical and biological views of woman and her role in nineteenth-century America,' *J. Am. Hist.*, 1973, *60*, 332–356; and Regina Morantz, 'The lady and her physician,' in Mary S. Hartman and Lois Banner, eds., *Clio's consciousness raised: new perspectives on the history of women* (New York, 1974), pp. 38–53.

25. See Joseph Collins and Carlin Phillips, 'The etiology and treatment of neurasthenia. An analysis of three hundred and thirty-three cases,' *Med. Rec.*, 1899, *55*, 413–422; and Paul Schilder, 'Neurasthenia and hypochondria: introduction to the study of the neurasthenic-hypochondriac character,' *Med. Rev. Rev.*, 1930, *36*, 165.

26. Beard, *Nervous exhaustion* (n. 2), pp. 96–98.

27. *Ibid.*, p. 80. Mitchell too suffered from neurasthenia. See Margaret C.-L. Gildea and Edwin F. Gildea, 'Personalities of American psychotherapists,' *Am. J. Psychiat.*, 1945, *101*, 464–466; and Anna Robeson Burr, *Weir Mitchell: his life and letters* (New York, 1929).

28. George M. Beard, 'The problems of insanity,' *Physn. Bull. medico-legal Soc.*, 1880, *13*, 244; Cowles (n. 7), p. 50.

Virginia Woolf, an upper-class patient suffering from hallucinations and severe feeding disorders might frequently be diagnosed as neurasthenic.[29] An individual with similar problems, but fewer financial resources and less loyal family and friends, might have been declared insane and placed in an asylum. Given the importance of the therapist's expectations on the patient's chances of recovery, the more optimistic diagnosis may have kept some individuals who would today be considered schizophrenic or borderline from long hospital stays and possible deterioration.[30]

Class prejudice undoubtedly influenced the attitudes of upper- and middle-class patients and their physicians toward the asylums, as the rhetorical query of one neurologist suggests: 'Should the psychical symptoms of instability, distrust, and confusion of mind be used as an excuse for, and can such a condition be most effectively combated by, sending such a delicate, sensitive, nervous invalid to an insane asylum? We think not.' But at a time when public hospitals suffered from overcrowding, understaffing, and low recovery rates, treatment at home or in one of the new nerve retreats was the rational choice for those who could afford it. Such individuals could also escape the stigmatizing label of insanity. For even after recovery, formerly hospitalized patients often continued to be reminded that they had been 'crazy a number of years ago.'[31]

Many late nineteenth century physicians accepted Beard's generalization that neurasthenia was principally a disease of the 'comfortable classes.' Like Beard, their patients were probably drawn largely from the business and professional classes in large cities. Those with diverse clienteles reached other conclusions. In 1869, the year Beard published his first article on the subject, a superintendent in Michigan independently discovered neurasthenia—and so labeled it—in the hardworking farm women near his hospital. To his surprise, Weir Mitchell diagnosed it in such unlikely victims as working-class male clinic patients. By the early years of the twentieth century, neurasthenia had become the most frequent diagnosis of the working-class patients who attended the neurological outpatient clinics at Boston City and Massachusetts General Hospitals. The deficient energy syndrome could be applied to the most varied individuals, and was not just a euphemism for serious mental illness in middle-class patients.[32]

It would appear that age and marital status had more to do with the disease, or at least with the diagnosis, than either class or sex. Many neurasthenic patients were young and single. In one study of 333 neurasthenics, two-thirds were between the ages of 20 and 40, with the incidence highest among those 20 to 30 and the average age 33.3. Almost one-third of the women and over two-fifths of the men were single, a figure no

29. *The letters of Virginia Woolf. Volume I: 1888–1912*, eds. Nigel Nicolson and Joanne Trautmann (New York and London, 1975), pp. 141–142.

30. The classic work on the relationship between social class and the diagnosis and treatment of psychiatric illness is August B. Hollingshead and Frederick C. Redlich, *Social class and mental illness: a community study* (New York, 1958). Gerald N. Grob discusses the ways class, race, and ethnicity influenced treatment in mental hospitals. See *Mental institutions in America: social policy to 1875* (New York, 1973), esp. pp. 221–256.

31. Edward C. Mann, 'A plea for lunacy reform,' *Medico-legal J.*, 1884, *1*, 159; discussion of William A. Hammond, 'The non-asylum treatment of the insane,' *Trans. med. Soc. St. N.Y.* (1879), p. 297.

32. E. H. van Deusen, 'Observations on a form of nervous prostration (neurasthenia), culminating in insanity,' *Am. J. Insan.*, 1869, *25*, 445–461; S. Weir Mitchell, 'Clinical lecture on nervousness in the male,' *Med. News Libr.*, 1877, *35*, 177–184. See also Cecil MacCoy, 'Some observations on the treatment of neurasthenia at the dispensary clinic,' *Brooklyn med. J.*, 1903, *17*, 399–401; and annual reports of Boston City and Massachusetts General Hospitals.

doubt partly related to their age.[33] Observing the relationship between neurasthenia and young adulthood, Beard noted that the 'dark valley of nervous depression' often disappeared between the ages of twenty-five and thirty-five. Once cured, the former sufferer went on to a 'healthy and happy maturity.'[34]

Beard spoke from personal experience. Between the ages of seventeen, when he completed his preparatory course at Phillips Andover Academy, and twenty-three, when he graduated from Yale, Beard suffered from ringing in the ears, pains in the side, acute dyspepsia, nervousness, morbid fears, and 'lack of vitality.' His journal reveals a young man beset by religious and vocational indecision. Reared in an austere and religious family that rejected drinking and smoking and warned its children of the snares of worldly success, Beard chastized himself for his coldness and 'hanging back' in religious matters. Health and joy finally came with his decision to become a physician (which was equally a rejection of the ministry, the occupation of his father and two brothers). Beard entered medicine with a passionate commitment to medical and hygienic reform. By this time, too, he had begun to enjoy the worldly pleasures of champagne and Turkish tobacco, and soon after became engaged. His recovery seems to have been permanent. A minister who knew Beard in later life described him as a man who 'put courage, hope, strength into one's heart, and his atmosphere was always healthy. He did not gush with over-warmth, or freeze with over-cold.'[35]

In conjunction with other case materials, Beard's experience suggests that for many middle-class men and women neurasthenia incorporated elements of today's fashionable identity crisis. Clearly individuals reaching maturity in the second half of the nineteenth century had no monopoly on the trials of establishing a satisfactory adult identity. But cultural imperatives may have made the task particularly problematic. Intellectuals who struggled to emancipate themselves from the introspective and gloomy religious teachings of their childhood often suffered acutely from the loss of faith that accompanied Darwinism, higher criticism of the Bible, and the growing authority of Science. In a society of changing and often conflicting values, the decline of spiritual certitude intensified feelings of isolation. Educated women struggled to reconcile their desire for independence with still potent family expectations that they would live out traditional female roles. For men, longer professional training and the desire to achieve a higher standard of living necessitated later marriages; prescriptions for 'masculinity' often meant disavowing 'feminine' emotional impulses. Both men and women encountered a sexual code that demanded purity in thought as well as in deed, restraint within marriage as well as

33. Collins and Phillips (n. 25), pp. 413–422. My own research in Massachusetts General Hospital records reveals a similarly high proportion of neurasthenic patients between the ages of twenty and forty and an even higher proportion of single patients.

34. Beard, *American nervousness* (n. 2), pp. 282–284.

35. Beard's case is discussed in Barbara Sicherman, 'The paradox of prudence: mental health in the gilded age,' *J. Am. Hist.*, 1976, *62*, 890–912. The quotation from the minister appears in *Sermon by the Rev. J. L. Willard, of Westville, Connecticut at the funeral services of Elizabeth A. Beard. Together with comments upon the life and career of the late Dr. George M. Beard* (Grand Hotel, New York [1883]), p. 4 in George M. Beard Papers, Yale University Library, New Haven, Conn.

abstinence outside it. But men were sometimes also expected to be rough and ready.[36] 46

William James is a good example of a Victorian incapacitated by psychosomatic ills, mental anguish, indecision, and an inability to believe. As a young man he developed digestive and eye troubles, weakness of the back, and a 'feeling of loneliness and intellectual and moral deadness.' He feared being alone in the dark, had morbid obsessions, and for a time felt continually on the verge of committing suicide. His family considered his condition hypochondriacal, but James claimed he was 'a victim of neurasthenia, and of the sense of hollowness and unreality that goes with it.' Relief first came with his decision to believe in free will. Of the same generation as Beard, James tried to reconcile science and religion, resisted determinism in both, and struggled to find a genuine vocation. He successively tried art, natural history, medicine, and psychology and did not commit himself to philosophy, his first love, until the age of fifty-seven. It has recently been suggested that James's intense relationship with his domineering Swedenborgian father complicated this struggle, and that his illness gave him a psychic moratorium and a legitimate reason for disobeying parental wishes. His symptoms subsided following his first professional position (at thirty) and marriage (at thirty-six).[37]

If men sometimes found it difficult to choose the right profession, educated women faced a dilemma merely by wanting to have a vocation. Those who chose to defy convention as well as those who gave up their aspirations might find life equally intolerable. Jane Addams has described the years of backaches, depression, and purposelessness that followed her graduation from college. She even consulted Weir Mitchell, with little benefit. She diagnosed her problem as an inability to find a practical way to fulfill the ideals she had acquired in college and a disinclination to follow the course favored by her stepmother, including marriage and the dilettantish pursuit of culture. For Jane Addams and, she believed, for others like her, the decision to found a social settlement and create a new kind of community proved immensely liberating.[38] Charlotte Perkins Gilman experienced a more severe breakdown following her marriage and birth of a daughter. Her vague but exalted hopes of helping mankind seemed threatened by these events, so inescapable a part of most women's lives. In her case, Mitchell's advice compounded her difficulties and reduced her to playing with a rag doll on the floor. Her symptoms finally abated when she separated from her husband and began to pursue an independent course as a writer and lecturer.[39] 47

36. In addition to works discussed in n. 22 and n. 24, see Hale, *Freud and the Americans* (n. 10), pp. 24–46; and Charles E. Rosenberg, 'Sexuality, class and role in 19th-century America,' *Am. Q.*, 1973, *25*, 131–153.

37. Cushing Strout, 'William James and the twice-born sick soul,' in Dankwart A. Rustow, ed., *Philosophers and kings: studies in leadership* (New York, 1970), pp. 491–511; Erik H. Erikson, *Identity: youth and crisis* (New York, 1968), pp. 19–22, 150–155. Compare the similar case of G. Stanley Hall, the psychologist who later formulated the modern concept of adolescence, in Dorothy Ross, *G. Stanley Hall: the psychologist as prophet* (Chicago, 1972), pp. 309–340.

38. Jane Addams, *Twenty years at Hull-House. With autobiographical notes* (New York, 1911), pp. 64–88, 113–127. Cf. Allen F. Davis, *American heroine: the life and legend of Jane Addams* (New York, 1973), pp. 24–37.

39. Charlotte Perkins Gilman, *The living of Charlotte Perkins Gilman: an autobiography* (New York, 1975; originally published in 1935), pp. 78–106. See also her short story about the same events, 'The yellow wall-paper,' reprinted in Gail Parker, ed., *The oven birds: American women on womanhood, 1820–1920* (Garden City, 1972), pp. 317–334.

Because evidence about sexual behavior is harder to come by than information about vocational and religious conflict, it is difficult to assess its role in neurasthenia. Beard for one was acutely sensitive to the difficulties that contemporary sexual mores posed for his patients. It is possible that he had personally experienced such stress, for shortly after his engagement he asked God's blessing for his spiritual interests. He went on to declare: 'The most solemn and weighty of any experience with the exception of religious experience is the love life of a man.'[40]

In his posthumously published *Sexual Neurasthenia*, Beard insisted that sexual complaints had been vastly underestimated as a cause of nervousness, in men especially. He believed that sexual desire, like neurasthenia itself, plagued the sensitive men and women of the middle classes more than those of phlegmatic temperament who lived and worked outdoors. Masturbation he viewed as a nearly universal practice, for women as well as men, and did not think it invariably harmful if not begun too early in life or indulged in too often. As for other sexual difficulties, such as impotence and nocturnal emissions, Beard advised his patients not to worry about them: 'Live generously. Work hard. . . . As soon as convenient, get married, but at all events keep diligently at work.' Most important, he offered reassurance: '*I have known personally of very many young men who have passed through difficulties of the kind and are now well and the fathers of healthy families.*' Perhaps it was advice of this sort that prompted the comment, by a minister-friend at the memorial service for Beard, that: 'Many joy children were born of his kindly words and kindly deeds, while of sad ones there were none to moan.'[41]

The self-study of a neurasthenic patient, herself a specialist in mental and nervous disorders, suggests some of the conflicts that must have been central to many neurasthenic individuals, particularly those who resigned themselves to lives of partial nervous invalidism. Written in 1910 with pre-Freudian innocence, *The Autobiography of a Neurasthene* by Margaret Cleaves is a classic study of unresolved dependency needs that were at least partly met by her long-term relationship with her physician.[42]

Dr. Cleaves describes herself as hardworking to a fault, so completely devoted to her patients that 'they are my family and my friends. I have none other, and science is my mistress.' Overwork led first to a 'sprained brain and later to a 'complete crash,' accompanied by the sensation of hot blood pouring into her ears, an inability to concentrate or to 'bear a touch heavier than the brush of a butterfly's wing,' depression, copious weeping, fears of going insane, and other typical neurasthenic symptoms. Learning to live within the margin of her slender nervous endowment proved difficult, but essential, for she suffered 'utter lassitude of body,' 'weariness of mind,' and a 'sense of physiologic sin' from the slightest indiscretion, even an excess in diet. Social events proved particularly tiring, for she could not control them. Always she fought against her illness, which she took pains to distinguish from hysteria.

40. George M. Beard, 'Private Journal,' p. 217, Beard Papers (n. 35).

41. Beard, *Sexual neurasthenia* (n. 5), pp. 102–103, 122, 119–120; Willard (n. 35), p. 4.

42. Margaret A. Cleaves, *An autobiography of a neurasthene. As told by one of them and recorded by Margaret A. Cleaves* (Boston, 1910). Although presented as an as-told-to autobiography, this work is probably the story of Margaret Cleaves herself. Insofar as they are known, the facts of Margaret Cleaves's family background, early life, and professional career closely resemble those of the subject of the autobiography.

Between acute attacks she carried on her work. But even as she took pride in her ability to care for her patients, it is clear that she resented her responsibilities, particularly because there 'was no one to look after [her] needs.' She attributed her illness (which she considered constitutional) to feeding insufficiencies in infancy, aggravated by the death of her father when she was fourteen. Thus she notes that the too early arrival of a younger sister interfered with her babyhood by depriving her of milk. Upbraided throughout her life for her failure to eat, she attributed her later preference for milk products to this early deprivation. When she was acutely ill, milk was often her only source of nourishment. She thought of her father, a physician after whom she seems to have modeled herself, as her best friend and, following the death of the family's only son, tried to become her 'father's boy.' She must bitterly have resented his death, even as it devastated her, for she insisted that he would have protected her against the stresses and strains she encountered in later life. For years she had a recurrent dream of being a child cradled in her father's arms. The dream disappeared after her most severe breakdown, and she missed the comfort it had afforded her.

The patient was fortunate enough to find a sympathetic physician who cared for her for many years, often visiting her daily during her acute attacks. If he did not completely understand her condition—at least until he had himself suffered a neurasthenic breakdown—he was compassionate: 'I told him all this tale of woe, of my past life . . . [and] laid bare my soul to my professional confessor.' She depended on her physician greatly, and in times of special need on a trained nurse as well. When others responded to her needs, she reported: 'It seemed worthwhile to have suffered for the sake of all this comfort.' Her course of treatment—rest, limitation of activities, tonics, massage—was designed to replenish her meager supply of 'neuronic energy.' But given this patient's personality and her isolated life in New York City, the close relationship with her physician-confessor, by providing a substitute for other forms of intimacy, was obviously the crucial element.

The patient's struggles with her propensity toward invalidism were familiar enough to therapists, who insisted that each case required individualized treatment. Prescribing rest for one patient might be restorative, while for another with similar symptoms, it could be completely wrong. Clinicians thus recognized that the relationship between doctor and patient was often the most potent agency in effecting a cure. Given contemporary insistence that disease was an entirely objective phenomenon, they could not pursue such insights very far. Beard, for example, outraged fellow members of the American Neurological Association when he reported a series of experiments with 'definite expectation'—what a later generation called suggestion—in which he cured patients of rheumatism and neuralgic sleeplessness by prescribing placebos. One colleague denied the existence of mental therapeutics entirely, a second considered it more dangerous than handling the most powerful drugs, while still another claimed that doctors had known about royal touch cures for centuries, but before practicing such deceits should 'give up our medicines and enter a convent.'[43]

43. 'American Neurological Association,' *J. nerv. ment. Dis.*, 1876, *3*, 429–437.

50 The therapeutic guidelines of S. Weir Mitchell, member of Philadelphia's upper class and a popular novelist, proved less controversial. Mitchell first tried out the rest cure on Civil War soldiers suffering from acute exhaustion brought on by marching. He did not repeat it until 1874 when, despairing of any other treatment, he ordered an exhausted invalid to bed. He carried the principle of rest to what he later admitted was 'an almost absurd extreme.' The patient—a ninety-five-pound invalid who had tried every available cure—was fed and washed by others, forbidden to read. use her hands, or talk. At first a maid even turned her when she wished to move. Mitchell subsequently systematized the treatment to include total isolation of the patient from the family, a trained nurse, a carefully regulated diet (often limited initially to milk), tonics for the nerves, rest, and massage. The treatment's success could be explained in the somatic terms so appealing to this generation, and Mitchell emphasized the benefits of building up the patient's fat and blood by this method.[44]

But Mitchell also appreciated the moral aspects of the rest cure. The separation of patients from the moral poison of their accustomed environments, especially the attentions of too solicitous relatives, was often an essential condition for recovery. Isolation also enhanced the physician's influence over the patient, which Mitchell considered of supreme importance: 'The man who can insure belief in his opinions and obedience to his decrees secures very often most brilliant and sometimes easy success.' Confidence in the physician produced 'that calmness of trustful belief which alone will secure the rest of mind we want.' At first he found it surprising 'that we ever get from any human being such childlike obedience. Yet we do get it, even from men.'[45]

The similarity between the rest cure—with its bland diet, lack of external stimuli, and complete dependence on the physician—and infancy is apparent. Indeed, the enforced regression may well account for its success. The rest cure permitted individuals who ordinarily survived only by desperate effort to remove themselves from daily life and to submit for a time to the attentions of a charismatic physician like Mitchell. The physician in turn imposed reciprocal obligations. During convalescence, Mitchell lectured patients on the value of self-control and used his by then considerable influence to exact a 'promise to fight every desire to cry, or
51 twitch, or grow excited.'[46] The paternalism of this therapy may help to explain why Charlotte Perkins Gilman and Jane Addams—women who temperamentally rejected the subordinate role assigned to their sex—were among Mitchell's most conspicuous failures.

Clearly there was often a therapeutic fit between physicians like Beard and Mitchell who had mastered their own nervous crises and their neurasthenic patients, many of whom—like the doctors themselves—were from the middle and upper classes. But class was not the sole determinant of a

44. S. Weir Mitchell, 'The evolution of the rest treatment,' *J. nerv. ment. Dis.*, 1904, *31*, 368–372; Mitchell, *Rest in nervous disease* (n. 22), esp. pp. 94–96; S. Weir Mitchell, *Fat and blood: an essay on the treatment of certain forms of neurasthenia and hysteria*, 5th ed. (Philadelphia, 1888); and S. Weir Mitchell, *Lectures on diseases of the nervous system, especially in women*, 2nd ed. rev. (Philadelphia, 1885), esp. pp. 265–283.

45. Mitchell, *Fat and blood* (n. 44), pp. 40–42, 47–49, 55–62; Mitchell, *Rest in nervous disease* (n. 22), p. 84.

46. Mitchell, *Rest in nervous disease*, p. 94; Mitchell, *Diseases of the nervous system* (n. 44), p. 38. For a discussion of regression as a psychoanalytic technique, see Karl Menninger, *Theory of psychoanalytic technique* (New York, 1958), esp. pp. 43–76.

physician's response to patients. A. A. Brill, one of Freud's earliest American disciples, described the rapt attention with which as a medical student he attended the clinic on neurasthenia: 'In contrast to the psychotics, the neurasthenics inspired one with a sympathetic interest; they spoke feelingly about their symptoms and apparently wanted to be helped.'[47] What more could a young physician, eager to be of service, ask of a patient?

The perception of pain, the significance attached to symptoms, even the symptoms themselves vary greatly, depending not only on individual personality needs but on class and ethnic patterns. Today middle-class individuals are more willing to consult psychiatrists and to discuss emotional problems. And, despite the somatic orientation of medicine in the late nineteenth century, articulate individuals like William James often considered their illness in the context of their search for a meaningful personal identity.[48]

Although working-class men and women may lack a vocabulary of psychological distress, they are by no means immune from the effects of emotional stress; indeed, today they tend to be more subject to psychophysiological illnesses than members of other social groups. Recent clinical and sociological studies also indicate that visits to physicians for minor symptoms are often prompted by such needs as a desire for reassurance, for a close relationship with someone, for sanction to escape onerous duties or conflicts—needs which are often intensified during periods of severe psychological stress.[49]

It is likely that also in the late nineteenth century many of the conflicts of less articulate individuals manifested themselves in the myriad of physical symptoms that constitute the central clinical picture of neurasthenia. Not only were working-class patients treated for neurasthenia in outpatient clinics, but they sometimes entered Massachusetts General Hospital (then primarily an institution for charity patients) for extended periods. Nor were physicians unsympathetic to such patients. Hospital case records were not devoid of moral judgments, but the individuals described as 'stupid,' 'lacking gumption,' or 'intent on deception' were more often diagnosed as hysterical than as neurasthenic. Doctors carefully recorded the complaints of individuals who were run down or 'unable to keep about' after overworking or an imperfect recovery from an illness. Patients might complain of sinking feelings about the heart, an inability to bear the weight of their own hands, seeing stars, sensations of smothering, and 'bearing down' pains. Their physical symptoms included palpitations and shortness of breath and a rich variety of gastric complaints (anorexia, vomiting, belching, constipation). The interpretation of these symptoms was entirely somatic. An occasional entry reported a recent death in the family, but attributed the breakdown to excessive exposure to cold or rain at the funeral rather than to the psychological effects of the loss.[50]

47. Brill, 'Diagnostic errors in neurasthenia,' (n. 8), p. 122.

48. Cf. Dewitt L. Crandell and Bruce P. Dohrenwend, 'Some relations among psychiatric symptoms, organic illness, and social class,' *Am. J. Psychiat.*, 1967, *123*, 1527–1538; and Mechanic (n. 21), pp. 1132–1139. See also William James's letters to James Jackson Putnam in the James Jackson Putnam Papers, at The Francis A. Countway Library of Medicine, Boston.

49. Cf. John D. Stoeckle, Irving K. Zola, and Gerald E. Davidson, 'The quantity and significance of psychological distress in medical patients: some preliminary observations about the decision to seek medical aid,' *J. chron. Dis.*, 1964, *17*, 959–970.

50. The material in the next two paragraphs is drawn from Massachusetts General Hospital, Medical Records (East and West Wings), 1880–1900. See, for example, Vol. 381 (1885), p. 82, and Vol. 455 (1893), p. 124. For judgmental comments, see Vol. 349 (1880), p. 198; Vol. 381 (1885), p. 250. Charles Rosenberg informs me that he found similar material on working-class patients at Pennsylvania General Hospital.

What is most surprising is that cigarmakers, millworkers, seamstresses, and housewives received modified versions of the rest cure for weeks and even months. Like the middle-class patients seen in private practice, they received a variety of physical therapies—including tonics, bromides, cannabis, massage, and blisters over tender spots. Special diets ranged from milk, cream toast, and eggnogs to oysters, whiskey, sherry, and beer. The entry for a particularly frail woman read, 'keep her quiet and stuff with food.' The treatment seemed to work, for within three weeks the patient left the hospital much relieved, with the notation that 'rest was apparently all that she needed.' Many patients seemed to enjoy their hospital stays—one entry recorded a patient who 'seemed disposed to remain indefinitely'—and a few kept their physicians informed of their latest symptoms after discharge. Since so many of these patients were single, it is likely that their illness and hospital sojourns provided some with psychological as well as physical care that they could obtain in no other way.[51]

During its brief reign as the national disease, neurasthenia gave physicians a rationale for diagnosing and treating many types of stress. Whatever the limitations of their construct, physicians like Beard and Mitchell pioneered in developing respectable therapies for patients with problems otherwise excluded by medicine and psychiatry. Although asylum superintendents maintained that neurasthenia might lead to insanity if not treated early enough, their isolation from general medicine and restricted conception of their role gave them no way of reaching men and women before serious trouble occurred. The rest cure and related therapies provided individuals with alternatives to inaction or incarceration.

During the first two decades of the twentieth century the scope of psychiatry expanded almost beyond recognition. Physicians openly practiced psychotherapy in offices and in outpatient clinics in general and psychiatric hospitals. Some participated in prophylactic programs in schools, prisons, and industry. Most practitioners still worked in mental hospitals, but professional spokesmen insisted that psychiatry must concern itself not only with the psychoses but with 'the smallest diseases and the minutest defects of the mind' and even with the efficiency of normal individuals. The new practitioner was 'educator, preacher, sociologist' as well as asylum superintendent and dispenser of drugs.[52]

Specialists in the functional nervous disorders had pioneered in the expansion of the physician's social role. Even by diagnosing neurasthenia, they were interpreting behavioral symptoms that some found morally reprehensible (an inability to work for no apparent cause, compulsive or phobic behavior, bizarre thoughts) as signs of illness rather than wilfulness. They thus legitimized the right of individuals with such difficulties to be considered, and to consider themselves, victims of disease, and their own right as healers, to treat them.

Beard went further than most in asserting the physician's obligation to become a power in society. He not only insisted that neurasthenia be taken seriously, but urged that the categories kleptomania, inebriety, and

51. *Ibid.*, Vol. 487 (1897), p. 42. One of these letters appears in Vol. 451 (1893), p. 56. The comment about wanting to stay refers to the same patient during a second hospitalization. Cf. Vol. 457 (1894), p. 306.

52. E. E. Southard, 'Cross sections of mental hygiene, 1844, 1869, 1894,' *Am. J. Insan.*, 1919, *76*, 109; Charles L. Dana, 'The future of neurology,' *J. nerv. ment. Dis.*, 1913, *40*, 753–757.

pyromania—all safely medical—replace the traditional moralistic designations of stealing, drunkenness, and arson. A rebel against the evangelical faith of his childhood, Beard relished the substitution of physician for priest as arbiter of social and personal mores. Mitchell, noting the similarity between the physician's role and that of the priest, also thought members of his profession more fitted to probe human character: 'The priest hears the crime or folly of the hour, but to the physician are oftener told the long, sad tales of a whole life.'[53]

So much attention to a disease that could easily have been dismissed as minor also reveals a changed attitude toward health and disease. Long before the popularization of psychoanalysis, physicians interested in mental and nervous disorders proclaimed the relativity of health and illness. One superintendent declared that 'perfect health of mind is probably . . . exceptional.' And an influential lay philanthropist went so far as to claim: 'The question to be considered is, not whether such and such a person is insane,—that is, indisposed mentally: of course he is, more or less, like the rest of us,—but, *How much* out of health is he?' Many no doubt reached such conclusions on the basis of personal experience. A fictional physician drawn by Weir Mitchell—a self-portrait—noted that even 'to the most healthy nature, at times [come] inexplicable desires, moments of unreason, impulses which defy analytic research, even brief insanities.' To the extent that individuals considered such conditions mental aberrations rather than sinful thoughts, they would consult physicians rather than ministers.[54]

The relationships between symptoms and diagnosis, disease and culture, doctors and patients are inevitably complex. Any attempt to understand them historically must take account of the clinical context in which doctors and patients interact; certainly this must be the case for a disease as subjective as neurasthenia. The available clinical materials suggest that neurasthenia was a complex reality for the doctors and patients charged with interpreting puzzling mental and physical difficulties they did not fully understand. If the particular insights of late nineteenth century physicians into the psychological and psychophysiological aspects of illness disappoint us, it is not altogether certain that we have, even today, found satisfactory solutions to conditions of this sort.

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53. George M. Beard, *Our home physician: a new and popular guide to the arts of preserving health and treating disease* (New York, 1870), pp. xxi, 672; Mitchell, *Doctor and patient*, 3rd ed. (Philadelphia, 1889), p. 10; cf. p. 6.

54. Peter Bryce, 'The mind and how to preserve it,' *Trans. med. Assoc. St. Ala.*, 1880, p. 260; Philip Garrett, 'President's address,' *Proc., natn. Conf. Charities Correction*, 1885, *12*, 20; S. Weir Mitchell *Dr. North and his friends* (New York, 1900), p. 389.

Barbara Sicherman, 'The uses of a diagnosis: doctors, patients and neurasthenia', *Journal of the history of medicine*, vol. 32, 1977, pp. 33-54.

Victor Turner

1.6

A NDEMBU DOCTOR IN PRACTICE

THIS Chapter consists mainly of an extended case study of a Ndembu *chimbuki* (which I shall translate as "doctor," though "ritual specialist" or "cult-adept" would be equally appropriate) at work. I knew Ihembi well and during a period of six months attended a number of curative rites over which he presided. He was a member of the Ndembu tribe, a relatively conservative people as we have seen, an amalgam of Lunda invaders from the Katanga and autochthonous Mbwela and Lukolwe. They are matrilineal and virilocal; have a senior chief and about a dozen subchiefs, four of whom are recognized by the British administration under the Native Authority; and grow cassava as their staple crop along with finger millet, maize, sweet potatoes, and a variety of cucurbits and other relish plants. They have no cattle and only a few sheep and goats (though large areas are free from tsetse fly infestation). Until recently, hunting was the predominant male pursuit and was accompanied by a richly elaborated ritual system involving beliefs in the punitive and tutelary powers of hunter ancestors or "shades" (as I shall call them henceforward). Ndembu live in small circular villages each of which consists of a nuclear group of matrikin, one of whom is headman, surrounded by a fringe of cognatic and affinal kin. 359

These facts are relevant to the account that follows, for disease among the Ndembu must be viewed not only in a private or idiographic but also in a public or social structural framework. All societies have, of course, a functional interest in the minimization of illness, as Parsons has pointed out (Parsons 1951, 430). The Ndembu go further in positing a social explanation for illness itself. All persistent or severe sickness is believed to be caused either by the punitive action of ancestral shades or by the secret malevolence of male sorcerers or female witches. The shades punish their living kin, so the Ndembu declare, for negligence in making offerings at their village shrines, for breaches of ritual interdictions, or "because kin are not living well together." My own observations suggest that, whenever rites to propitiate or exorcise the shades—as distinct from private treatment by herbalists—are performed, there is a factor of social conflict present. The "ritual of affliction," as I have called it (1957, 292), constitutes, in fact, a phase in the complex process of corporate life and has a redressive function in interpersonal or factional disputes, many of which have long histories. Even when a person's fault has been slight, he may be "caught by the shades," the Ndembu think, as a scapegoat for his group if it is full of "grudges" (*yitela*) or "quarreling" (*ndombu*). Therapy then becomes a matter of sealing up the breaches in social relationships simultaneously with ridding the patient (*mu-* 360

* First published in *Magic, Faith and Healing*. Ari Kiev, ed. (Glencoe: Free Press, 1964). Reprinted with permission of The Free Press, copyright © 1964, The Free Press, a Division of The Macmillan Company.

yeji) of his pathological symptoms. Attributions of disease to sorcery or witchcraft are frequently made in the context of factional rivalry, especially when the factions support rival candidates for office during the old age of its incumbent, whether he be chief or village headman. All deaths are attributed to sorcery or witchcraft, but only those of structurally important individuals are singled out for special ritual attention. When minor personages die, the identities of their secret destroyers are left to speculative gossip and rumor, and no action is taken. However, in the course of lively factional struggle, the death of even an infant may precipitate accusations and counteraccusations. In villages that markedly exceed the average size of thirty men, women, and children, such accusations may precede schism—when a dissident faction leaves the parent village and builds elsewhere on the pretext that it is escaping from witchcraft, which is believed to have a limited geographical range of efficacy.

In their treatment of disease, the Ndembu, like ourselves, recognize symptoms and distinguish between diagnosis and therapy, but there the resemblance ends. Ndembu do not know of natural causes for diseases but, as we have seen, believe that either punitive shades or envious sorcerers produce them. Their diagnosticians are diviners, and their therapists are in effect masters of ceremonies.

Divination

Divination is a phase in a social process that begins with a death, illness, reproductive trouble, or misfortune at hunting (for illness is only one class of misfortune that is mystically caused). It continues through discussion in the victim's kin-group or village about the steps to be taken next, the most important of which is a journey to consult a diviner (distant diviners are believed to give more reliable diagnoses than local ones). The fourth stage is the actual consultation or séance attended by the victim's kin and often by his neighbors. This séance is followed by remedial action according to the diviner's prescription. Such action may consist of the destruction or expulsion of a sorcerer or witch; the performance of ritual by cult specialists to propitiate or exorcise specific culturally defined manifestations of shades; or the application of herbal and other "medicines" according to the diviner's advice by an herbalist or medicine man.

This book contains an account of Ndembu leechcraft (pp. 299 ff.). It is sufficient to state here that whatever may be the empirical benefits of certain treatments, the herbal medicines employed derive their efficacy, according to the Ndembu, from mystical notions, and native therapy is an intrinsic part of a whole magico-religious system.

The divinatory consultation is the central phase or episode in the total process of copying with misfortune, and it looks both backward to causation and forward to remedial measures. Since death, disease, and misfortune are, as we have noted, usually ascribed to exacerbated tensions in social relations, expressed as personal grudges charged with the mystical power of sorcery or witchcraft or as beliefs in the punitive action of ancestral shades intervening in the lives of their surviving kin, diviners try to elicit from their clients responses that give clues about the patterns of current tensions in their groups of origin. Divination therefore becomes a form of social analysis, in the course of which hidden struggles among individuals and factions are brought to light, so that they may be dealt with by traditional ritual

procedures. It is in the light of this "cybernetic" function of divination as a mechanism of social redress that we should consider its symbolism, the social composition of its consultative sessions, and its interrogation procedures (see Turner 1961, 18).

Therapeutic Rites

The curative rites are performed by a number of cult associations, each devoted to a specific manifestation of the ancestral shades. Thus a shade that manifests itself as *nkula* afflicts its living kinswoman with 362
menstrual disorders of various kinds, a shade that "comes out [of the grave] in *isoma*" causes miscarriages, and so forth. The patient in any given cult ritual is a candidate for entry into that cult and, by passing through its rites, becomes a cult adept. The particular shade that had afflicted him in the first instance, when propitiated, becomes a tutelary who confers on him health and curative powers for that particular mode of affliction. Although the tutelary shade is an adept's kinsman or kinswoman, cult membership cuts across membership of descent groups and territorial groups. Cult members make up associations of those who have suffered the same modes of affliction as the result of having been seized (perhaps "elected" would be a more appropriate term) by deceased members of the cults. Since there are many cults and since the focal symbols of each refer to basic values and beliefs shared by all Ndembu, it may be said that the total system of cults of affliction keeps alive, through constant repetition, the sentiment of tribal unity. Ndembu secular society is characterized by the weakness of its political centralization, by the high spatial mobility of its individual members and of its groups (due to shifting areas of cultivation and the emphasis on hunting), and by the tendency of villages to split and reassemble. This secular mobility (and lability) is counteracted to some extent by the embodiment of tribal values of unity in the cults of affliction.

The Ihamba *Cult*

This necessarily truncated account of Ndembu divination and cult therapy must suffice as background to Ihembi's practice. Since this doctor specialized in the *Ihamba* cult, I shall briefly outline its characteristics. In the first place, the term *ihamba* refers among the Ndembu to an upper central incisor tooth of a deceased hunter. It forms an important element in a complex of beliefs and symbolic objects associated with hunting ritual—especially with ritual associated with those hunters who employ firearms. It is believed that the two upper front incisors of a gun-hunter (*chiyang'a*) contain much of his power to kill animals. If one of these teeth is knocked out or drops out as a result of pyorrhea, the hunter must preserve it. When a gun-hunter dies, these incisors are removed. The left incisor is said to belong to "his mother's side," the right "to his father's." The teeth must be inherited by appropriate relatives who are initiated members of the gun-hunters cult (*Wuyang'a*).

An inherited *ihamba* is carried in a pouch with a long sash of white 363
or colored cloth. The pouch itself (called *mukata*) is made of white cloth. The *ihamba*, concealed beneath a long flap, is embedded in a paste of corn meal mixed with the blood of slaughtered game. Above it are inserted two cowrie shells (*mpashi*), which are known as "the eyes" (*mesu*). With these *mesu* the hunter's shade is said to "see

animals" in the bush and to confer similar powers on their owner. The inheritor takes the *mukata* pouch into the bush with him when he goes hunting. With the carrying sash are folded strips of the dead hunter's clothing. When it is not in use, it is hung up in a shrine consecrated to hunters' shades. Women are forbidden to approach this shrine closely. Should they do so inadvertently, they are believed to develop menstrual disorders or to bleed to death after their next childbirth. This prohibition derives from a basic principle of Ndembu ritual, that "the blood of huntsmanship" (*mashi aWubinda,* from *Wubinda,* which stands for "generic huntsmanship") must not be brought into contact with "the blood of motherhood" (*mashi amama*) or the "blood of procreation" (*mashi alusemu*). For example, when a hunter's wife is about to give birth he must remove all his hunting gear from his hut and its vicinity, lest it lose its efficacy. Behind this principle lies the notion that, for a child to be born, the maternal blood must coagulate around the fetus. Hunters shed blood and cause it to gush and flow. Again, women give life, while hunters take it. The two functions are antithetical.

It is necessary to distinguish between two ritual usages in connection with *mahamba* (the plural of *ihamba*). An *ihamba* may be inherited by a renowned hunter and then be used as a charm or amulet to bring him good fortune in the chase. On the other hand, some *mahamba* are believed to afflict the living by burying themselves in their bodies and causing them severe pains. In such cases the afflicting *mahamba* are believed to be of two kinds: some are from the corpses of hunters whose incisor teeth were lost before burial; others are "escapees" from *mukata* pouches or from calabash containers in which they had been placed after extraction by *Ihamba* doctors. The *Ihamba* cult consists of male adepts, who must be initiated hunters of the gun-hunters' cult, and the purpose of the rites they perform is to extract *mahamba* from the bodies of persons afflicted by hunter shades. The *mahamba* are said to be the incisors of the afflicting shades. To remove an *ihamba,* the senior adept or "doctor" makes an incision on any part of the patient's body and applies to the cut a

cupping horn (usually a goat's horn) from which the tip has been removed. After the horn (*kasumu*) has been sucked, it is plugged with beeswax. The doctor's intention is to "catch" the *ihamba,* which is believed to "wander about" subcutaneously.

What are the symptoms of *ihamba* affliction? Here are some of my informants' comments. Nyamuvwila, the aged wife of a village headman, said that she had been "eaten" (*ku-dya*) in the chest, neck, and shoulders by an *ihamba* that had "fallen" into her body. The *ihamba* came from her uterine brother, a hunter whose *ihamba* tooth had not been removed before burial. After his death, "it wandered about and went after meat." Another woman from the same village had "become sick" (*wakata*) "in the back," because an *ihamba* had "started to bite" her. My best informant on ritual matters, Muchona, in describing to me the circumstances surrounding a particular case of *ihamba* affliction, said, "Chain [the patient] comes from the village of Makumela, his mother's village. That is also where the shade of *ihamba* [*mukishi wehamba*] has come from. His grandfather is the shade, the mother's brother of his mother. He is the one who has fallen on his grandson to obtain blood from him. He has come that he may be known [remembered]. When they have sucked him out [as an *ihamba*], they

should offer him the blood of an animal [smear the *ihamba* with the blood of a kill after the hunt], so that they may stay well [live in health, mutual accord, and prosperity], and that the patient, who was sick, may also stay well. They pray to him that they may put him in a pouch of cloth and sing and dance with drums for him [at a gun hunters' rite]." According to other informants, an *ihamba* can be seen moving about under the patient's skin (muscular spasms, perhaps) "like the movements of an insect (*nyisesa yakabubu*)." It is said to "catch him with its teeth," the plural form *mazewu,* "teeth," being sometimes used for the single tooth that has been extracted. It "flies in the air" to reach its victim, whose blood it demands.

Its attributes suggest that the *ihamba* epitomizes the aggressive power of the hunter. It also represents the harshness of internalized norms, since an *ihamba* only "bites" when there has been transgression of moral or customary rules. At the unconscious level of meaning, behavior associated with *ihamba*—"eating," "biting," "going after meat"—and its removal by "sucking" and anointing with blood suggests that *ihamba* beliefs may be connected with the orally aggressive stage of infantile development.

An interesting feature of the *Ihamba* cult is its comparatively recent introduction into Ndembu territory. It has been grafted onto the rites of the long-established hunters' cult and shares much of its symbolism. This cult, with many tribal variations, has a wide geographical range among the West Central and Central Bantu peoples. Certain linguistic features indicate that *Ihamba* was borrowed by Ndembu from the Luvale and Chokwe peoples in Angola. It has certainly spread rapidly in the postwar period. One major difference from the hunters' cult proper is that, while the *ihamba* is almost invariably a manifestation of a male shade, its victims include at least as many women as men, although women may not become *Ihamba* doctors since membership in the curative cult is restricted to initiated hunters.

Two further features of *Ihamba* should be noted. The cult has spread precisely where hunting has been on the decline because of the increasing scarcity of game and the increase of population. Apparently, by frequently performing *Ihamba,* the Ndembu maintain in fantasy the values, symbols, and trappings of a highly ritualized activity that is rapidly losing its economic importance. The penetration of the modern cash economy into the pores of Ndembu social organization, together with an accelerating rate of labor migration to the industrial towns of the Copperbelt in Zambia, have created new economic needs and new tensions in traditional social relationships, while new relationships based on trade and contract are insidiously undermining corporate bonds. *Ihamba* may, therefore, be seen as part of a rear-guard action whereby Ndembu culture is fighting against change. In the projective systems of modern villagers, the shades of hunters may well represent, at one level of social experience, the guilts and anxieties of those who are compelled by changing conditions to act in contravention of traditional standards.

Another sign that *Ihamba* is a response to cultural change is reflected in the fact that the rite contains its own built-in phase of divination. The traditional diviner, it is true, may well diagnose a person's illness as due to an *ihamba* affliction, but it is not strictly necessary. It is enough for someone to dream of a hunter shade when he is ill and then to consult an *Ihamba* doctor to have the rite

performed for him. Furthermore, when the rite begins, the doctor divines by peering into medicated water in an old meal mortar, in which he claims to be able to see the "shadow-soul" (*mwevulu*) of the afflicting hunter. By asking questions of the patient and his kin, he declares, he can then identify the particular relative who has "come out in *ihamba*" (*wunedikili mwihamba*). He may also claim to detect
366 sorcerers and witches who have seized the opportunity of the patient's *ihamba*-caused debility to attack him. As we shall see, part of the process of removing the *ihamba* consists in the doctor's summoning kin of the patient to come before the improvised hunters' shrine (identical with that used in the hunters' cult) and inducing them to confess any grudges (*yitela*) and hard feelings they may nourish against the patient. The tooth will "not allow itself to be caught," he will assert, until every ill-wisher in the village or kin-group has "made his liver white" (or, as we would say, purified his intentions) toward the patient. The patient, too, must acknowledge his own grudges against his fellow villagers if he is to be rid of the "bite" of *ihamba*. It is interesting how the symbolism of oral aggression pervades our own speech in the context of small-group behavior: "envy's poisonous tooth," "the bite of malice," "the mordant utterance," "back-biting," "the sting of jealousy," "being eaten up with jealousy," and so forth. There is a parallel here, too, between the Ndembu notion of the hunters' tooth preying on the living and our saying that someone is "hounded by guilt" or "a prey to remorse."

Ihamba (as well as other Ndembu rites that involve the sucking of objects, including bones, graveyard soil, and stones, from the bodies of patients) is a variation on that widespread theme of primitive medicine that Erwin Ackerknecht has called "the stone of the medicine man" (1942, 503–521). He quotes im Thurn that, for the Indians of Guiana at least, the foreign substance "is often if not always regarded not as simply a natural body but as the materialized form of a hostile spirit." Given this premise, im Thurn goes on to argue, "the procedure is perfectly sincere and in its way rational. An invisible force is dealt with visibly by means that are meant and understood to be symbolic." Nevertheless, I can confirm that the Ndembu—except for the doctors—do believe that the *ihamba* tooth of a specific hunter relative is actually extracted from the patient's body. The doctor confines skepticism to the issue of whether the tooth is that of a human being or of an animal (like a monkey or a pig). He leaves untouched the question that sleight of hand may have been used in making the "extraction." The doctors must themselves be aware of their own trickery, although I never managed to persuade one to admit that he had used deception. My own guess is that doctors sincerely believe that their therapy—which includes the use of washing and drinking medicines ("lotions" and "potions") and of cupping techniques—has a positive efficacy and may also believe that in some mystical fashion they actually do with-
367 draw an influence inimical to the patient's welfare from his person. At any rate, they are well aware of the benefits of their procedures for group relationships, and they go to endless trouble to make sure that they have brought into the open the main sources of latent hostility in group life.

Therapeutic Procedure

Before getting down to specific cases, I shall briefly describe the

manipulative techniques of an *Ihamba* doctor. We must consider, for example, whether or not there may be certain unintended or inadvertent benign consequences for health from Ndembu practices that are overtly determined by magico-religious ideas without empirical foundation. It seems possible that the bloodletting that accompanies the doctor's efforts to "capture" the elusive tooth may have beneficial effects on some patients. There may also be in the procedure something analogous to modern shock treatment—treatment that, as Lessa and Vogt have suggested, "stimulates an internal reaction capable of returning the organism to health" (1958, 343).

It is more difficult to establish whether or not the use of "medicines" confers any physical benefit. The medicines employed are the leaves, bark scrapings, and roots of forest trees and bushes. The principles underlying their use are not derived from experiment but form part of a magical system, as is clear from a listing of the properties attributed to them by informants. I have collected a considerable body of this kind of exegetical material not only about *Ihamba* medicines but also about many other kinds of rite, and in almost every case, notions of sympathetic or contagious magic control the selection of vegetable or animal medicines.

LIST OF IHAMBA MEDICINES

NDEMBU TERM	BOTANICAL NAME	INDIGENOUS EXPLANATION FOR USE
1. *Musoli*	*Vangueriopsis lanciflora*	a. It comes from *ku-solola,* "to make visible" or "reveal." b. It has fruit that are eaten by *duiker* and other woodland game during the early rains. Ndembu say that the name is connected with the power of the tree to draw forth animals from their hiding places in the bush and make them visible to the hunter. What is made visible is good, what is concealed is often bad. *Musoli* medicine is given to barren women "to make children visible." c. It is the senior (*mukulumpi*) medicine of *Ihamba,* the first to be collected. The doctor addresses the *musoli* tree and says: "You *musoli* tree of animals (of huntsmanship), come quickly, may this *ihamba* come out quickly, so that the patient may get well soon." He then guesses where the tap root lies and hoes up the ground. If he finds it at once, it augurs well that the tooth will be found quickly. d. *Musoli* means "to speak openly or publicly." It refers to the confession of grudges described earlier.

LIST OF IHAMBA MEDICINES (*Continued*)

NDEMBU TERM	BOTANICAL NAME	INDIGENOUS EXPLANATION FOR USE
2. *Museng'u*	*Ochna pulchra*	a. The name comes from *ku-seng'uka,* "to multiply." b. It has many small black fruits; it stands for "many animals" or "many children."
3. *Mututam-bululu*	*Xylopia adoratissima*	The name comes from *ambululu,* a small bee that makes nests in the ground or in old termite mounds. Such bees come in swarms to the *mututambululu* tree to gather its nectar. In the same way, many people will come to the drum (rite) at which it is used, and many animals will come near a hunter who has been washed with its medicine.
4. *Mufung'u*	*Anisophyllea boehmii*	From *ku-fung'a,* "to gather together a herd of animals."
5. *Mutata*	*Securidaca longipeduncu-lata*	This word means "to heat huntsmanship" (*Ku-tatisha Wubinda*).
6. *Muneku*	*Randia kuhniana*	It comes from *ku-nekama,* "to sink down," which means that a *mufu* or "zombie" raised by a sorcerer's curse must "change its mind" (*ku-nekuka*) about afflicting the patient and sink down into the grave again. It will be recalled that the grudges of the living must be confessed during *Ihamba* because the Ndembu believe that protracted grudges animate the mystical powers of sorcery and witchcraft if not brought into the open. In any case, sorcerers and witches and their familiars are always likely to be present in large assemblies of people or so the Ndembu think.

Other medicines employed in *Ihamba* have similar characteristics. They represent aspects of huntsmanship or protect the patient and the congregation from sorcery and witchcraft. Many of the medicines are borrowed directly from the hunters' cult rites and appear to represent *inter alia* the afflicting hunters' shades. At any rate, in other rites of affliction, the pieces of medicine leaves adhering to the patient's skin after he or she has been splashed by a leaf-broom are said to "stand for the shade," in that each represents a cluster of values associated with the cult of hunters' shades, and, in a sense, to identify the patient with
370 that shade. Other antisorcery medicines in *Ihamba* include a root dug up from under a path leading into the village. This root is used

because Ndembu believe that sorcerers conceal destructive medicines beside or beneath paths to injure or slay their personal enemies. The root medicine "makes known" the sorcery and renders it innocuous. The doctor thus signifies that he has exposed the hidden sorcerers and can if necessary counter their malignant magic.

The main point to note in connection with these medicines (which are pounded by the doctor and his assistants in an old meal-mortar, soaked in water, and then both splashed on the patient's body and given to him to drink) is that they are ostensibly used because, through analogy, they confer on the patient certain powers and qualities conducive to strength, good luck, and health. The semantic links of analogy may derive from the name of the object used (by a species of serious "punning") from its natural properties, as they are conceived by the Ndembu, or from both. But it is doubtful that the medicines have any pharmaceutical value at all; it is sufficient that they are not toxic.

Ihembi, the Ihamba *Doctor*

This brief account of the cultural structure of *Ihamba* suggests that whatever efficacy the rite possesses—and it does have ameliorative effects on patients, as I can testify after witnessing more than a dozen performances, some of them in villages I knew really well—resides in the degree of skill wielded by the doctor in each instance of its performance. It is hardly likely to be attributable to the bloodletting and the application of medicines. We must therefore examine the form that *Ihamba* ritual takes in the light of what Radcliffe-Brown has called "the actually existing network of social relations." I propose therefore to give a few words about the personality of one *Ihamba* doctor, Ihembi, and then to describe his practice of his craft in two concrete situations.

Ihembi was a man about seventy years old, white-haired, dignified, but with a smile of singular sweetness and charm. He had the throaty voice characteristic of the Ndembu hunter, but he put it to lucid and eloquent use. I first met him at the court of a "progressive" subchief, Ikelenge, when I was collecting from the chief and his councilors the official history of his chiefdom and the royal genealogy. There was a full muster of elders from the chief's area present, and they were encouraged to contribute to the discussion. Among the most vocifer-

17. *Wubwang'u* ("Twin-Ceremony") adepts relax after "cutting medicines." My best informant, Muchona, puffs at a cigarette in the top right-hand corner.

18. *Ihamba* doctors collect medicines from trees in the bush. One plays a friction-bar, while the others sing hunting songs to "please the *Ihamba*" shade-manifestation.

ous was Ihembi, who tended to raise objections to the chief's narrative at crucial points. I found out afterward that Ihembi belonged to a branch of the royal lineage that had formerly supplied chiefs to the realm but had been permanently excluded from the succession several generations before after a bitter and unsuccessful dispute with another branch over the incumbency of the chieftainship. In compensation, the victors had given the defeated branch, that of Matembu, a ritual office. The members of Matembu resided in a single large village, several miles from the capital, and their headman performed important ritual functions in the installation of each new Ikelenge chief, at chiefs' funerals, and in periodically purifying the royal insignia. Ihembi thus belonged to a social group with ritual status that had nevertheless a permanently "marginal" or "outsider" quality in political terms. Within the Matembu matrilineage, Ihembi had further "dispossessed" characteristics. Although he came from a senior branch of that lineage and was chronologically senior to its headman, he did not hold political office—probably because in his youth he had migrated to another Lunda subtribe, that of Shinde in Balovale District, many miles to the south of Mwinilunga District, where he had married and raised a family. There he had also practiced as a diviner. More important for this analysis, he had become initiated into the hunters' cult and had later learned the medicines and techniques of *Ihamba,* allegedly from the Luvale people who live intermingled with the Lunda in Balovale District. At a comparatively old age he had returned to the Ikelenge chiefdom, where he found the headmanship of Matembu already occupied. He did not fall into apathy but applied himself vigorously to his practice as an *Ihamba* doctor and earned quite a substantial income, for people were prepared to pay ten shillings or even a pound for an "extraction." Chief Ikelenge, who paid careful heed to the views of the Christian missionaries in his area, on more than one occasion fined Ihembi for fraudulently exploit-

ing the people. Nevertheless, Ihembi managed to carry on his practice and enjoyed a wide reputation. In many ways, he was typical of Ndembu doctors: capable, charismatic, authoritative, but excluded from secular office for a variety of reasons, some structural, some personal. He was the typical "outsider" who achieves status in the ritual realm in compensation for his exclusion from authority in the political realm.

It was not long before Ihembi and I were on terms of friendship that soon developed into the "joking relationship" between "grand-

19. An *Ihamba* "doctor," before performing ritual, divines into the mystical cause of his patient's affliction by gazing into the surface of medicated water in a meal mortar. Note the forked *chishing'a* shrine planted to a hunter's spirit.

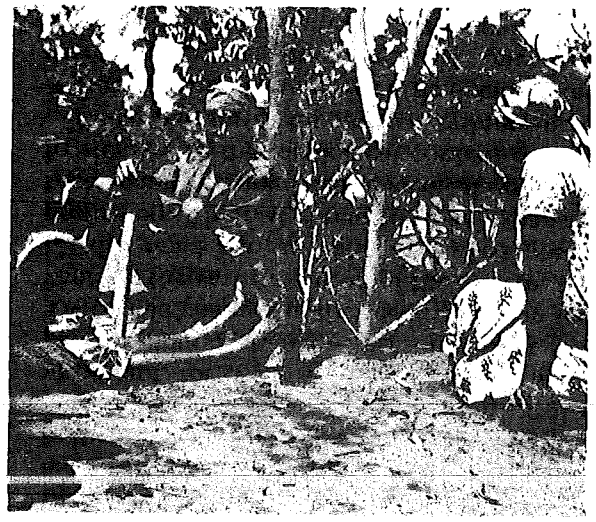
father and grandson." This friendship enabled us to speak very 372
frankly to one another and to perform mutual services. I gave him gifts from time to time, and he allowed me to attend his *Ihamba* rites and explained much of their symbolism for my benefit. In this short study, I can do no more than discuss briefly two performances. They were held for the same patient and formed part of a series of seven rites performed for him, of which I was fortunate to observe three in close detail. Three of the seven were *Ihamba* rites, two belonged to the hunters' generic cult of *Wubinda* (since the patient, though not a gun-hunter, trapped and snared antelope), one was the antisorcery rite called *Kaneng'a* and one was a recently introduced rite called *Tukuka* in which the patient is believed to be possessed by the spirits of live Europeans or of alien tribesmen. The large number of these rites, all performed within a few months, indicates that the patient was seriously disturbed. Furthermore, as I have argued, it indicates that there was serious disturbance in his network of social relations.

Ihembi and the Case of Kamahasanyi

It is at this point unavoidable that I should deploy the divinatory

apparatus of the social anthropologist: the genealogy, the hut plan, the village census data, and the condensed life history. For the events I shall discuss fall within a social field with many dimensions, several of which must be exhibited and scrutinized if we are to make any sense at all of the observed behavior and the monologues (the prayers and invocations) and dialogues of the participants. I may say, too, that, in an intuitive or pragmatic fashion, the information and even analysis I shall submit were fully mastered by Ihembi, whose business it was to study social relationships in order to diagnose the incidence and pattern of tensions and to attempt to reduce them in his handling of the rites. We have noted earlier how *Ihamba* contains its own built-in system of divination. What I have written elsewhere of the divinatory process among the Ndembu holds true, therefore, a fortiori for the *Ihamba* doctor in his divining capacity. I wrote (1961, 18) that

> the diviner clearly knows that he is investigating within a social context of a particular type. He first establishes his clients' locale—the Senior Chief's area, then the subchief's, then the vicinage (the cluster of neighboring villages), and finally the village of the victim. Each of these political units has its special characteristics: its factional divisions, its inter-village rivalries, its dominant personalities, its nucleated and dispersed groups of kin, all of them possessing a history of settlement or



20. An *Ihamba* "doctor," holding a friction-bar or "stridulator," decides on the next placement of the cupping horns. His patient's outstretched legs may be seen on the left, the forked hunter's sticks on the right.

migration. An experienced diviner will have already familiarized himself with the contemporary state of these political sub-systems from previous consultations and from the voluminous gossip of travelers. Next he ascertains the relationships between the victim and those who have come to consult him. He is assisted in this task by his knowledge of the categories of persons who typically compose a village: the victim's matrilineal kin, his patrilateral kin, his affines, cognates and unrelated persons. He finds out the type and nature of the victim's relationship to the headman, then focuses his attention on the headman's matrilineage and discovers into how many sub-lineages it may be segmented. By the time he has finished his interrogation, he has a complete picture of the contemporaneous structure of the village, and of the position in its relational network occupied by the victim.

These remarks refer to diviners who are consulted by clients from distant regions and who operate by the manipulation of symbolic objects, as well as by the exhaustive interrogation that accompanies it.

The clients try to trip up the diviner by feeding him false information, and it is the mark of a "true diviner" if he avoids this pitfall. The *Ihamba* doctor, however, is in the more fortunate position of operating in a village not far from his own, whose inhabitants and their interpersonal relations are known to him, and of having had full access to the patient's dreams (which induced him and his kin to call in the *Ihamba* doctor in the first place) and to the gossip and opinions of the patient's neighbors and relatives. Nevertheless, he builds up his picture of the social field and its tensions in much the same way as the specialist diviner does and acts on this knowledge in his therapeutic practice. By tactful cross-examination of the participants and by keeping his eyes and ears open, he discovers the likes and dislikes of the patient, the village headman, the members of the patient's domestic family and matrilineage, and so forth.

In the case of Kamahasanyi, which I shall describe shortly, Ihembi already knew the principal participants, and his two assistants, Mundoyi and Mukeyi, had distant patrilateral ties with the patient. What is more, before the second performance of Ihamba he spent a day and night in the patient's village, where he was able to size up the situation.

My own acquaintance with Kamahasanyi's village had been long and close, for my first camp had been in the neighborhood, and my wife and I had attended a girl's puberty ritual there. Furthermore, I had collected census and budgetary information not only in this village of Nswanamundong'u but also in many other villages of the Mukang'ala chiefdom, of which it formed a part. It was while I had been visiting Nswanamundong'u that I first became aware of Kamahasanyi's troubles. His snares had failed to catch *duiker* antelope for many weeks, and he had had the hunting rite *Mukala* performed to placate the angry shade. This shade was that of his maternal grandfather, the late chief Mukang'ala, he told me, and the same shade had "come out in *ihamba*" to afflict him "with pains in his whole body." An *Ihamba* rite was to be performed for him the day after my arrival by a Luvale doctor temporarily residing in the neighborhood. I mentioned to the villagers that I knew Ihembi well, and they immediately besought me to bring the great doctor and his assistants (who helped him with the collection of medicines and with various ritual tasks) from the Ikelenge area in my car. He could "help" the Luvale, they said, who was "only a little doctor"—they even hinted that he might tactfully take over control of the rite. They also asked me to bring to the performance a man called Samuwinu, whom they described as "the real headman" of the village. He had fled from the chiefdom at the accession of the present chief Mukang'ala Kambung'u, fearing the latter's sorcery. For Samuwinu had been a candidate for the chiefly "chair," and, indeed, the male members of the nuclear matrilineage of Nswanamundong'u belonged to a branch of the royal matrilineage of Mukang'ala chiefdom. Their village was a "royal village." The villagers told me that the shade afflicting Kamahasanyi "in *Mukala*" and "in *Ihamba*" was doing so because it was angry that a "younger man" had become headman while a member of its own generation (genealogical generation) remained alive. A member of the junior adjacent generation to Samuwinu had been appointed as headman by the villagers. The shade was incensed too, they said, because it had been slain by the sorcery of the present chief, a slaying that had been

unavenged for several years. Its wrath had been manifested in other ways. Once there had been a whirlwind that had ripped the thatch from the hut of the new headman Kachimba, and people claimed that they had seen flames leaping above it. Villagers said that they had dreamed that the late chief's shade had come to reproach them. Not only was it aggrieved that it had been ensorcelled, they alleged, but also because the British authorities had a few years previously withdrawn recognition from the Mukang'ala chieftainship, which had been merged with that of Senior Chief Kanongesha. The shade, that
375 of Mundong'u Kabong'u, blamed the people of the chiefdom and in particular those of his own village for allowing this merger to happen.

The persecution of Kamahasanyi by the late chief's shade was therefore not so much aimed at him personally as in his representative capacity. When I asked one informant why Mundong'u had not afflicted Kachimba the acting headman, he replied that the shade "wanted to shame" everyone by "catching" one of the villagers. It was not Kachimba but the village folk (*enimukala*) as a whole who had behaved irresponsibly. They should have made Samuwinu headman, and the latter should have remained in the area to represent his matrilineage fittingly. Indeed, it was Kachimba himself who begged me earnestly to bring Samuwinu to the *Ihamba* performance so that Samuwinu could invoke the shade on Kamahasanyi's behalf. The shade, he said, would listen to Samuwinu, who was his uterine brother, as well as "real headman" but might well reject his own intercession. I learned later that several villagers secretly despised Samuwinu for running away and indeed for not pressing his claim for the chieftainship with vigor while he could. As we shall see, this whole case history is pervaded by the theme of failure to undertake responsibility and failure to live up to expectation. Part of the work of a doctor is to encourage people to discharge the obligations of their status well and not seek escape from them.

While the villagers were sure that Mundong'u Kabong'u's shade was afflicting Kamahasanyi and that other misfortunes assailing them collectively at that time (like loss of crops because of wild pigs, quarrels between village sections, bad luck in hunting) could be laid at his door, it was thought highly probable that other mystical agencies were also at work. Some thought that Kamahasanyi was being bewitched by someone in the village, a line of inquiry that soon engaged Ihembi's attention and that he discussed with me. Others thought that the spirits of living Europeans were "troubling" him. Kamahasanyi himself had recently gone to Angola to consult a diviner there and had been told that his own father's shade, as well at that of Kabong'u Mundong'u, had "caught" him in *ihamba*. This diagnosis, supported by the fact that Kamahasanyi had frequently dreamed of his father's shade, opens the way for an investigation of Kamahasanyi's life history and an analysis of his character and temperament that must be postponed until our sociological analysis has been made. The point I want to make here is that, when misfortune is attributed
377 to mystical causes in Ndembu society, it is common for many sets of disturbed social relations to be scrutinized by the interested parties. The vagueness of the mystical beliefs enables them to be manipulated in relation to a great diversity of social situations. Eventually the crucial tension is isolated and dealt with.

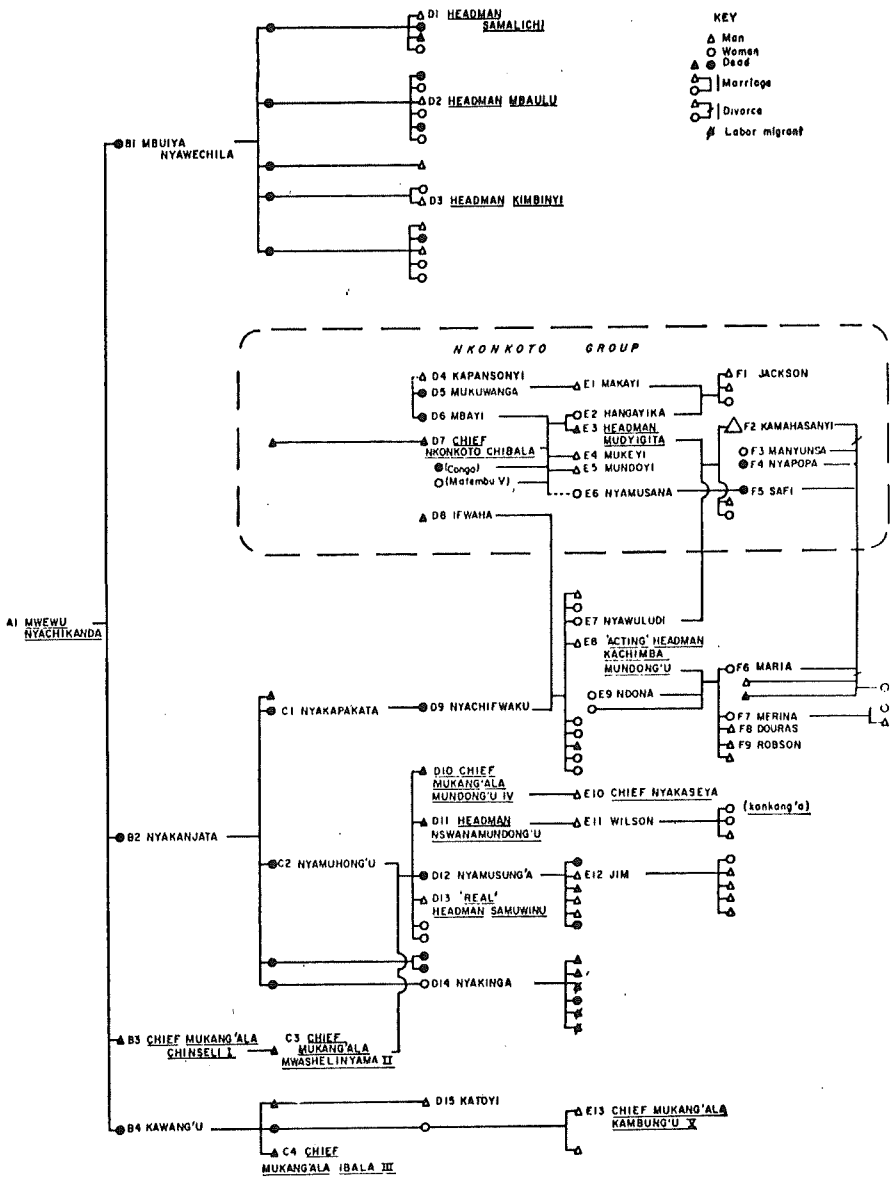


Diagram 10. Genealogy of Nswanamundong'u village

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The Performances of Ihamba

The material I have presented—and much more—was known to Ihembi, who discussed it with me and with his assistants Mundoyi and Mukeyi, who were themselves patrilaterally connected with Kamahasanyi and had grown up in the same part of the Belgian Congo. All of it was taken into account and put to therapeutic use by Ihembi, not only in the formalized situation of ritual performances, but also in the informal talks he held during his stay in Nswanamundong'u with Kamahasanyi, Maria, Jim, Kachimba, Makayi, and other interested parties. I would like, first of all, to present some of Ihembi's diagnoses of the causes of Kamahasanyi's illness and misfortune and then to consider his conduct of the *Ihamba* performances. Ihembi, like other Ndembu, believed that these causes were all of a mystical type. He was not at all like a Western psychiatrist working with the concept of mental illness.

After the first performance of *Ihamba,* in which he had, as anticipated, tactfully taken control of the proceedings from his Luvale colleague (with great delicacy he had first asked his permission to do so and later gave him a half share of his ten-shilling fee), Ihembi told me that, while it was true that Kamahasanyi had been "bitten" by the *ihamba* of his "grandfather" Mundong'u Kabong'u, other entities had also been at work. He had himself removed the late chief's incisor, and he had been correct, he said, in his view that the shade was angry because a proper headman had not been installed in Nswanamundong'u. He knew that he was correct, he went on, because the shade had caused the patient to "tremble"[1] (*ku-zakuka*) after Ihembi had "addressed" (*kwinka nyikunyi*) the proper questions to it. Later he had divined by gazing into a meal mortar full of pounded medicines and sprinkled with powdered red clay (with the generic sense of "blood") and white clay (which may mean "innocence," "health," "strength," certain manifestations of ancestral shades, and so forth). There he had "seen" another *ihamba,* probably that of the patient's father. Kamahasanyi, it may be recalled, had dreamed of his father's shade. Ihembi said that Mudyigita was angry with his son for having quarreled with his (Mudyigita's) matrikin. Since Kamahasanyi had dreamed on successive nights that the shade had stood between the forked branches of a hunters' shrine set up in front of his dwelling hut, Ihembi resolved to perform *Ihamba* at that very place.

In addition to *mahamba,* said Ihembi, sorcery and witchcraft were partly to blame for Kamahasanyi's troubles. When he first divined, he thought he saw in the medicated water the "reflection" or "shadow-
387 soul" (*mwevulu*) of Wilson. He "saw" further that Wilson had "raised a *musalu,*" a kind of malignant ghost, by means of a curse, after quarreling with Kamahasanyi. I can confirm from my own information that Wilson strongly disliked Kamahasanyi and resented his coming to the village. Since he was not a matrilineal kinsman, Wilson was less constrained about expressing his hostility, for matrikin must in public maintain the fiction of amity in their relations. On going more deeply into the matter, Ihembi learned, since he was a great diviner and not easily deceived, that the "reflection" of Wilson had been "put in his *ng'ombu*" (his divining apparatus) by the "real witches." These witches were Kamahasanyi's wife Maria and her mother Ndona (E9), Kachimba's wife. They wanted to "kill Kamahasanyi for his meat," since Ndembu witches are thought to be necrophagous. They had sent their familiars (malignant little beings known as *tuyebela,* who take the forms of small domestic animals or tiny men with inverted feet) to "beat" Kamahasanyi with hoe-handles. This behavior accounted for some of his symptoms. Beside, Ndona preferred Jackson to Kamahasanyi as a son-in-law and wanted the latter done away with.

Ihembi told me that he had informed the villagers that, before he could "make another *Ihamba,*" he would have to perform a rite known as *Kaneng'a* or *Lukupu* ("splashing with medicine"), to make the witches realize that in a general way "they were known." *Lukupu* also had the effect of driving off witches' familiars. He would not mention any names openly, since "there was enough trouble in the village," but the performance of *Lukupu* would act as a sharp warning to the

[1] A sort of rhythmic shuddering, indicative of possession, which begins in time with the drum rhythm and afterwards may become uncontrollable.

witches to call off their familiars, for otherwise he would expose them publicly and take drastic ritual remedial action. To perform *Lukupu* was also, in my opinion, Ihembi's way of sharply jolting the quarrelsome villagers into reconciling their differences and behaving better toward their kinsman Kamahasanyi. To imply so bluntly that witchcraft was at work in the village was the sharpest rebuke Ihembi could make and played on the Ndembu villagers' deepest fears.

Ihembi told me that it was in his mind to advise Kamahasanyi to divorce Maria and to go to reside in Chief Ikelenge's area, where his widowed mother was now living with Kamahasanyi's younger brother —not far from the "real headman" Samuwinu's hut (D13). He might thus hope to escape a horrible death. In the end, however, he decided against this course and worked to make "the livers of the Nswana-mundong'u people white towards one another," to remove the state of mutual ill-feeling. This removal would "please the shade," which would stop afflicting Kamahasanyi.

In this projective guise, Ihembi was really dealing with the undercurrents of personal animosity and sectional rivalry in the village. He was also clearly trying to emancipate Kamahasanyi from the guilts and anxieties attendant upon his belated removal from his late father's sphere of influence. Kamahasanyi had to be made over, as it were, to the matrilineal sphere, which was also the arena of adult reponsibility.

I shall pass over the events of the *Lukupu* rite, which I observed, except to note that Ihembi made Kachimba (E8) throw, on behalf of the whole village, a portion of white clay (*mpemba*) into the medicines with which Kamahasanyi was washed to betoken that all had "good feelings" toward him. Makayi, too, attended the rite, which was held in the bush far away from the village.

The Second Ihamba *Performance*

I shall not give a "blow by blow" account of the rite here but shall confine myself to its social implications. It is necessary to know, however, that, after certain ritual preliminaries, including the collecting of medicines in a prescribed formal manner, an *Ihamba* rite proceeds in a series of stops and starts. The "stops" occur when the cupping horns (*tusumu*) are attached to the patient's body; then follows a phase of drumming and singing, in which all present join, and the patient goes into a trembling fit. If he shakes off a horn or two in his convulsions, the doctor bids the drummers stop playing, removes the horns, and investigates them. If he finds nothing in them, he makes a statement to the congregation about why the *ihamba* has not "come out"—which usually entails a fairly detailed account of the patient's life story and of the group's inter-relations—then he invokes the shade, urging it to "come quickly" and finally invites village members to come, in order of sex and seniority, to the improvised hunters' shrine set up for the shade and confess any secret ill-feeling they may have toward the patient. The patient himself may be invited as well. Then cupping horns are affixed once more, drumming and singing commence again, and the "big doctor" passes the time until the next round of verbal behavior in dancing, purifying the village by ritually sweeping out huts and paths, or going out into the bush to bring back some new medicine plant.

Ihembi's greatest skill was in managing this stop-start routine so that, after several hours of it, the congregation felt nothing but a

389 unanimous craving for the removal of the *ihamba* from the patient's body. The intense excitement whipped up by the drums; the patient's trembling; mass participation in the sad-sweet or rousing hunters' cult songs, which are sung to "please *ihamba,*" followed by the spate of confessions and the airing of grievances; the reverent or hortatory prayers addressed not only by the doctor but also by village elders to the shade to "make our kinsman strong"; the sight and smell of blood, which often pours in gouts from the horns: all these elements make a dialectical and dialogical pattern of activity that generates strong sentiments of corporateness, reduces skepticism, and maximizes sympathy for the patient.

Ihembi was also skilled in allocating appropriate ritual tasks to the patient's kin. For example, he asked Nyaking'a (D14) to bring in a calabash of water to be consecrated to the making of *Ihamba* medicines. Nyaking'a had been a friend of Kamahasanyi's mother while both were married out in the Belgian Congo. She was Kamahasanyi's classificatory "grandmother," and she had been ritual instructress to Maria some years earlier at her puberty rite. Because of its importance at life crises, Ndembu regard water as an "elder" (*mukulumpi*) or most venerable "thing," and Nyaking'a's friendly relationship with the disturbed marital pair was thus recognized.

Jim (E12), the tactful aspirant to the chief's chair, helped in the sucking of horns, thus demonstrating that he wanted to rid the patient (and his village) of troubles. Samuwinu was asked to invoke the shade before others did, since he was "the real headman."

Wilson was asked by Ihembi to put a piece of white clay on the fork of a hunter's shrine tree in token of his friendly and pure intentions toward Kamahasanyi, of which, as we have seen, there had been some doubt. Ihembi made the faithless Maria go into the bush to bring leaves from a *mudyi* tree (*Diplorrhyncus condylocarpon*). This tree, as I have shown elsewhere, stands for "motherhood," "matriliny," and "womanhood" (its white latex secretions are likened to mother's milk). It also stands for "auspiciousness." Maria chewed the leaves and spat the juice on her husband's temples, feet, and hands, centers of thought and activity, and tapped him smartly on the back and head with a small hand rattle—"to give him strength." By these acts she reaffirmed her wifely duties toward the patient and her good will —the reverse of witchery.

Others too numerous to mention were assigned minor parts in this ritual drama by the old impresario Ihembi, who sought, as I have
390 seen him do again and again in ritual contexts, to get everyone working together, despite the issues that divided them in secular life, "to please the shade," and thus to cure the patient. Once when the women attenders did not sing loudly enough, Ihembi made them come closer to the compact men's group and exhorted them to sing up. "It is very important," he said, "that you give your power to help Kamahasanyi." For, in Ndembu belief, singing is not merely a pastime or aesthetic activity but a way of generating "power," which can be used by a doctor for healing purposes.

After a number of people had admitted to ill feeling or negligence toward Kamahasanyi, the patient himself spoke out. He complained vehemently that his matrilineal kin (*akumama*) had not moved a finger to help him when he was ill. He had been forced to go to a diviner himself, although he was unwell. It was fortunate, he said,

that Maria, his wife, had gone with him. But, he added, now that he had told his grudge to everyone, he thought that all would be well. His hard thoughts had kept back his cure. It was also lucky that Mundoyi and Mukeyi, Ihembi's assistants (who had performed many ritual tasks) were present, for they were Kamahasanyi's (classificatory) "fathers" (see genealogy), and it was his father who had been troubling him.

I should like to conclude my account of the performance with an extract from my field notes, written up shortly after I observed it in 1951, to convey something of its atmosphere and flavor:

Mundoyi now took the *duiker* horn out of Kamahasanyi's hair over the brow, washed it, filled it with medicine, and replaced it at the back of his head. He did the same with the blue *duiker* horn at the back, replacing it at the front. He blew his whistle twice. Kamahasanyi started to quiver again violently, and the cupping horn on the left of his neck fell off, unpleasantly spilling what looked like a small chunk of flesh. Next the horn on his temple fell off. Ihembi sat very quietly, not registering any emotion at all. I felt strongly that what was being drawn out of this man Kamahasanyi was, in reality, the hidden animosities of the village. To all appearances, Kamahasanyi was in a state of complete dissociation.

Now Ihembi fitted a long thin *duiker* horn on the little finger of his right hand, took a mongoose-skin purse in his left hand, and pointed the horn at one of the cupping horns, wiping the patient's skin just above it as he did so. The whole congregation rose to their feet as one man, and Ihembi fastened on the twitching Kamahasanyi, who fell on his side, writhing convulsively. Kamahasanyi cried out and sobbed when Ihembi removed the blood-dripping horn in a large skin purse. Mundoyi and Kachilewa (an *Ihamba* adept from a neighboring village) threw large quantities of medicine over the patient. Ihembi rushed to the small calabash (containing medicine and blood from other cuppings) and threw the cupping horn now concealed by the purse into it. He then spat powdered white clay on the really ugly bulge on Kamahasanyi's neck where the horn had been, "to cool and purify it." Kachilewa now held his hand poised over the leaf-concealed calabash while all of us waited intently. He removed the leaves and dredged with his hand in the bloody mixture. After a while he shook his head and said "Mwosi" ("Nothing in here"). We were all disappointed. But Ihembi with a gentle smile took over. He plunged his fingers into the gruesome liquid and when he brought them up I saw a flash of white. Then he rushed with what was in his fingers out of the avid circle of onlookers. From the edge of the village, he beckoned to the elders and to me. Led by Samuwinu and Kachimba, we went one by one to Ihembi. It was indeed a human tooth, we had to say. It was no bush pig's tooth, nor a monkey's. Jubilantly we told the women, who all trilled with joy. Men and women who had been on cool terms with one another until recently, shook hands warmly and beamed with happiness. Kachimba even smiled at Makayi, who smiled back. Several hours later a mood of quiet satisfaction still seemed to emanate from the villagers.

These events took place toward the end of my first field trip. More than a year later, when I visited the village again during my second tour, I found that several changes had occurred in its composition. Of the Nkonkoto group none remained in Nswanamundong'u. Old Kapansonyi had died, and Makayi had emigrated to Chief Ikelenge's

area, while Maria's lover Jackson had gone as a labor migrant to the Copperbelt mining town of Chingola (where I met him by chance in the street one day—he said he was never going back to village life). Kachimba's sons Douras and Robson had built new huts elsewhere in Mukang'ala Chiefdom. Kamahasanyi was still in residence, Maria was still his wife, and indeed he had added to his personal following by persuading his younger brother and sister to reside in Nswanamundong'u. Furthermore, he had increased his prestige by becoming an adept in some of the cults into which he had been initiated through suffering, though not in *Ihamba,* for he was not a gun-hunter. In terms of social morphology, therefore, Nswanamundong'u had shed its patrilateral attachments and was reduced to its matrilineal nucleus,
 although it had increased in size. Kamahasanyi gave me the impression that he was enjoying life, was accepted by his fellow villagers, and was liked by his wife. He showed me with pride his new cassava gardens and told me that he was now successfully snaring game. It looked as though Ihembi's "therapy" had "worked," if only for a time!

It seems that the Ndembu "doctor" sees his task less as curing an individual patient than as remedying the ills of a corporate group. The sickness of a patient is mainly a sign that "something is rotten" in the corporate body. The patient will not get better until all the tensions and aggressions in the group's interrelations have been brought to light and exposed to ritual treatment. I have shown how complex these interrelations can be and how conflicts in one social dimension may reverberate through others. The doctor's task is to tap the various streams of affect associated with these conflicts and with the social and interpersonal disputes in which they are manifested, and to channel them in a socially positive direction. The raw energies of conflict are thus domesticated in the service of the traditional social order. Once the various causes of ill feeling against Kamahasanyi and of his ill feeling against others had been "made visible" (to use the Ndembu idiom), the doctor Ihembi was able, through the cultural mechanism of *Ihamba,* with its bloodlettings, confessions, purifications, prayers to the traditional dead, tooth-drawings, and build-up of expectations, to transform the ill feeling into well wishing. Emotion is roused and then stripped of its illicit and antisocial quality, but nothing of its intensity, its quantitative aspect, has been lost in the transformation. Ndembu social norms and values, expressed in symbolic objects and actions, are saturated with this generalized emotion, which itself becomes ennobled through contact with these norms and values. The sick individual, exposed to this process, is reintegrated into his group as, step by step, its members are reconciled with one another in emotionally charged circumstances.

Yet, there is room within this communal and corporate process for the doctor to take fully into account the nuances and delicate distinctions of interpersonal relationships. Ihembi, for example, dealt with the idiosyncratic relationships between a father and a son, a husband and a wife, an uncle and a nephew; but his main endeavor was to see that individuals were capable of playing their social roles successfully in a traditional structure of social position. Illness was for him a mark of undue deviation from the norm. The shades punish such deviation. In this time of rapid change, the shades of old hunters are particularly

likely to be sensitive to breaches of traditional norms, since hunting is for Ndembu the activity around which has formed the basic constellation of tribal values. It is therefore appropriate that hunters' shades should "bite" those who are most exposed to modern changes.

Stripped of its supernatural guise, Ndembu therapy may well offer lessons for Western clinical practice. For relief might be given to many sufferers from neurotic illness if all those involved in their social networks could meet together and publicly confess their ill will toward the patient and endure in turn the recital of his grudges against them. However, it is likely that nothing less than ritual sanctions for such behavior and belief in the doctor's mystical powers could bring about such humility and compel people to display charity toward their suffering "neighbor"!

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Cecil G. Helman

'FEED A COLD, STARVE A FEVER' – FOLK MODELS OF INFECTION IN AN ENGLISH SUBURBAN COMMUNITY AND THEIR RELATION TO MEDICAL TREATMENT

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. . .This paper – which arises from my own experience as a family physician – describes a folk model of illness in an ordinary English suburban community on the outskirts of London; it outlines certain widely-held beliefs about illness related to perceived changes in body temperature in such a community – beliefs 109
which can be summarised in the phrase "Feed a Cold, Starve a Fever", and which to some extent are common throughout the British Isles. Although the suburb is now part of the great metropolis, it is a study of the 'ethnomedicine' of the area, which in Hughes' definition is "those beliefs and practices relating to disease which are the products of indigenous cultural development and are not explicitly derived from the conceptual framework of modern medicine" (1968:88). It is also a study of the effect of these beliefs on the diagnoses and treatments given by the general practitioners, the local representatives of biomedicine, to their patients. . . .

"FEED A COLD, STARVE A FEVER" – THE FOLK MODEL OF INFECTION IN STANMORE 112

The phrase "Feed a Cold, Starve a Fever" is a common aphorism in the area. It arises from a folk model, or scheme of classification, of illness which is widely accepted by the patients; and it relates to those conditions of impaired well-being which the patients perceive as disequilibrium, and regard as 'illness', and which concern perceived changes in body temperature – either 'hotter' than normal, or 'colder'. In general, these feelings of abnormal temperature change are purely subjective; they bear little or no relation to biomedical definitions of 'normal' body temperature as 98.4° F or 37° C, as measured orally on a thermometer. The conditions where the patients 'feels hot' are classified as *Fevers*, those where he 'feels cold' in his body are classified either as *Chills* or *Colds*. Both Fevers and Colds/Chills are states of being – both classified as abnormal – which, in the folk model have different causes, different effects, and thus require different treatments.

There are two important principles underlying this folk classification of 'illness-misfortune': (1) the relation of man with *nature*, i.e. with the natural environment, in Colds and Chills, and (2) the relation of man to man, which exists within human *society*, in Fevers.

To a large extent the area covered by the folk model – which I have set out schematically in Figure 1 – corresponds to that area of disorders which biomedicine classifies as Infectious Diseases: that is, acute or chronic inflammatory conditions where the causative agent is known to be either a virus or a bacterium. These disorders, which occur very commonly in general

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	HOT	COLD
WET	(1) *Ear, Nose, and Throat* FEVER + NASAL CONGESTION OR DISCHARGE	(1) *Ear, Nose, and Throat* COLD + NASAL CONGESTION OR DISCHARGE, WATERY EYES, 'SINUS' CONGESTION
	(2) *Chest* FEVER + PRODUCTIVE COUGH	(2) *Chest* COLD + NON-PRODUCTIVE COUGH
	(3) *Abdomen* FEVER + DIARRHOEA AND ABDOMINAL DISCOMFORT	(3) *Abdomen* COLD + LOOSE STOOLS AND SLIGHT ABDOMINAL DISCOMFORT
	(4) *Urinary System* FEVER + URINARY FREQUENCY AND BURNING	(4) *Urinary System* COLD + SLIGHT URINARY FREQUENCY BUT NO PAIN
	(5) *Skin* FEVER + RASH + NASAL DISCHARGE OR COUGH	
DRY	FEVER + DRY SKIN, FLUSHED FACE, DRY THROAT, NON-PRODUCTIVE COUGH	COLD + SHIVERING, RIGOURS, MALAISE, VAGUE MUSCULAR ACHES.

Fig. 1. The Folk Classification of common 'Hot' and 'Cold' Symptoms

practice[6], include disorders known as: upper respiratory tract infections; influenza; coryza; bronchitis; pneumonia; sinusitis; urinary tract infections; gastroenteritis; childhood fevers (e.g. rubella); and several others. This classification overlaps, to some extent, the area covered by the folk model, but as will be described there are significant differences. Illnesses associated with temperature change are common in all sections of the population, as are the other associated symptoms of cough or rhinitis. Cough is apparently the commonest symptom complained of in general practice (see Morrell, 1972:297), and it is common even among those who do not consult the doctor: in Dunnell and Cartwright's study (1972;11) 32% of adults reported "cough, catarrh, or phlegm" in a sample two-week period, while 18% had suffered from "cold, influenza, or rhinitis". To describe the folk model it is necessary to adopt a diachronic approach: what follows is mainly the folk classification reported by older patients; those born during or since World War Two, while sharing the basic underlying classification, have introduced new elements, particularly with regard to the germ theory.

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STRUCTURAL ANALYSIS OF THE FOLK SYSTEM

In Figure 1 I have listed the common groups of symptoms which relate to, or accompanied by, perceived changes in body temperature. There are four diagnostic categories in all (see Figure 2); the basic division is between '*Hot*' and '*Cold*' conditions, but in addition there is a further division into '*Wet*' and '*Dry*' conditions. 'Wet' conditions are those where the temperature change is accompanied by other symptoms, and with a seemingly abnormal amount of 'Fluid' being present – either still within the body, or else emerging from its orifices; this 'Fluid' includes sputum, phlegm, nasal and sinus discharge, vomitus,

urine, and loose stools. The symptoms here include nasal congestion or discharge, sinus congestion, productive coughs, 'congested' chests, diarrhoea, and urinary frequency. 'Dry' conditions are those where the abnormal temperature change is the only, or the paramount symptom -- such as a subjective feeling of being cold, shivering or rigours on one hand – and a feeling of being 'hot', perhaps with a dry throat, flushed skin, slight unproductive cough, and possibly delirium, on the other. Skin rashes usually occur on the 'Hot' side of the classification. Other subsidiary symptoms -- including pain – may occur in one form or another on both sides of the temperature division.

	HOT	COLD
WET	HOT WET	COLD WET
DRY	HOT DRY	COLD DRY

Fig. 2.

	HOT	COLD
WET	FEVER + FLUID	COLD + FLUID
DRY	FEVER	COLD

Fig. 3.

Thus there are four basic compartments into which most common symptoms relating to temperature change can be fitted (see Figure 3): 'Hot/Wet' (Fever plus Fluid), 'Hot/Dry' (Fever), 'Cold/Wet' (Cold plus Fluid), and 'Cold/Dry' (Cold). Obviously these compartments are not watertight; there is always some overlap between divisions. In addition, not all conditions associated with abnormal temperature changes have been included; only the commonest, as encountered in general practice.

(A) 'Chills' and 'Colds'

These are explained as being due to the penetration of the environment -- across the boundary of skin – into the human organism. They are part of the relationship of man to the natural environment; in particular to the idea of 'danger without' and 'safety within' the boundaries of the human body. The *causes* of these illnesses are areas of lowered temperature in the natural environment – either as damp or rain (i.e. 'Cold/Wet'), or cold winds and draughts ('Cold/Dry'). In general, 'Cold/Wet' conditions in the environment may cause 'Cold/Wet' conditions in the body, and 'Cold/Dry' may cause 'Cold/Dry' conditions of illness, though the division is by no means rigid. Dampness is considered dangerous in most situations, as is rain. Wind is dangerous if it is lower than body temperature, and is called a draught. Wind at body temperature, or above it, poses no threat, and is merely 'fresh air'. Night air, though, whether warm or cold, is considered dangerous by many of the older patients; it is different in quality from day air, and often "the children get sick if you leave the bedroom windows open at night".

These cold forces in the environment are impersonal, and not linked to any social relationships.

The protective boundary of the human being is skin, but also clothes. All areas of skin, though, if exposed to damp or draughts, can be penetrated by the cold ("the damp goes right through you", "I was chilled to the bone"). The actual *route of entry* of the cold, is through the skin itself. Some areas of skin are more vulnerable than others:- in particular, the top of the head, the back of the neck, and the feet. These parts of the body must be specially protected from draughts and damp. Colds were explained as occurring when any of these areas were inadvertently exposed to damp or draughts: e.g. after "getting one's feet

wet", "walking around with damp socks on", "going outside with damp hair", "going out into the rain, without a hat on", "stepping into a puddle", "getting caught in the rain", and so on. Among men, there is a particular sense of increased vulnerability to 'head Colds' after a haircut – when the back and top of the head are unprotected against environmental cold by their normal covering of hair.

I think it is significant, incidently, that the two most vulnerable areas to cold – the head and the feet – are, in a sense, the most *public* parts of the clothed body, and the parts most passive to being acted upon by the environment. I would argue that the hands and face, while both 'public', are considered less vulnerable as they actively manipulate the environment, and in a sense 'join' the person to the environment.

In addition to parts of the body especially vulnerable to cold, there are certain states intermediate between hot and cold environments, or between body temperatures, where the intermediate zone is considered most dangerous to the human being – as far as Colds and Chills go. For example:

(1) Body temperature changes, from hot to cold: e.g. "Going into a cold room (or outside) after a hot bath", "sitting in a draught after a hot bath", "walking on cold floor when you have a Fever" – all which occur within the home.

(2) Changes in environmental temperature, from hot to cold, on leaving the home (or other building): Older patients explained the increased incidence of Colds in winter as being due to a drop in body temperature when one leaves a modern centrally-heated house for the outside. Younger patients think this occurs because "the Germs breed more" in a hot, centrally-heated house. Other examples here are "going outdoors when you have a Fever", "going out into the cold after a hot bath", and so on.

(3) Changes in season: November (damp), and February (cold winds) are both considered dangerous months, but most dangerous of all is autumn – where the 'hot' summer is changing to the 'cold' winter.

(4) Changes in geography: One patient has explained that there are more Colds ('summer Colds') in summer these days because, since cheap air-flights and holidays became available 10–15 years ago, people return from 'hot' Spain or Italy to 'cold' Britain after their summer vacations, and in the change over of temperature they "catch Cold".

In all these cases there appears to be an intermediate, dangerous zone, between hot and cold states – when the former gives way to the latter. This may reflect an underlying schematic dichotomy between 'Hot' inside (body, home), and 'Cold outside (nature, the natural environment). Mary Douglas (1970) has pointed out how in many primitive classificatory systems, special dangerous qualities are ascribed to states of transition, marginality, or anomaly. She notes Van Gennep's observation of the danger inherent in states of social transition (1970:116), but it would appear that this applies also to intermediate zones between changes in temperature, as described in the above examples.

Although Colds do not, at least in the view of older patients, originate in other people, they are caused – as one middle-aged patient put it – "by doing something abnormal". That is, by putting oneself in one of the situations of danger or risk mentioned above. There is the strong implication of personal responsibility for the condition, which has been caused by one's own carelessness, stupidity, or lack of foresight. You get a Cold when you "don't dress properly", "go outside after washing your hair", "allow your head to get

wet", "walk barefoot on a cold floor", "wash your hair when you don't feel well", and so on. Making oneself, or part of oneself, vulnerable to cold causes one to "catch Cold". Colds, therefore, are a by-product of one's personal battle with the environment. They are one's own responsibility, and no one else could be blamed for them. If, despite adequate precautions such as proper clothing, etc, one still got a Cold, it was still your responsibility. Poor people tended to get more Colds as they are "less responsible".

Once the cold has penetrated the boundaries of the human organism, it can travel. It can move from the damp head, down to the nose (causing a "runny nose"), the sinuses ("Sinusitis", "a head Cold"), the chest (causing a slight cough – "a Cold on the chest"). It can travel even further downwards to the abdomen, to cause vague abdominal discomfort and possibly slight loosening of the motions, or to "the bladder" to cause discomfort and slight frequency, but no burning sensation or fever. From damp feet it can migrate upwards to cause the "stomach Chill" or a "Chill on the bladder" already mentioned, or even further upwards to the nose, chest, or sinuses. All of these symptoms are accompanied by a subjective feeling of cold, shivering, and possibly by some muscular discomfort. In addition, a direct draught can also cause the Colds and Chills, but this occurs less frequently; usually a direct draught on the lower back (while "sitting in a draught") causes a "Chill on the kidneys" which is described either as a muscular pain in the lumbar region, or vague lower back discomfort, perhaps with some urinary frequency.

In general, *Chills* occur below the waist ("stomach Chill', "bladder Chill', "kidney Chill") and *Colds* above it (a "head Cold", a "Cold in the sinuses", "a Cold on the chest", "a Cold that's gone to my chest").

In the battle with environmental cold, one should strengthen one's own defenses by dressing warmly, avoiding draughts and damp, and building up the body's strength from within, by good food and patent 'tonics'. If you "did not eat properly" you were more liable to develop a Cold. People took tonics to "build themselves up" against the threat of cold; older patent tonics used included Parrish's Food, ViDaylin, Cod Liver Oil and Malt Extract, and Virol, and newer ones include Brewer's Yeast, Multivite, Haliborange, Sanatogen, and of course Vitamin C. As one patient put it – if you went outdoors after having taken a tonic "you felt warm inside"; the tonic was an ally in one's battle with cold. Most important of all allies and body strengtheners, though, was food.

Some people, who have been severely penetrated by cold in the past and were severely ill, may be left with a permanent "weakness" in that part of their body; a permanent gap in their defences against the environment. They may have a "weakness on the chest" and often wrap up that area particularly warmly when they leave the house. "Weakness" may also be familial and "run in families", or else constitutional, such as a "thin skin" which is abnormally vulnerable to cold penetration.

The area of Stanmore is known by the patients as a damp, dangerous area as far as Colds go. People in the area are reputed to suffer many respiratory infections and to be "bronchial"; this is said to be due to "dampness" retained by the clay soil in the area, which is the residue of marshes drained in the 1930's.

Treatment of a Cold or Chill is your own responsibility; it is your own problem, and is less likely to mobilise a caring community around you than a Fever. As in all Hot-Cold and humoural systems, treatment aims primarily to fight cold with warmth, and to move the patient from 'Cold' (or 'colder' than normal) back to 'normal', by adding heat in the form of hot drinks, hot-water

bottles, rest in a warm bed, and so on; and in giving him the means to generate his own heat, especially by ample warm food ("Feed a Cold, Starve a Fever"), as
118 well as tonics and vitamins, which are also perceived as a type of nutriment. In addition, he must if necessary be shifted from the 'Wet' to the 'Dry' state – not by expelling or washing out the Fluids, but by drying them up. These Fluids are considered part of the body, and should be conserved, with the aid of nasal drops, decongestant tablets, inhalations, and drugs to solidify the loose stools. Older remedies used as decongestants include goose fat, Vicks, and Friar's balsam. Pain accompanying these symptoms is to be treated by analgesics such as aspirin, anadin, paracetamol, and several others. By these various methods, both folk and medical treatments aim to restore the previous equilibrium, and a 'normal' temperature.

The only social dimensions of Colds and Chills are the implications of personal carelessness that they carry, and also for the social embarrassment of a red nose, rhinitis, bloodshot eyes, etc. "For appearance's sake", said one patient, "you get rid of them as soon as possible".

(B) 'Fevers'

Illnesses in this group are all characterised by conditions which begin with, or are accompanied by, a feeling of abnormally raised body temperature. In general, they are more severe, longer-lasting, and potentially more dangerous than those in the 'Cold' group. All are said to be due to the actions of entities known as 'Germs', 'Bugs', or 'Viruses'. These terms are not used in the strict biomedical sense; to most people, who have never looked down a microscope and seen 'a Germ', and who who have no other perceptual evidence for their existence, Germs remain a hypothesis, a theory of causality. Although the terms are borrowed from biomedicine, folk theories of Germs are rooted in the folk classification of Fevers and Chills, rather than in modern microbiology.

When asked about the attributes of Germs most patients give the following description: Germs are described as living, invisible, malevolent entities. They have no free existence in nature, but exist only in or among people. They are thought of as occurring in a cloud of tiny particles, or as a tiny, invisible, single 'insect'. They traverse the spaces between people by travelling in the air, or in the breath. Germs causing gastro-intestinal symptoms are seen as more 'insect-like' ('Bugs'), and are larger in size than those Germs causing other symptoms. Germs have personalities; these are expressed in, and can be recognised by, the various symptoms they cause. (For example, "I've got that Germ, doctor, you know – the one that gives you the dry cough and the watery eyes", or "the one that gives you diarrhoea, and makes you bring up"). The Germ, however, may only reveal its true personality in stages, during the course of the disease.

In their effect, Germs are single; you are only attacked by one Germ at a
119 time, which selects just you to attack ("I've got a Germ, doctor"). 'Your Germ' can infect other people, but part of it will remain within you until it is expelled, or you are cured. The same individual Germ cannot be in two places at the same time. Germs are amoral in their selection of victims, but once they attack they can only cause harm. There are no 'good' Germs, or 'normal' Germs; all Germs are bad, whether they are 'Bugs', 'Germs' or 'Viruses'. Viruses and bacteria are generally lumped together, and no attempt is made to differentiate them clinically.

The *routes of entry* of the Germs into the body are via the orifices; particularly the larger ones of mouth, nose or anus, though sometimes they can enter via the ears or the urethra. These orifices are the natural breaks in the body's defences and boundaries (cf. Douglas, 1970:145). The Germs can enter the mouth in a "moist wind", perhaps causing a painful throat en route; or through the anus from a dirty lavatory seat. In general, Germs that enter the body in this latter way cause diarrhoea and vomiting, and are usually termed 'Bugs', while the remainder of the Fevers are caused by Germs or Viruses (these terms are used interchangeably) that enter via the mouth, though this division is not absolute.

Once having entered the body, and crossed its boundaries, the Germ signals its presence by a *Fever*, and later by other symptoms. It can expand to inhabit several parts of the body simultaneously, or it can move in sequence from part to part ("It's gone to my lungs", "I can feel it in my stomach", "It began as a sore throat, but then went down to my tummy", "It's moved to my chest", "It's breaking out in the skin", or, as one patient with a peptic ulcer said, "I got the 'flu, but then it flew to the ulcer and that blew up").

The cardinal attribute of Germs is their externality. They originate *outside* the individual, but not outside human society. They may wander from country to country, or through a community, but they are always transported by people. Here, the inside/outside dichotomy can be seen to refer to dangers outside the organism, but which still originate in other people – not in the natural environment. In fact, Germ infection implies another person, and the social dimension of life. Infection with a Germ implies a *social relationship* (of whatever duration) with another person. Infection is an inherent risk in all relationships. Different types of relationship imply different types of risk, different types of infection. For example: measles, mumps, chicken pox, etc. indicate relationships between children (school or family); influenza usually occurs after sustained contact between adults – relatives, friends, neighbours, or workmates; urinary infections are sometimes linked to sexual relationships; and tuberculosis infection implies contact with 'unclean' people, such as slum-dwellers or recent immigrants. The risk, however slight, of Germ infection appears to be inherent in *all* relationships, but neither party is to blame for the infection. There is no malevolence or 'maleficium' involved. That is, the Germ has its own volition, and cannot be directly controlled by its host. The victim of a Germ infection is therefore blameless; there is not the slight implication of irresponsibility found in Colds and Chills. The patient is the passive victim of a Germ that is "going around", and his illness is not in any way linked to the moral order (with the exception of certain venereal infections). Because of this blamelessness, the person has a socially acceptable reason for withdrawal from all his social networks, work obligations, and so on.

Fevers create a caring community around the victim. Because Germs can be dangerous to contacts, one of the obligations of close relationships is to undergo these risks when called upon to do so. This is especially true of families with children, or with adults who become, as it were, 'temporary children'.

Fevers attack especially the weak, the old, and the poor. With regard to the latter, there is a strong association with dirt (which is conceived of as concentrated, or condensed, Germs) and Germ infection, particularly in poorer people. To some extent this may be due to their type of social relationships, as well as to the dirt and disorder associated with poverty.

Germs can be 'immunised' against; the 'immunising' drug or chemical is seen

as a force that is introduced into the patient's body, with his permission, and resides there – ready to combat the Germ should it enter the body. It is, in a sense, an internal talisman against infection.

The Fevers that are covered by the classification above are those that occur most commonly in the population in Stanmore, and which are frequently seen in general practice (see Figure 1). They include such conditions classified bio-medically as: influenza; bronchitis; pneumonia; pharyngitis; tonsillitis; urinary tract infections; some forms of gastroenteritis; and the childhood fevers – all of which are accompanied by a subjective feeling of being 'hot', as well as certain other symptoms. In all of these the Germ is conceived of as being within the body itself. Local skin infections, which usually do not cause a Fever, are therefore not included here.

As with Colds and Chills, Fevers may occur in either the 'Dry' or the 'Wet' state. 'Wet' fevers ('Hot/Wet') are the presence of a Fever, plus Fluid – whether as excess phlegm, sputum, nasal discharge, tears, urine, loose stools, or sweat. 'Dry' Fevers ('Hot/Dry') are characterised by merely "feeling Feverish", perhaps with a flushed skin, dry mouth, and a slight cough. A rash may occur in either state and so may pain or discomfort.

In summary, Fevers and Germ infections seem to be associated with three qualities: (1) *Externality* – penetration of the body by an external, living entity. It is easier to conceive of the Germ as a living entity, I think, because it originates in living people, unlike Chills and Colds; (2) *Heat* – that is, the Germ itself is 'hot', and brings its heat into the body. It is also easier to conceive of a 'hot' entity being alive; and (3) *Liquidness* – the majority of Fevers seem to be related to the presence of excess fluid. It is as though the Germ matures into a 'hot liquid' inside the body.

The treatment of Fevers, in the folk model, aims firstly to move the patient from the 'Hot' state back to a 'normal' temperature, and secondly to move him from the 'Dry' to the 'Wet' state (see below).

Methods of dealing with Germs – the living, malevolent entities who temporarily invade and disrupt the body, or parts of it – fall into three main categories:

(1) *Expulsion:* In all these methods *fluids* are used to "wash out" or liquefy the Germ, so that it can be "washed out of the system". Fluids are taken in by mouth as a form of treatment, and the appearance of a more 'Wet' symptom indicates that the Germ is being diluted and "washed out", usually via the orifices through which it entered the body. Examples of this are:

– From the *chest* – the aim in chest infections associated with Fever is the expulsion of fluid from the chest, carrying with it the infecting Germ – "getting it off your chest", "coughing up the muck", "clearing the chest", "getting it (the phlegm) out of your system", and so on. Patients often complain that their cough is still unproductive and "dry", that it "hasn't broken" or "hasn't loosened" so that they can "cough it off my chest". A variety of fluids are used as expectorants here; including tea, honey, hot water, cough medicine, and other liquids, and these also have a soothing effect on the throat. "I gargled with salt water to get the catarrh out," said one patient, "and I always swallow a bit of it to loosen the cough".

– From the *bowels* – especially in the presence of diarrhoea and vomiting with the Fever. Here the therapy consists primarily of drinking lots of fluids, so as to "flush out" the infection.

– From the *urinary tract* – especially if there is urinary frequency and pain

on micturition, accompanied by Fever – once again treatment consists of drinking large amounts of fluid "to flush it (the Germ) out of one's system".

– Through the *skin* – usually by induced sweating. The appearance of sweat fluid on the skin, which often accompanies a drop in the Fever, is taken as evidence that the Germ or infection is leaving the body through the skin. The aim of treatment, therefore, is to "sweat it out" or "sweat it off". Various fluids and other remedies[7] are used for this purpose, including hot drinks, honey, certain types of tea, as well as aspirins and other patent anti-pyretics, which are always ingested with large amounts of fluid. The appearance of a skin rash is also welcomed, as the Germ is now "showing itself", and is on its way out of the body; this is especially true in measles where the fever often drops when the rash appears.

Germs can also be dealt with by:

(2) *Starvation* – as in the phrase "Feed a Cold, Starve a Fever". I think the implication of this advice to reduce the food intake of a feverish patient is that as the Bugs or Germs are living entities to starve their host is to starve the Germs, and they will eventually die or leave the body, and so end their possession[8].

(3) *Killing the Germs in situ* – since World War Two, and the discovery of the anti-microbial drugs, it is generally accepted by most of the patients that antibiotics and sulphonamides are the specific agents for killing the Germ in situ, without the need to expel or starve it. This is particularly true of those Germs causing high Fevers and severe illness, which do not respond to home remedies. The drugs are taken into the body as an external force to kill the Germ in situ, in a battle lasting up to ten days.

The signs of expulsion, death, or starvation of the Germ are a return to what is perceived as normal body temperature, a subjective feeling of being less ill, and the appearance of excess liquid being expelled from the body (as phlegm, nasal catarrh, urine, or loose stools), which then gradually dries up – as well as the disappearance of all other associated symptoms.

Germ infections imply, or bring into being, social relationships: as sources of infection, a caring community about the victim, and as an informal 'community of suffering' of those afflicted by the same type of Germ. Questions often asked of doctors or their receptionists in the area are: "Is there a Bug (like mine) going around?", "Is there a Germ floating around?", "Have you had anyone else in with the 'flu?", "Is there Chicken Pox in the area?". They are relieved if the answer is in the affirmative, and to find that they have "got something normal" and are part of a community of victims.

It should be noted that this description of 'Germs' as hypotheses, or theories of causality, of illness in the folk model in Stanmore, has a similarity to equivalent theories of disease causation in many non-literate societies, particularly with spirit possession.[9] In these societies 'spirits' take the place of 'Germs' as causal entities of disease, and like them are invisible, amoral, malign, and capricious in their choice of victims. The victim is therefore blameless, and possession by these pathogenic spirits is a culturally accepted experience, and a way of mobilising a caring community around the ill person (see Lewis, I. M., 1971:66–99). However, a much wider range of disorders are caused by these spirits, than those included in the Fever/Colds model described above.

IMPACT OF THE BIOMEDICAL GERM THEORY OF DISEASE ON THE FOLK MODEL

There is an increasing difference, as regards the Germ explanation of disease, between older and younger patients in the area – especially those born during or since World War Two, who constitute the first 'antibiotic generation'.
123 Although the bacteriological discoveries of Pasteur and Koch were made at the end of the 19th Century, the biomedical germ theory of disease seems to have only gained widespread currency among the lay public since the influenza pandemics of 1918/19. However, it is only since the last War, and the introduction of specific antimicrobial drugs, that the Germ theory has come to explain a wider range of illness in the folk model. A probable reason for this is that since the establishment of the N.H.S. in 1948, with its guarantee of free medical care to the entire population, more people consult doctors and for a wider range of disorders – disorders that they would previously have borne in what one writer calls "the imposed silence of poverty" (Inglis, 1964:18). This means that 'Fevers' and 'Chills' in the folk classification, that would previously have been treated by folk remedies alone, are now brought to N.H.S. doctors – particularly general practitioners – for diagnosis and treatment. Nevertheless, the basic conceptual system of the Fevers/Colds/Chills model has remained largely unaltered; Germs are still hypotheses, and there is little lay knowledge of their characteristics, or of the difference between Germs and Viruses, terms which are used interchangeably by the patients. The main differences between younger and older patients regarding the folk model, are as follows: the conception of Germs as active causative agents of illness has spread to include several (though not all) conditions on the 'Cold' side of the classification. Younger patients are more likely to blame 'Germs' or 'Viruses' for these conditions. Because Colds and Chills are due to these active agents, they can be killed, expelled or starved like the Germs causing Fevers. Hence the increasing demand, on the part of the patients, for specific 'anti-Germ' drugs and the pressure put on doctors to prescribe antibiotics for even minor viral infections. While a Cold is now often considered to be caused by a Germ, some sense of personal responsibility for the condition still remains; bad clothing, inadequate nutrition, exposure to damp or cold – all make you more vulnerable to Colds, as before. Nevertheless, on the Cold side of the spectrum, the amount of personal responsibility for illness seems to have declined. At the same time, 'Cold' illnesses have become more social in origin, effect, and dangers; they now arise more from within human society, and create more of a caring community around the victim than previously. Colds and Chills are now dangerous to other people, especially children and the very old. Young mothers often ask "My child's got a Cold; can she mix with other children?", or remark "I didn't go round to her place yesterday because her child's got a Cold". It seems that there is an increased sense of danger in human relationships, and they are now all tinged with a new anxiety, the threat of infection. Whether or not this new fear expresses or echoes other stresses in the social system, one cannot be sure. Nevertheless, in a small way, the threat of infection is used to avoid social contacts, or to mobilise a perhaps unwilling community around the patient. This 'medicalisation' of Colds and Chills extends also beyond the
124 original confines of the folk classification; for example, a wide range of mood changes, from aggression to depression, are now being ascribed by patients to Germ infection. In this medicalisation of internal moods, the folk Germ theory

provides a useful escape route to the patient – "I'm feeling low and depressed. I must have picked up a Virus", or "He was rather aggressive on Sunday, and I wondered if he hadn't picked up a Germ"; so that, increasingly, the hypothesis of Germ infection is now being used to explain behaviour changes. Depression due to Viruses, is now added to "post-Viral depression", in the folk classification of younger patients. Also, both "stomach Chills" and "bladder Chills" are now increasingly being ascribed to Germ infection, except by the older generation; they are now often thought to be due to "a Germ in the water (urine)", rather than "a Chill on the bladder", or to a "stomach Bug" rather than a "stomach Chill" or "something you ate". In both cases, the infection requires active medical help to destroy or expel the Germ. In general, as the hypothesis of 'Germ infection' has spread to cover a wider range of illness and behaviour, illness has become more social and dangerous, and the process of seeking medical treatment for it is increasingly common.

CONSENSUS AND CURE

The social process that begins with illness, and hopefully ends with cure, begins with a state of discomfort or disequilibrium perceived by the patient, or by those associated with him. In the Fevers/Colds/Chills model, the basic minimum definition of 'illness' is a subjectively experienced change in body temperature, on either side of 'normal', and which is usually accompanied by other symptoms; so that the units of the folk model are clusters of symptoms forming what might be termed 'illness entities'. These are predominantly composed of subjective symptoms, while objective corroboration of the symptoms (for example, by measuring the body temperature with a thermometer) is less commonly called upon as an integral part of defining oneself as 'ill'. By contrast, the units of the biomedical model are named diseases, which are composed of symptoms plus objectively verifiable physical signs. At the interface between these two systems, a consensus must be achieved by doctor and patient regarding the interpretation of the patient's symptoms, and the treatment to be given. My research concentrated on the nature of that consensus, on the vocabulary used in consultations, and on the diagnoses and treatment given to patients by GPs in the area; particularly those patients suffering from symptoms within the Fevers/Colds/Chills model of illness.

It should be pointed out that apparently most patients suffer from some pathological symptom or symptoms, most of the time. In Dunnell and Cartwright's study (1972:8–13) 91% of adults in a random interview reported that they had had one or more abnormal symptoms in the two weeks preceding the interview, while only 16% had consulted a doctor during that time. Most illness is treated by self-medication; it is estimated that only about one-third of all illness reaches a medical agency (1972:13). The remainder are treated by self-prescribed folk or patent remedies bought at a pharmacy. Self-medication is therefore much more common than drugs prescribed by a doctor, and also the illness seen by a doctor is only the tip of an 'iceberg of illness' in the general population. Only those cases of illness brought to the GP's attention could be included, therefore, in this study.

The initial diagnosis of 'illness' is usually made by the patient himself, and expressed in the terms of the folk model ("I've got a Cold"), and is usually dealt with by self-medication. However, there is a hierarchy of advice as to the diagnosis, and the treatment required. This hierarchy includes friends and relatives, the local pharmacist, the doctor's receptionist, and finally – in the minority of cases – the doctor; (see Dunnell and Cartwright, 1972:96–98 – 57% of adults questioned in their survey regarded the local pharmacist as a good person to ask advice when not feeling well). The threshold at which the doctor is consulted varies with individuals, and between social classes; the impression is that under the N.H.S. the threshold for consultation is dropping for most conditions. Diagnosis, as given by the GP, is the organisation of the patients symptoms and history into a named and standardised entity, the biomedical disease. The patient's symptoms and experience pass from the private to the public domain, and become a recognisable part of the biomedical model of misfortune. For this to be acceptable to both sides, a concensus must be negotiated; diagnosis, as Fabrega (1975:972) has said, "is an attempt to establish a consensus for purposes of action". No diagnosis would be acceptable to patients, it appears, unless it was to a large extent consonant with their world view, and particularly with their interpretation of illness. The impact of biomedical concepts on this world view are less than had been thought. Despite exhortations in medical textbooks, for example "D(octor) should never forget that P(atient) is already equipped with all kinds of ideas about the nature of disease. Many of these are stereotypes, and attacking them is an essential part of any therapeutic strategy" (Crystal, 1976:49), the language and concepts used by GPs in consultations with patients suffering from Fevers/Colds/Chills was in the idiom of the folk model, not the biomedical one. The patients usually presented lists of symptoms, often accompanied by questions like "Is there a Bug going around?", "I'm feeling ill – is there a Virus around?", "Have you had anyone else come in with a tummy Chill?", "Is there Chicken Pox in the area?", "Have there been any children in recently with German Measles?", and so on. The answer from the GP was usually in the affirmative, and the patients were relieved to find that there *is* a "Bug going around", and they are blameless and not socially deviant in their behaviour, they also no longer feel uneasy or unsure of their condition, particularly as their illness is now a disease within the biomedical world – and by definition capable of being cured, or at least palliated. The diagnoses given by the GPs, which provided a unified explanation of the patients' vague feelings of illness or unease, were also couched in the folk idiom; for example: "You've picked up a Germ", "You've got a 'flu Bug", "It's a Viral infection", "It's just a tummy Bug – there's one going around", "It's just an ordinary Cold", "I'm afraid it's gone to your chest", "Your chest is clear now – the infection's gone", "You've got a Germ in the water", "It's only the Chicken Pox", "Oh yes, is that the one where you've got a runny nose, watery eyes, and you lose your voice? I've seen a dozen already this week", and so on[11]. These explanations do not satisfy all patients; nevertheless the majority find such diagnoses, although vague, a satisfactory diagnosis of their condition. Even if a more precise and 'biomedical' diagnosis is given, it often turns out to be also vague and non-specific. This is partly due to the fact that diagnosis in general practice, where the average consultation time between GP and patient is 5–6 minutes (Morrell, 1971:454; Marsh and Kaim-Caudle,

1976:132) is usually based on traditional rather than modern forms of biomedical divination – such as listening, looking, feeling, touching, smelling, and so on; and by numerous questions relating to the patient's feelings, experiences, and behaviour up to that point in time. A minority of patients are referred for hospital investigations, such as blood tests or X-rays (also a form of 'seeing'), or referred to specialists in out-patients departments. In general practice precise differentiation between viral and bacterial infections is often impossible to make (due especially to the time factor involved), or else unreliable. Aetiological agents of infection are often loosely termed "Germs" or "Viruses" by the GPs, when speaking to patients, rather than a precise definition of the type of bacterium (e.g., Streptococcus, Staphylococcus) or virus (Coxsackie virus, ECHO virus) responsible for the condition. Pressure of work, and the self-limiting nature of many infections, makes it impracticable to always undertake bacteriological or viral laboratory studies, such as throat swabs, blood cultures, stool cultures, etc. The diagnosis "an infection" is commonly given, without identifying the causative organism more precisely. Even if more precise diagnoses are given, they are also often couched, as mentioned above, in what to the patients seems a vague way; for example, "upper respiratory tract infection", "a viral infection", "gastroenteritis", "influenza", "bronchitis", "urinary tract infection", "chest infection" and so on. The effect of this vagueness of diagnosis, from the perspective of the patients is, I think, to confirm and strengthen the 'illness entities' – clusters of subjective symptoms and behaviour changes – that constitute the folk model of illness, rather than imposing precise biomedical 'diseases' on this lay model. This vagueness of diagnoses given extends also to the anatomical model used by both patients and GPs; in order to achieve a diagnosis based on mutual understanding, broad areas of the body are coalesced into: "a chest infection", "a tummy bug", "a cold in the head", "gastric 'flu", "an infection in the sinuses", or "a urinary infection". So, to a large extent, as far as diagnosis goes, what might be termed the 'operational' model of the GP in practice bears a closer relationship to the folk model than to the official biomedical model of hospital medicine; and may therefore serve to reinforce that folk model. The entities into which the patients' symptoms are organised in diagnosis often bear a closer resemblance to the symptom groupings of the folk model than to biomedically-defined diseases.

Much of this organisation of symptoms, in the area, is done not by the GPs but by their receptionists – who are often consulted personally or by phone by the patients at the surgery, and often they make the decision as to whether they are ill enough to justify seeing the doctor. In general, the doctors' receptionists act as paramedical diagnosers and advisers, and reduce even further the number of patients who actually get to see the GP. In dress and manner they often mimic the doctors; wear white coats, speak in a voice of authority, and often make confident diagnoses on minor complaints based on their years of experience in the practice.

To some extent diagnosis itself is a cure; especially in those conditions likely to be self-limiting, and where the patient's unease is a marked feature of the condition. This phenomenon was well put by one Phineas Parkhurst Quimby, a famous folk-healer, born in New England in 1802 – "I tell the patient his troubles, and what he thinks is his disease, and my explanation is the cure. If I succeed in correcting his errors I change the fluids in the system, and establish the patient in health. The truth is the cure" (Rose, 1971:62). From my own study and experience, it would appear that in general practice the 'language of

truth' in most consultations was the idiom of the folk model, rather than that of the biomedical model.

TREATMENT OF 'FEVERS', 'COLDS', AND 'CHILLS'

Treatment commonly prescribed by general practitioners for disorders within the Fevers/Colds/Chills model can also be seen to 'make sense' within the conceptions of that model. More important, though, is that many of these prescribed treatments cannot be fully justified in scientific, biomedical terms; it is almost as if, in some cases, the patients are treating themselves, using the doctor as a source of folk remedies – rather than a pharmacy, or a supermarket. An important aspect of any GP consultation under the N.H.S. is the handing over to the patient of the E.C.10 prescription form, which is then handed to a

local pharmacist in exchange for the prescribed drugs. The majority of patients attending a GP are given such a prescription for one or more medicines. In a sense, many GPs regard *all* patients who consult them as being, by definition, in some way 'ill'; even if it is only the 'illness' of over-anxiety. This attitude is expressed by one Professor of Community Medicine (Marinker, 1976) – "A patient is not necessarily someone who has a medical problem; he is rather someone who comes to ask a doctor for help. It is the act of asking, or in the case of those who cannot ask for themselves, of being presented to the doctor, that constitutes that relationship of which we call one half doctor and the other half patient" (1976:18). A result of this over-medicalisation of the population is that more and more minor illnesses that were explained by folk models, and treated by folk remedies, are now brought within the sphere of biomedical treatment. Nevertheless, as the examples below indicate, the biomedical treatment itself can be incorporated into, and be explained by, the folk model itself; and thus helps the patients 'make sense' of the treatment given. Examples of this are:

(1) General Advice (From Doctors or Receptionists)

"Drink a lot of fluid", (for influenza, cystitis, diarrhoea);
"Stay in bed, and keep warm: take warm drinks"[12], (for a Cold);
"Don't smoke now, or it'll go down to your chest", (for a Cold);
"The rash is a good sign; it shows that the infection is coming out of the system", (measles);
"Yes, there is a tummy Bug going around. Starve yourself and take only sips of water for 24 hours; otherwise, the more you feed it (the Bug), the more it'll enjoy itself and cause diarrhoea and sickness". (Advice given by a receptionist to a patient with diarrhoea and vomiting).

(2) Cough Medicines

According to Wilkes (1974: 98–103), a Professor of Community Care and General Practice, an estimated *six million gallons* of cough mixtures are prescribed in Britain every year under the N.H.S. (this excludes the vast quantity of self-prescribed patent cough medicines sold over the counter). Of the about sixty million N.H.S. prescriptions written every quarter, about 5% (i.e. 3 million prescriptions) are for cough mixtures. In a winter quarter they can form the single largest group of drugs prescribed, exceeding antibiotics, tranquillisers, and

antipyretics. At the same time, most medical authorities cast doubt on the pharmacological effectiveness of cough medicines; in some views this is negligible. Wilkes (1976: 98–99) discounts their therapeutic value, except as reassurance, particularly in coughs likely to be self-limiting, as most are. He suggests instead a hot or sweet drink, which will be just as effective; (most cough 129
linctuses are very sweetened, and brightly coloured, as well as having a syrupy consistency. In this they echo the traditional cough remedies of honey in warm milk, or in herbal tea). The official British National Formulary (Harman, 1976–78: 63), after differentiating between expectorants and cough suppressants, the two types of cough medicine, states – "Despite this distinction many preparations contain both expectorant and sedative drugs, and this perhaps reflects the lack of evidence that the ingredients have any relevant pharmacological effect". In other words, about six million gallons of relatively useless coloured water is prescribed every year in Britain. My hypothesis is that a major reason for this is that the cough medicine, in the terms of the widespread Fevers/Colds/Chills folk model, can be seen as something that will expel or "wash out" or dilute the external entity causing the feverish cough; that is, a Germ. This cannot be proved conclusively; obviously cough linctuses do have a limited soothing or pharmacological action. Nevertheless, the flood of cough medicine in Britain, in association with conditions where increased fluid intake is considered beneficial, does seem to me to be suggestive. Cough medicines that are medically prescribed are only part of the total amount consumed; the majority of cough medicine seems to be self-prescribed (see Dunnell and Cartwright, 1972: 26–29, 107–109). I think that the widespread use of a remedy such as cough medicines, in the face of biomedical doubt as to its effectiveness, can be explained (if only in part) by the patients' need to 'make sense' of treatment for their illness in terms of their indigenous medical system.

(3) Anti-Pyretics

These are probably the most widely used medicines, both prescribed and non-prescribed. Again quoting Dunnell and Cartwright's figures, 41% of adults interviewed in a random sample had taken aspirin or other analgesic-anti-pyretic drugs in the two weeks preceding the interview (1972:100). In my study, anti-pyretic drugs were widely prescribed, or suggested, to patients by the GPs; particularly in the case of viral infections, but also in all other cases of raised body temperature within the Fevers group of disorders. These drugs have two effects; the relief of pain or discomfort, and also the reduction of body temperature if this is abnormally raised. Most medical textbooks cast doubt on the effectiveness, or even desirability, of prescribing anti-pyretic drugs to patients with a raised body temperature, unless the fever would be deleterious to the patient for some other reason; a moderate fever may well be a protective physiological mechanism, and also symptomatic improvement caused by the drug may cause the patient to be ambulatory while still infectious, and so spread the infection around.[13] Nevertheless, large amounts of anti-pyretics are prescribed and consumed; from the biomedical viewpoint this is symptomatic treatment for discomfort from sinus blockage, sore throats etc., as well as 130
reducing the temperature. There is no evidence of any curative effect of anti-pyretics on, for example, the common cold or upper respiratory infections, (see Goodman and Gilman, 1965:313–314, 328–329). From the patients' perspective, in the Fevers/Colds/Chills model, the antipyretics *are* curative in

that they are seen to induce sweating – and thus the expulsion of the Germ through the skin – and thereby return the temperature back to normal.[7]

(4) Antibiotics

These are generally known by the patients "to kill Germs", particularly Germs that cannot be expelled, starved, or otherwise eliminated. The patients do not differentiate between bacteria – where antibiotics *are* effective – and viral infections, where they are not. Nor, it must be said, do many GPs make this differentiation in practice; whether by a more thorough examination, or by laboratory investigations. A result of this is that, in the rushed consultations in general practice, antibiotics are often prescribed for viral infections; and an effect of this is to confirm in the patients' minds that "Germs" are a group of homogenous entities, with no differentiation between viruses and bacteria, and therefore that all or most Fevers require antibiotic therapy. The constant demand by patients, especially the younger ones, for antibiotics is evidence of this attitude, as is the vast number of antibiotics prescribed annually.[14] From the patients' perspective, antibiotics are seen as a force introduced into the body to fight and kill the Germ *in situ*, with the body being the passive battlefield in this struggle. The GPs' reluctance, or inability, to differentiate between viruses and bacteria – or between different strains of bacteria[15] – has led to a vast amount of overprescribing of antibiotics, numerous side-effects, and the development of resistant strains of bacteria; at the same time it has served to reinforce the folk model's conception of 'Germs' as being all of one type, and so requiring the same type of treatment.

(5) Nasal Drops, Sprays, and Inhalations

These are widely used, both by self-medication, and prescribed by the GP. They are considered particularly useful by the patients in 'Cold/Wet' conditions, such as coryza, or early influenza, and the aim of treatment from the perspective of the folk model is to move the patient from the 'Wet' to the 'Dry' state. Although these are frequently used, and frequently prescribed ("I'll give you something to dry up that Cold"), most medical authorities cast doubt on their safety in the long term, particularly on their effect on the nasal mucous membrane. In the opinion of one medical writer (Harrison, 1976), "The only nasal drops which can be prescribed with complete confidence regarding frequency of use and efficacy are isotonic saline solution. By sniffing up such a preparation, usually made at home by dissolving one teaspoon of salt in a glass of tepid water, the patient may readily remove secretions and crusts with both efficacy and safety. A simple douche system makes this remedy even more effective" (1976:72–73). Despite this common-sense advice, a great number of nasal drops and other local preparations are prescribed by GPs, though the number is falling. The point is that Colds, which were usually treated by self-medication, are now increasingly being treated by doctors. A larger portion than before of the 'Cold' side of the folk model is being treated by general practitioners; and in the patients' perspective this gives almost equal weight to both 'Cold' and 'Hot' sides of the folk model.

(6) Other Proprietary Preparations

A wide variety of proprietary preparations are available which provide symptomatic treatment for conditions in the Fevers/Colds/Chills model. Some of these (especially 'Cold' or 'flu' medicines) can be bought over the counter in pharmacies or supermarkets, while others can only be obtained with a doctor's prescription. The significance of these preparations is that they treat a cluster of symptoms which constitute the folk model, rather than treating the *cause* (for example, a virus) of the biomedical disease; in other words, they treat 'illness' rather than 'disease'. They are palliative rather than curative, and are widely prescribed by GPs for conditions that are likely to be self-limiting, or as an adjunct to curative therapy. From the perspective of the folk conception of illness, these symptomatic treatments are often seen as curative, preparations which reduce fever, relieve sinus or nasal congestion, induce sweating, aid expectoration, and so on, are conceived of as specific cures for the clusters of symptoms that make up the 'illness entities' of the Fevers/Colds/Chills model. Drugs which palliate a whole cluster of symptoms simultaneously – especially if prescribed by a doctor – tend to reinforce a folk model of 'illness', rather than educate the patients in the nature of biomedical 'disease'. In the Fevers/Colds/Chills model described here, a number of proprietary preparations are available which treat simultaneously a number of symptoms within the folk model. Often Vitamin C is included as a 'tonic' in a modern form, especially in building up one's energy to fight a Cold. Examples of commonly used combination drugs[16] are:

Antipyretic-Analgesic + Decongestant (e.g., 'Triogesic')
Antipyretic-Analgesic + Decongestant + Cough Suppressant (e.g., 'Triotussic', 'Vicks MediNite')
Antipyretic-Analgesic + Decongestant + 'Tonic' (Vitamin C) (e.g., 'Uniflu plus Gregovite 'C')
Antipyretic-Analgesic + Decongestant + Stimulant (Caffeine) (e.g., 'Emprazil')[17]
Antipyretic-Analgesic + 'Tonic' (Vitamin C) (e.g., 'Beecham's Powders')
Decongestant + Cough Suppressant + Expectorant (e.g., 'Antitussin')
Decongestant + Cough Suppressant (e.g., 'Actifed Compound Linctus')
Cough Suppressant + Expectorant (e.g., 'Terpolin')

These examples are mainly concerned with disorders of the respiratory system; combination drugs do not exist for all the symptom-clusters within the Fevers/Colds/Chills model. Nevertheless they do provide an example of how biomedical treatment, whether prescribed by a doctor or self-prescribed, can fit into the folk model without challenging its basic premises; in fact, especially in the case of medically prescribed drugs, they may actually serve to reinforce it.

In several of the examples of treatment for common Fevers or Colds that are given above, there is little or no biomedical justification for that treatment; it would seem that many prescriptions are given more to 'fit in' with the folk model, rather than on strictly rational or scientific biomedical grounds. The folk model still exerts a potent influence on the prescribing habits of many GPs.

Although the conditions that fall within the Fevers/Colds/Chills model are in general trivial and non-life-threatening, they are extremely common in the population at large, and are frequently encountered in general practice. As such they provide a useful source of data for any study of the persistence of folk beliefs about illness in a Western, urban community; a community long exposed to information about biomedicine, and which is in frequent contact with the medical profession. The creation of the National Health Service in 1948, which brought free medical care to the entire population, also converted the entire population into potential patients. A wide variety of folk beliefs and folk remedies relating to illness, which, largely for economic reasons, had remained untouched by the medical profession prior to 1948, were suddenly brought into contact with the concepts and treatments of biomedicine. The Fevers/Colds/Chills model described above is just one example of such a folk system. Despite the impact of information about the true nature of microbial infections, the basic underlying classification of 'Fevers', 'Colds', and 'Chills' seems to have remained largely unchanged. It is suggested that a reason for this is that GPs in the area studied (and presumably in other parts of the country[18]) give their patients diagnoses and treatment which clearly 'make sense' in the terms of reference of the folk model. Biomedical concepts are tailored to fit in more closely with the patients' model in the consultation; partly to avoid 'cognitive dissonance' in the interpretation of the illness; partly because most conditions in the Fevers/Colds/Chills model are self-limiting and not life-threatening – so that in treating them symptomatically the GPs are less concerned to be biomedically 'scientific', than they would be in more dangerous conditions. The rushed consultation times of only a few minutes per patient also make it difficult to be more scientifically exact in diagnosis and treatment, and afford the doctor less opportunity to dispute or tamper with folk models of illness. ("My job," as one GP put it, "isn't to educate – it's to cure"). The effect of these factors is to reinforce, in the patients' minds, many aspects of their traditional folk models of illness, and the traditional remedies used for them.

It would seem, therefore, that in some respects the 'operational model' used on a day to day basis by the GPs is closer to that of the lay model than to the official biomedical model of disease – as found in hospital medicine, the medical textbooks, and the medical schools. However, this effect on the prescribing habits of GPs is by no means always benign; many of the drugs prescribed have undesirable side-effects, both in the short- and the long-term. Antibiotics, antipyretics, and even anti-histamines may all cause dangerous side-effects. In addition, the cost of N.H.S.-prescribed drugs is spiralling in Britain[19]. If six million gallons of cough medicine are annually prescribed by doctors, in the face of biomedical doubt as to its pharamacological effectiveness, a case might be made for the much wider use of harmless 'placebo' drugs – at least in those conditions known to be trivial and self-limiting. The increased use of traditional remedies by patients should be encouraged, provided that they are free of harmful side-effects, and that the doctor is confident that biomedical treatment cannot improve on the traditional remedies – in safety, or in effectiveness. If life is being 'medicalised', as Illich has suggested – that is, brought under the aegis of the biomedical model of misfortune – then at least one can ensure that the treatments prescribed are not dangerous to the patients in any way. As the common conditions within the Fevers/Colds/Chills model are now firmly within

the biomedical sphere of influence, at least in Britain, it is important that doctors should be more aware of the traditional medical systems of their patients, and of the effect of these systems on their own prescribing habits.

Contrary to its original intention, the National Health Service in Britain may have reinforced the 'folk healer' aspect of its General Practitioners; a much wider range of life experience and misfortune is now being dealt with by GPs – not only a wider range of illness and disease than formerly, but also psychological crises, life crises (such as bereavement, divorce, etc.), and all the normal biological landmarks, such as birth, childhood, puberty, menopause, and death. In an age of preventive medicine, the GP deals increasingly with healthy people (as biomedically defined), for immunisations, ante-natal clinics, cervical smear clinics, baby clinics, and so on. The more intimate and long-term relationship between GP and patient that this brings about does not seem to have drastically changed folk models of illness. The Fevers/Colds/Chills model is one example of this, but undoubtedly there are many others that remain to be studied, with the eventual aim of improving health care, with less side-effects to the patient.

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NOTES

1 I have used the term 'biomedicine' throughout the paper; in Fabrega's definition it is "The whole medical complex in Western nations, which includes knowledge, practices, organisations, and social roles" (1975:969). It is therefore "our own culturally specific perspective about what disease is, and how medical treatment should be pursued" (1975:969). It is the world-view of a professional subculture, the medical profession. The term 'biomedicine' is rarely used in British anthropological or medical writings.

2 The history and sociology of the British National Health Service are well described in Stacey (1976), and Levitt (1976). In Stacey's book, see Gill's article (1976:10–12) for a history of the N.H.S. and of the medical systems which preceded it.

3 See Levitt (1976:96. Table 4). She quotes a study of the 'Annual Morbidity Experience in Average British General Practice of 2,500 Persons (i.e., numbers of patients suffering from the diseases that the doctor may expect to see each year).' Of the patients seen, 1365 had 'Minor Illness', 288 had 'Major Illness', while 558 had 'Chronic Illness'. Of the 'Minor' conditions, 674 had Upper Respiratory Infections, 84 had Acute Otitis Media, 51 had Acute Urinary Infections, and 53 had 'Common Digestive Disorders' (which presumably includes Gastro-enteritis). Of the 'Major' conditions, 184 patients had Pneumonia and Acute Bronchitis.

4 Many medical anthropologists have noted that definitions of 'normality' in health differ between cultural groups and social classes. In Britain there are significant differences in the definition of 'illness', and in the threshold at which it is brought to a doctor, between the different socio-economic classes. For a study of this, see Cartwright and O'Brien (1976:77–94).

5 For example, see Camp's article (1976:70–76) on the medical use of hydros and spas in France ("la thermalisme"). In France there are over a hundred of these spas and hydros to which half a million patients are referred by their family physicians every year. This practice is now almost unknown in Britain, though 'hydrotherapy' flourished here from the 17th century. French spas are supervised by 'thermal specialists', many of whom are doctors who have taken a 'diploma in hydrology'.

6 See Levitt (1976:98. Table 4).

7 One popular book of folk remedies (Mellor, 1975) puts this concept in a similar way; for example, the treatment she recommends for the common Cold is: "Hot lemonade with a pinch of cinnamon and a little honey in it, and hot elderflower-and-mint tea, with a pinch of composition powder in it, will induce sweating and excretion of waste-products through the skin. The body should be rubbed down with a rough towel; this will remove the sweat, and will induce further sweating and further elimination of unwanted debris through the pores of the skin" (1975:89).

8 Cf. Mellor (1975:66) on the treatment of "Bronchitis and Broncho-Pneumonia" – "The best way to cure both of these ailments is to fast, on juices only, for a day or two. A cup of hot elderflower-and-mint tea should be taken every half hour until sweating begins, then only every hour. The sweat should be removed with a dry towel."

9 See Lewis, I. M. (1971:66–99) for a description of the "malign pathogenic spirits" who cause illness by possession of the victim's body, in parts of Africa and elsewhere. In these societies 'spirits' are hypotheses for the causation of illness. These spirits are capricious and amoral in their attacks, and their victims are considered blameless. Among the Luo of Kenya, for example, "amoral, malevolent spirits of external origin", existing alongside the ancestor cult, cause a wide variety of afflictions, especially among women (1971:81). In other similar societies, these spirits "strike without rhyme or reason; or at least without any substantial cause which can be referred to social conduct. They are not concerned with man's behaviour to man. They have no interest in defending the moral code of society, and those who succumb to their unwelcome attentions are morally blameless" (1971:71).

10 An inadequate diet, especially, is now increasingly blamed for Colds. Cf. Mellor (1975:89) – a Cold is "Nature's way of forcing you to rest, so that your body can throw out unwanted debris that has accumulated in the blood. An unclean bloodstream, loaded with unwanted debris, provides a favourable breeding ground for the common-cold virus, which cannot live and multiply in a clean bloodstream because it requires waste-matter on which to feed. It gains entry into the body via the nose or mouth, but, if waste-matter is not present in the blood, it will have nothing to feed on and will soon die and be excreted, together with other unwanted debris, through the eliminative organs of the body. A clean bloodstream is, therefore, the best insurance against all forms of germs, including the cold-virus and the 'flu-virus."

11 One patient whom I diagnosed as having a "viral infection", replied "That means you don't know what's wrong with me, doctor."

12 Similar advice for the common cold can be found in many medical textbooks; in Maclean and Scott (1968:178) for example, treatment of the common cold includes bed rest in a warm room, together with hot drinks and a hot bath.

13 See Goodman and Gilman (1968:328); and Chatton, Margen, and Brainerd (1970:5–6).

14 See Trethowan (1975:749) – In 1972, in England, 36 million prescriptions for 'Anti-Infective Drugs' were issued by GPs in the N.H.S., at a total cost to the state of £23.7 million. This amount excludes anti-infective drugs prescribed under the N.H.S. in Wales, Scotland, and Northern Ireland, and those prescribed by hospital doctors.

15 Medical textbooks stress the fact that viruses are not susceptible to antibiotic therapy; see Garrod and O'Grady (1968:427), and British National Formulary (Harman, 1976:115).

16 Details of all prescribable proprietary drugs available in the United Kingdom, together with their pharmacological constituents, can be found in the monthly publication 'MIMS' ('Monthly Index of Medical Specialities'), published by Haymarket Publishing Company, London. It is sent free each month to most doctors in the UK. Some patent remedies are not included in it, especially those that can be bought in pharmacies and supermarkets.

17 Emprazil's slogan, written on each box, is: "Clears the nose, eases aches and pains – Helps you carry on through the cold."

18 Byrne and Long's study (1976) of consultations between GPs and patients in several areas in Britain, includes transcripts of a few conversations which seem to exemplify these points, for example, in one conversation between D(Doctor) and P(Patient): D. "Hello, come in, how are you?" P. "Got a cold . . ." D. "It's the fashion this week, everybody's got it. Well, now, how's the breathing going, any different?" P. "Not so bad, doctor, can't grumble. I feel a bit better than I did before." D. "That's a good sign. Are you coughing at all?" P. "A bit. Just got a bad chest, just my arms you know." D. "It's the cold and damp – that sort of thing . . ." (1976: 93–94).

19 See Trethowan (1975:749) – In England only, in 1972, 255.9 million prescriptions were issued by General Practitioners in the N.H.S., with a total cost to the state of £155.1 million.

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Barbara and John Ehrenreich

1.8

MEDICINE AND SOCIAL CONTROL

The question most frequently addressed to angry groups of service consumers in the sixties was: "What do you people *really* want?" The initial answers could be condensed to one word: more—more educational opportunities, more health and mental health services, more welfare and social services. In time, the answers were tempered with the realization that "more" might be less than enough, and even "better" might not be good enough. What was the point of more schools, or even more teachers and equipment per school, if the fundamental mission of the schools was to socialize children into capitalist values and (unappealing) work roles? Who wants a community mental health center, even an attractive and well-staffed one, if its ultimate prescription for mental health is acquiescence to oppression? As a radical analysis developed and deepened, it made it clear that the schools, the welfare agencies, and the mental health and other social service systems were agencies of *social control*. "More" was not only not enough; it could be dangerous. 39

The one area of human services which escaped the sixties relatively unsmeared was medicine. It is true that radicals (ourselves included) bitterly castigated the medical system, but always more for what it did *not* do than for what it did. It did not offer high-quality, dignified medical care to the poor; it did not energetically expand preventive services; it did not lower the financial barriers to the care experienced by working-class people. Why not? The answer was simple enough: the medical system was too concerned with profits, power, and status to care much about services; these were merely a byproduct of Americas' "number one growth industry"—health. Radical analysis tended to ignore the byproduct and focused on the industry—its institutional contours, its relationship to government and the economy in general, etc.[1] 40

If there was a "politics of health" that went deeper than the political economy of the institutions and the gross inequities in the availability of care, it was not examined. Medical services themselves were seen as politically neutral: the need for them was biologically ordained; their precise content was technologically determined. Although all the visible abuses—profiteering, unjust distribution, the use of poor people as "teaching material," racism and sexism from doctors, and so forth—came under fire, the core of the system remained sacrosanct, out of bounds for social criticism.

There are two important exceptions—two areas where radical analysis has gone beyond a single-minded concern with availability and quality and begun to probe the ideological con-

tent of health services themselves. First there is the area of mental health. Early critiques of mental health services focused on their unavailability to poor and working-class people. Today, many radical psychiatrists are skeptical about the therapeutic value of conventional mental health services for anyone. They have arrived at the conclusion that mental health services operate directly to enforce oppressive sex and class roles, to reinforce individualism, and to promote the idea that however oppressive your situation is, your problems are "all in your head."[2]

The second area in which the health movement has broached the issue of the ideology of health care is the area of women's medical care. Faced with what some have described as "sexocidal" tendencies in medicine—evidenced by massive pharmaceutical experiments on women, excessive gynecological surgery, and so forth—it is not surprising that the overwhelming concern of the women's health movement is *survival*. As in the health movement in general, availability, cost, and quality are the central issues. At the same time, the ideological content of the services has not gone unexamined. Feminists point out that the treatment of women is often patriarchal to the point of medical irrationality. (For example, standard obstetrical procedure features the woman unconscious and/or strapped down to a table while the lordly obstetrician extracts the baby with forceps. There is considerable evidence that anesthesia, the supine position, and forceps are unhealthy for mother and baby.) The effect of this kind of treatment is to promote feelings of passivity and low self-worth on the part of women, hence to reinforce oppressed roles as wives and workers.[3]

But the issues raised by feminists and radical mental health workers have not been integrated into the mainstream of radical analysis of the medical system. They have been incorporated as qualifications, and little more: "We want *more*, but, if possible, without the sexism, racism, ideological manipulation, etc." Whether such a qualified expansion is possible, whether the ideologically objectionable features of the services can simply be "peeled off" the presumably neutral core, has not been examined. Answering such questions, it seems to us, is central to the framing of a truly socialist, feminist, and humanist vision of health care.

Our purpose here is to lay out a tentative approach to an understanding of the social control functions of the medical system. At the outset we want to make clear, first, that our approach is sociological, and not primarily medical or economic. We are not concerned with the biological impact of medical services, but with their social impact—how they are viewed by people, what expectations people bring to them, how their behavior or understanding of social reality is affected by them. Thus we would not ask of a given service, or element of service, such as a chest x-ray: "Was it really necessary or helpful?" It might well be both necessary and helpful, but regardless of the answer, we are interested in a different set of questions: how was it experienced by the patient? What was the nature of the social interactions required for its performance? Though some may see this approach as narrow or blind to everything that is "good" in medicine, we see it as essential to making a fresh start in our analysis—to seeing medicine as something other than what the

medical men themselves define it as. And except insofar as the financial transactions between doctor (or hospital) and patient directly affect the social relations between them, we shall not be concerned with the economics of health care, either.

Second, our description of the medical system as a system of social control is not, in itself, an attack on the medical system. 42
Any social system is characterized by mechanisms of social control—mechanisms that ensure that members of the society follow the behavior patterns acceptable to the particular society (in particular, in the societies we are most familiar with, to the ruling classes of the society—but even a totally egalitarian society would have such mechanisms). Our concern here is not with the fact that the medical system functions as a system of social control *per se;* it is rather with the *content* of the social control exercised. To sum up our argument briefly, a capitalist health-care system operates to maintain and reinforce capitalist social relations.

Third, we should make it clear that to analyze something as a system of social control is not to view it as a conspiracy. We are not arguing that the health system is consciously designed to exercise social control, or that the social control functions of the health system somehow explain its structure and dynamics. On the contrary, we explain the social control functions as themselves a result of the institutional structure, organization, and economics of the health-care system.

Finally, we want to emphasize that our analysis is a tentative one, bordering in places on the purely speculative. The value of such a tentative beginning lies in the work which it stimulates others to do.

Doctors (and most of the public) view the medical system as a system for distributing technical expertise and intervention in the interest of improved biological fitness among the recipients. *Sociologists* view the medical system as a system of social relationships: "sickness" is a *social role* (as opposed to "disease," which is a *biological state*) and it is the business of the medical system to control entry into sick roles and to define the behavior appropriate to them. In the medical view, the issue of social control never arises, unless one considers that making people fit or capable to perform their normal activities is in itself a form of social "control." In the sociological view, the medical system is, at least in a formal sense, a system of "social control"—simply 43
because it defines roles, regulates entry into them, etc. Our interest here is not in academic formalisms—sociological or medical—but in the social and ideological impact of the medical system. We take some of the conclusions of academic sociology as a starting point for our analysis because they provide important insights into the fundamentally *political* issues that concern us: who is being "controlled," by whom, how, and in whose interests? And although such questions may not be of great concern to bourgeois sociology, we emphasize that they cannot even be framed within the *medical* description of the medical system which has so thoroughly dominated radical thinking up until now.

The two most important contributers to the sociological description of medicine are Talcott Parsons and Eliot Freidson.[4] We have no intention of summarizing, much less criticizing, their work, but we would like briefly to restate what we have found important in it. We consider them separately because their views, while in no way considered contradictory in sociological circles, do imply two apparently contradictory descriptions of the medical system and of the forms of social control that it exerts.

Parsons' classic contribution to medical sociology is his description of the sick role. The characteristics of the sick role are: (1) The individual is not held responsible for his/her condition. (Sinners and criminals are responsible; sick people are not.) (2) Conditions defined as illness are seen as a legitimate basis for certain *exemptions* from normal responsibilities—"sick" people can stay home from work, be waited on, etc., depending on the severity of the incapacity. (3) The exemptions held out to sick persons are only *conditionally* legitimate, the prime condition being that the sick person recognize that sickness is an undesirable state and that he/she has an obligation to try to get well. (4) In our society, this is an obligation to seek competent help and to cooperate completely with the efforts of competent helpers in becoming well.

In Parsons' view the sick role is always a tempting one: it is not considered blameworthy and it offers a way out of normal responsibilities. Insofar as illness is motivated, "the motives which enter into illness as deviant behavior are partially identical with those entering into other types of deviance, such as crime and the breakdown of commitment to the values of society. . . ." So it is understandable that certain features of the social construction of sickness are set up to discourage people from using a sickness as a way of dropping out:

> Life has necessarily become more complex and has made greater demands on the typical individual. . . . The motivation to retreat into ill-health through mental or psychosomatic channels, has become accentuated and with it the importance of effective mechanisms for coping with those who do so retreat.

First, there is the fact that sickness is seen as undesirable:

> The stigmatizing of illness as undesirable and the mobilization of considerable resources of the community to combat illness is a reaffirmation of the valuation of health and a countervailing influence against the temptation for illness. . . . Thus the sick person is prevented from setting an example which others might be tempted to follow.

As an added precaution, the sick are insulated from each other and from the general public, and placed under the supervision of certain nonsick people (medical personnel):

> The essential reason for this insulation being important in the present context is not the need of the sick person for special "care" so much as it is that, motivationally as well as bacteriologically, illness may well be contagious.[5]

The picture of the American "sickness system" that emerges from Parsons' work, then, is like nothing so much as the American welfare system. Welfare too holds out exemptions, particularly from the requirement to seek gainful employment. But these

exemptions are offered only to the "legitimately" poor (those certified as eligible) and they are only offered on the condition that the recipients recognize their state as undesirable and cooperate with "competent helpers" (social workers) to overcome the "character defects," "family pathology," etc., which have led to it. Like the sick role, the "welfare role" puts the recipient under the supervision of certain nonpoor people (caseworkers). And, even more obviously than in the case of sickness, a variety of measures (low payments, degrading procedures) are taken to make sure that the welfare role will not be too tempting to the mass of working people. Concern for the sick or poor, it seems, must always be held in check by the fearful possibility of *contagion*.[6]

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Singularly absent from Parsons' description is any sense of agency. What determines the "social construction of sickness" that he describes? In the homogeneous and seemingly middle-class America of Parsons' medical writings, the answer is simply "our values," and these appear to arise out of some deep cultural consensus. The first thing that strikes us as important about Freidson's work is that he identifies the actual architects of our "social construction of sickness": it is the medical profession that defines illness in theory (i.e., defines which biological syndromes admit one to the sick roles and which can be considered as minor, psychosomatic, or otherwise ineligible for special treatment). And it is the doctors who identify illness in practice (determine who is eligible for sick roles), and undertake to supervise those identified as "sick."

> They [professionals] are not merely experts but incumbents in official positions. . . . Given the official status of the profession, what happens to the layman—that is, whether or not he will be recognized as "really" sick, what the sickness will be called, what treatment will be given him, how he will be required to act while ill, and what will happen to him after treatment—becomes a function of professional rather than lay decision. . . . Thus the behavior of the physician and others in the field of health constitutes the objectification, the empirical embodiment, of certain dominant values in a society.[7]

Where Parsons is concerned with a culturally diffuse "sickness system" (our term), Freidson is concerned with the actual medical system. He describes it as an agency of social control on a par with the legal system or organized religion. Each of these institutions is concerned with the prevention, detection, and management of social deviance—criminality in the case of the law, sin in the case of the church, sickness in the case of the medical system. In his understanding of deviance, Freidson makes a significant departure from Parsons. Parsons sees deviance as motivated behavior or deliberate idiosyncrasy—more a matter for psychiatry than for sociology to comprehend. Freidson's approach is operational; he describes deviance as a state *imputed* by the relevant officials: the courts label certain people as "murderers" or "shoplifters"; doctors label certain others as "cancer cases" or "neurotics." Once so labeled, the person is required to enter the social role appropriate to the label—to undergo certain types of treatment, to modify his or her behavior in ways seen as therapeutic, perhaps to abandon all other social roles and enter an institution

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filled with similarly labeled people (cancer ward, jail, mental hospital).

The aspect of the sick role which seemed to concern Parsons was the exemptions that it entailed, and the allure that these might exercise on the nonsick. The aspect of the sick role that concerns Freidson is the requirement that the sick person cooperate with the agencies and personnel set up to deal with his or her sickness. To enter the sick role is to enter a state of professional dominance:

> In essence, the process of treatment and care may be seen as a process which attempts to lead the patient to behave in the way considered appropriate to the illness which has been diagnosed, a process often called "management" by professionals. . . . Professional management generally functions *to remove from the patient his identity as an adult, self-determining person*, and to press him to serve the moral and social identity implied by the illness which is diagnosed. [Emphasis added][8]

This is a remarkably cold-blooded description of the sick role, and one that raises serious political—if not moral—issues.

What does arouse Freidson's moral concern is not the power of the medical profession to manage the sick, but its power to define what is "sick." He describes the medical system as continually expanding its definition of sickness to embrace more and more forms of social deviance: sin is going out of style along with the church; the courts are losing ground to the psychiatric establishment; and "the hospital is succeeding the church and the parliament as the archetypical institution of Western culture."[9] Drunkenness becomes "alcoholism"; "perversion" becomes "psychosis"; and so on as medicine expands its jurisdiction to cover more and more areas once reserved for law or religion:

> The consequence of the movement [expansion of medicine's jurisdiction], however, is the strengthening of a professionalized control institution that, in the name of the individual's good and of technical expertise, can remove from laymen the right to evaluate their own behavior and the behavior of their fellow—a fundamental right that is evidenced in a hard-won fight to interpret the Scriptures oneself, without regard to dogmatic authority, in religion and the right to be judged by one's peers, in law.[10]

The picture of the medical system that emerges from Freidson's description is that of some vast, expansionist, and itself uncontrolled regulatory apparatus—forever advancing the frontiers of its jurisdiction and enfolding more and more citizens into its (always benevolent) supervision. Medical theory aggressively claims new territory as "sickness." Practicing physicians zealously recruit their patients into sick roles (lest they miss someone who turns out to be "really sick" after all). The ranks of the "sick" swell, but there is no way that this army of "deviants" can turn against the social order; each marches to a separate drummer, and submits to his or her own medical "management."

There is a world of difference between this and Parsons' vision of the medical system (or, to be fair, our extrapolation of his vision). The one is chary in its favors (exemptions); the other is recklessly indulgent. The one excites moral concern over what it may not do, whom it may not care for, in its caution lest "sick-

ness" sap the moral fiber of the nation. The other excites concern for what it *does* do, whom it does care for, in its drive to be caretaker for more and more of the nation's ills.

We emphasize this difference in perspective not because we are interested in provoking an academic sociological debate where there was none before, but because the same apparent contradiction runs through the radical critiques of the medical system: on the one hand we blame the system for being too chary and exclusionary—"there are not enough services; what there are are too costly, uninviting, etc." On the other hand we, to a lesser extent, blame the system for being expansionist—claiming ever more areas for its jurisdiction and endlessly expanding its institutional apparatus. Nowhere is this contradiction closer to the surface than in the critiques of "medical empires."[11] Some empires were criticized for being "conservative" and failing to expand their services to needy communities. Others were criticized for being "expansionist" and seeking to expand their services—i.e., their "control" over community health resources. Some were criticized for having *both* tendencies.

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We do not wish to make too much of this apparent inconsistency. As activists learned in the health movement, the medical system does have both exclusionary and expansionist faces, and neither is wholly benign, or even "neutral." In fact, we can now postulate that the expansionist and exclusionary aspects of the medical system, recognized by both academic sociologists and radical critics, correspond to two different forms of *social control* exerted by the medical system, which we shall call *disciplinary* social control and *cooptative* social control.

TYPES OF MEDICAL SOCIAL CONTROL

Disciplinary control. This type of social control is exerted by exclusionary sectors of the medical system. Exclusionary sectors are characterized by high barriers to entry (high costs, geographical inaccessibility, etc.) or socially repellent treatment of those who do enter (discourtesy, extreme impersonality, racism, fragmentation of care, long waits, etc.). The impact of exclusionary sectors on the populations that they are supposed to serve is to discourage entry into sick roles, either because of the visible barriers to entry or because of public knowledge of the treatment experienced by those who do enter (or, in some cases, both). In so doing, such services exert what we will call disciplinary social control in that they *encourage* people to maintain work or family responsibilities—no matter what subjective discomfort they may be experiencing.

Disciplinary social control operates primarily on those who are not "sick" (in the sociological, not the medical sense). At times, it has been used quite consciously to maintain industrial discipline in the work force. Foucault describes the combined poorhouses/insane asylums of eighteenth- and nineteenth-century Paris and London. These were maintained as *public spectacles* to remind the populace of what awaited them if they opted to drop out into pauperism or madness.[12] In much the same way today, exposés of conditions in state mental hospitals serve to discourage "madness" as an out, just as public knowledge of the indignities

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inflicted on welfare recipients serves to discourage willful unemployment. (Doctors also may function quite explicitly to keep people out of sick roles and in work roles rather than to detect and cure disease. Consider the company doctor, whose role is to pressure the injured worker to return to his station: production losses are minimized and the company saves on workman's compensation benefits. The widespread requirement of a "doctor's note" to excuse absence from work or school similarly reflects the anti-"malingering" function of the medical system.)

Cooptative control. This kind of social control is exerted by expansionary sectors of the medical system. Expansionary sectors are characterized by relatively low barriers to entry, and acceptable, even sympathetic, treatment of those who do enter. Such services encourage people both to enter sick roles and to seek professional help in a variety of nonsick situations (for preventive care, contraceptive services, marital difficulties, etc.). In so doing they bring large numbers of people into the fold of *professional management* of various aspects of their lives. It is this situation of professional management—whether all-inclusive, as in the case of a cancer patient, or partial—which allows for the exercise of cooptative control. It should be clear that cooptative control, unlike disciplinary control, operates on those who do gain entry into the system, to whatever degree. The important question, of course, is: What is the nature and ideological content of cooptative control? In other words, what is the impact of professional management on the patient's ideology, self-image, acceptance of work and family roles, etc.? We will devote a major section of this paper to a discussion of these questions.

First, however, it is important to emphasize that the exclusionary and expansionist aspects of the medical system are often closely intermingled. A given agency, or even physician, may present exclusionary or expansionist faces at different times, in different situations, to different groups of patients. At the same time, as we all know, there are certain consistent patterns in the kind of care experienced by different groups in our society—classes, sexes, races, age groups. For example, the overwhelming historical experience of the poor is of an exclusionary system. Thus the different forms of social control that we have distinguished are exerted differentially on different groups in society. History provides a striking illustration of the differential social control functions of the medical system.

Consider the kinds of medical care experienced by the urban poor and by the urban upper and upper-middle classes in late nineteenth-century America. (This period is interesting not only because it provides such vivid contrasts but because this is the period of the formation of the American medical profession.) The urban poor—mostly first- and second-generation immigrant workers—faced a grossly exclusionary system. Aside from a few dispensaries located in the ghettos, professional out-patient care was virtually unavailable; doctors were not interested in serving people who could not pay, or could not pay well. Institutional care, in the few municipal hospitals of the time, was avoided for good reasons—sanitary conditions in the hospitals were atrocious; nursing care was minimal until quite late in the century; and medical science had little to offer anyway.

Professionally "legitimized" sick roles were simply not available to the poor. Grinding poverty and the brutality of employers meant that if you were sick enough not to work, you were probably sick enough to die, and conditions in the hospitals meant that if you were going to die, you were better off dying at home. *Disease*, of course, *was* readily available to the poor—TB, cholera, typhus and typhoid fevers, malnutrition, and untreated complications of childbirth were rampant. But without a social and medical system willing to identify the diseased and offer exemptions to them, disease does not become sickness—the diseased go right on working. Thus, to the extent that the nascent medical system of the time had any effect on the poor, it was to enforce industrial discipline.

Meanwhile, the urban upper classes—families of wealthy businessmen, bankers, etc.—faced a medical "system" that was expansionary to a degree experienced by very few Americans today. 51
Relative to today, there was an *excess* of doctors serving the better-off. (At least it appeared so to the American Medical Association at a time when doctors were reduced to running newspaper ads and other less-than-professional tactics to drum up business.) One of the medical profession's most successful business strategies was the exploitation of affluent women as patients. First, medical theory maintained that women—or at least "ladies"—were inherently sick; menstruation (with or without any irregularity), pregnancy, menopause, and puberty were described as morbid conditions requiring close medical management. To fill in the time between these reproductive crises, doctors found a host of vague disorders—"nerves," "chlorosis," "hysteria"—also requiring diligent treatment. (Medical neglect of poor women, who also suffered from the supposedly baneful effect of uterus and ovaries, was justified on the grounds that the poor were constitutionally tougher than the rich, consistent with their "coarser" natures.)

Sickness became so stylish among upper-class women that it is hard to say where the sick role ended and the approved social role of women began. Fainting and nervous delicacy were signs of good breeding; lengthy rest cures and visits to health spas were definitely "in"; invalidism was virtually a way of life for many; the doctor was an almost constant companion. The woman who yearned for a more active life ran into stern medical admonishments—higher education could cause the uterus to atrophy; political involvement, even voting, could be an invitation to hysteria. Rebelliousness was itself pathological, and indicated the need for a medically managed return to "normalcy."

Whether the doctors were motivated by greed, misogyny, or a benevolent concern for the "weaker sex" does not concern us here. There can be no question but that medicine operated as a key agency in the social control of women—enforcing passivity and a childlike dependency on men, particularly on doctors and on the husbands who paid the bills. It is true that these women were *objectively* dependent on men anyway; they had few rights and no means of self-support. But medical theory provided a "scientific" justification for their dependency; and medical practice served, in effect, as an intimate surveillance system—ready to 52
detect female discontent when it was still at the stage of "nerves" or hysteria, and to intervene at once with a regime for "recovery."[13]

Thus the emerging medical system exerted two different kinds of social control on the two groups that we have considered: services for the poor served as a warning to the poor not to get "sick" (and possibly to the rich, as a warning not to get poor). This is what we have termed "disciplinary" control, and was aimed at the not yet sick, the working poor. The wealthy, especially wealthy women, on the other hand, experienced what we term "cooptative" control. This form of control was latent in the services themselves, and directed at those labeled "sick" (a category which, in medical theory of the time, included all affluent women).

THE EVOLUTION OF THE MEDICAL SYSTEM

The differential pattern of social control which prevailed in the late nineteenth century cannot, of course, be simply extrapolated to the present. The class structure of society has changed dramatically; sex roles have changed in all social classes. Even more important, for our analysis, the medical system itself has undergone profound changes—not only since 1900, but since 1930. Two broad changes in the medical system seem particularly relevant: (1) the vast expansion of the system, in all dimensions; and (2) the rapid rise in status and class position of the medical profession. The first is related to an expansion of the cooptative social control exerted by the medical system; the second is related to changes in the ideological content of that control.

The expansion of the medical system since 1900, or even more strikingly, since 1930, needs little documentation. It can be measured with any parameter that one wishes to apply—the absolute and relative amount of money spent on medical services, the number of people employed by the medical system, the amount of institutional resources devoted to medicine, or the public utilization of medical services.[14] Underneath what appears to be an amorphous mushrooming, we can distinguish three major dimensions of expansion:

1. An expansion in the *jurisdiction* of the medical system to include totally new types of services and functions, and services which were not formerly seen as medical : family planning, abortions, in-patient obstetrical care, long-term care of the aged and disabled, community mental health services, marriage and sex counseling, cosmetic surgery, etc.

2. An expansion in the *number and kinds of services* available within the traditional jurisdiction of medicine, along with a marked increase in the efficacy of these services. Thanks to biomedical technology, the medical system at last has "something to offer." Very little is left to "nature's course" any more, or considered hopeless. There are antibiotics for infections, radiation and chemotherapy for cancer, antihistamines for allergies, psychic energizers for depression, and surgery for just about anything.

3. An expansion in the *availability* of medical care along class lines. Medical care, though certainly not yet a right, is far from being a luxury. Medicaid, Blue Cross, and a host of other programs have put medical care within the financial reach of large numbers of poor and working-class people who would formerly have stood completely outside the medical system.

We will not attempt to analyze all of the social implications of medicine's expansion in these three dimensions. But one thing seems clear: the expansion of the medical system has been accompanied by a deepening public *dependency* on that system, and this dependency now extends, in varying degrees, to all strata of society. In the first place, the development of medical technology has produced a fantastic rise in public expectations of what the medical system has to offer.[15] Medical "miracles"—from heart transplants to kidney dialysis—promote the idea that almost any problem can be "cured." Headache? Take it to the doctor or take the pill that "doctors recommend." Recurrent cough? May be cancer, but don't delay, the doctor has a cure. There is nothing too trivial to take to the doctor, and nothing too serious to be cured. At least to the middle class, death itself becomes almost an accident—a failure of technique.

Second, advances in medical technology have helped to pave the way for the *jurisdictional* expansion of the medical system, and this in turn has led to a great broadening and diffusion of the public dependency on medicine. If medicine can "cure" anything from polio to TB, then why not dad's drinking problem, or mother's crankiness? The medical system is inexorably replacing lay sources of help (extended family members, neighbors, ministers) for problems ranging from how to handle a baby's cold to how to handle marital tensions or the burden of aged relatives. Even "Dear Abby," that steadfast holdout of lay wisdom, counsels all the really difficult cases to "see your family doctor." In part, this broadening dependency on medicine reflects real increases in the ability of medicine to deal with certain problems; in part it reflects basic changes in the pattern of American life: the breakdown of close-knit communities (especially for the recently suburbanized working class) and of extended families. The housewife isolated in an impersonal suburb may not *have* anyone to turn to except the doctor. But it is also true that doctors themselves encourage dependency by actively seeking to discredit lay advice and help—from chiropractic to "old wives' tales."

Health care is not, of course, the only human-service sector to expand in the last three decades; the educational system and the social welfare systems have grown apace. But the various service sectors differ markedly in the impact that rapid growth has had on their professional workers. The numbers of teachers and social workers have expanded as rapidly as have the services themselves. Along with rapid growth in numbers has gone a substantial measure of what has been called "proletarianization": teachers' and social workers' work has become more routinized, and the teachers and social workers themselves have become subject to closer and closer scrutiny by superiors. As a corollary of being treated more and more like "workers" and less and less like "professionals," both groups have rapidly accepted organization into unions in the last decade, and have conducted numerous widely reported strikes.

The case of the doctors is altogether different. The unique political power, tight organization, and traditional autonomy of doctors has enabled them to provide a greatly increased volume of services without significant increase in their own numbers. The doctor in solo practice has, as is well known, become a smaller and smaller component of the overall delivery of med-

55 icine; medical care delivery has increasingly shifted to institutions—the hospital, the clinic, the group practice, the community health center, and so forth. Within these institutional medical settings, the doctors represent a smaller and smaller proportion of all health workers. More and more of the tasks that traditionally would have been considered the doctors' are assigned instead to nurses, technicians, and administrators. But despite these changes, the doctors' power over the medical system remains virtually absolute. They have enormous administrative power within the institutional settings in which they practice. More important to our analysis, they remain the chief technical functionaries in the actual practice and public representations of medicine. It is still the medical profession which defines and identifies new diseases, diagnoses illness in individuals, and presides over the medical management of patients.

What is especially significant, the doctors have held on to their monopoly over communication with patients: nurses, technicians, and others may chat, but they cannot comment on your x-rays, or reveal so much as your temperature. In the eyes of the patient, the contributions of all other workers are secondary—only the doctor has the power to cure, or to pronounce you incurable.

By holding down their numbers and holding on to their power within an expanding system, the doctors have greatly improved their own incomes and standing in the American class structure. Back at the turn of the century, it was widely considered (by the doctors at least) that there was an excess of doctors. In rural areas and middle-class urban areas, doctors were certainly plentiful by today's standards. They often had good incomes, but few were wealthy men or men from wealthy backgrounds. Access to a career in medicine was relatively free compared to the present. As late as 1910, there were eight black medical schools and a substantial number of schools catering to women. Scores of "diploma mills" offered the title "doctor," if not serious medical training, to all comers at moderate cost.

In the first two decades of this century, however, opportunities for nonwealthy and nonwhite medical students almost vanished. The AMA and a few large foundations (notably the Carnegie
56 Foundation, which funded the famous Flexner Report on medical education, and the Rockefeller Foundation, which helped to implement the recommendations of the Flexner Report) waged a successful campaign to eliminate the greater number of the nation's medical schools, in the name of quality medical education. The results of this campaign were: (1) most of the schools catering to students other than upper-class white males were closed. This included all but two of the black medical schools and all but one of the women's schools. (Flexner, in his report, bewailed the fact that any "crude boy or jaded clerk" had been able to seek medical training.) (2) The cost of medical education sharply increased as medical schools installed laboratories, new equipment, etc. Again, poorer students were excluded. (3) A high school and college education became a prerequisite for medical training, again filtering out many prospective bright but poorer (or female or black) students. (4) The actual number of medical schools dropped rapidly from 162 in 1906 to 95 in 1916 and 79 in 1924; a

drop in the number of doctors practicing in the communities soon followed. In 1900 there were 173 doctors for every 100,000 Americans. By 1920, there were only 137 and by 1930 only 125.[16]

From that time on until the late sixties, doctors were recruited primarily from upper- and upper-middle-class families. In 1967, for instance, 66 to 81 percent (depending on the category of medical school—public, private, etc.) of all medical students had fathers who were doctors, other professionals, or businessmen. As for practicing doctors, today 93 percent are men and more than 98 percent are white.[17]

And from the 1920s through the mid-sixties, the AMA kept a tight lid on the nation's supply of doctors by what the *Journal of the AMA*'s editors referred to as "professional birth control"—strict limiting of the number of medical school places. (We again emphasize that we are not concerned here with the technical impact of the reforms in medical education—i.e., whether or not they improved the quality of medical care, etc. We are concerned only with the sociological impact, which was to limit the number of doctors and to limit the sources of recruitment of doctors.)

The doctors did not reap the full benefits of their declining numbers until after the Depression was out of the way. Then, with doctor supply limited and demand for health care soaring, their incomes rose dramatically, and with their incomes, their social standing. Consider: in the late 1920s and 1930s, doctors' average incomes were about on a par with those of dentists and lawyers; they were slightly over twice the average family incomes of the period and two-thirds higher than those of college teachers. By the 1960s, they had far outdistanced the lawyers and dentists. Their median incomes ($41,500 in 1970) were more than four times those of the average family and three-and-a-half times those of college teachers. A study in 1967 showed that the median assets of doctors aged in their fifties was $134,400. By comparison, the median assets for families with the head of the family aged 45 to 54 was $10,847.[18]

Data on doctors' social standing is more fragmentary, but suggestive. Recent studies of occupational prestige have shown doctors at the very top, on a par with Supreme Court Justices. Comparison with earlier studies indicates a definite, though small, increase in prestige from 1925 until the late forties at least. C. Wright Mills' study of class in a middle-sized city in the mid-forties indicated that with respect to their class origins, marriages, education, and job histories, "the free professionals [doctors and lawyers] are similar to the big business owners and executives" rather than to the small businessmen whose incomes they more closely approximate. The society pages of newspapers indicate the social acceptability of doctors as husbands to the daughters of the wealthy. G. William Domhoff's 1967 study of adult males listed in the *Social Register* (a guide to high society that represents the upper stratum of the upper class) revealed that no less than 8 percent of the adult males listed had the title "doctor" (presumably in almost all cases, MDs). This is a fifteen-fold overrepresentation: doctors make up only about 0.55 percent of the adult male population as a whole. And a quick look at magazines aimed at doctors, such as *Medical Economics*, conveys a vivid impression of upper- and upper-middle-class lifestyles—

country clubs, travel, heavy stock market involvement, etc.[19]

Whether we look at class origin, present incomes, assets, lifestyles, or patterns of social interaction, we are on safe grounds in saying that doctors are generally members of the American upper
58 and upper-middle classes. Relative to the overwhelming majority of patients whether poor, "working class," or "middle class," they are distinctly upper class.

THE CONTENT OF COOPTATIVE SOCIAL CONTROL BY THE MEDICAL SYSTEM TODAY

We have noted two major developments in the medical system since 1930: (1) an expansion of services in several dimensions, accompanied by a broadening and deepening public dependency on the medical system; (2) the lack of a proportional expansion in the numbers of the chief functionaries of the medical system, the doctors, accompanied by an absolute and relative improvement in the social position of doctors. Within the medical system, doctors remain the unquestioned elite, holding a monopoly on the key functions of diagnosis, defining of illness, management of illness, and communications with patients. Within the larger society, doctors are also an elite group, members of the politically, economically, and culturally dominant strata. We can now put these two developments together: the expanding public dependency on the medical system is a dependency on *white, upper-middle-* or *upper-class males*.

To put it another way: the expansion of services and of utilization means that more people have more contacts with socially advantaged white male professionals, over more "needs" and "problems," than ever before. What is the nature of these contacts? What is the character of the social relationships that arise? The outstanding features of the doctor-patient relationship as a social interaction are:

1. *Intimacy*. Patients are required to expose their bodies to detailed visual and manual probing, and to confide their deepest anxieties about their physical condition. In addition, the patient is usually urged to confide in the doctor about other personal matters that may be peripheral to the problem at hand—family relations, sexual relations, the use of drugs or alcohol, etc. The intimacy, of course, goes only one way: doctors do not confide in their patients, nor do they undress. "Intimate" revelations may, of course, be essential to proper diagnosis and treatment. For our
59 purposes, it is important to note that intimacy and personal trust cannot readily be restricted to the narrow imperatives of a particular episode of disease. Parsons has argued (correctly, we think) that

> through processes which are mostly unconscious the physician tends to acquire various types of projective significance as a person which may not be directly relevant to his specifically technical functions. . . . The generally accepted name for this phenomenon in psychiatric circles is "transference," the attribution to the physician of significances to the patient which are not "appropriate" to the realistic situation, but which derive from the psychological needs of the patient. For understandable reasons a particularly important class of these involves the attributes of parental role as experienced by the patient in childhood. . . . [Thus] the situation

of medical practice is such as inevitably to "involve" the physician in the psychologically significant "private" affairs of his patients.[20]

2. *Authority.* Patients are required to submit to the medical management of their problems almost without question. The penalty for excessive questioning is usually a quick put-down—"Where did *you* go to medical school?" "What are you so anxious about?" (Anxiety is in itself pathological, so this rejoinder amounts to the diagnosis of a new illness.) And so on. The penalties for persistent questioning, outright criticism, or general uncooperativeness are more severe: first, the doctor may reject the patient—"You'll have to find someone else." (Sometimes the rejection is accompanied by dire warnings. For example, a doctor once rejected one of the writers, for questioning the necessity of further lab tests, with the statement, "I don't care if you die!" Fortunately, the condition was far from life-threatening.) Finally, the doctor may "blacklist" the patient among other doctors whom he knows or works with. But these penalties need seldom be invoked: most patients accept the authoritarianism of the doctor and would be bewildered or even let down by more egalitarian treatment. What is especially interesting for our purposes is that the authoritarianism of the doctor-patient relationship increases as the social distance between doctor and patient increases. The degree of authoritarianism is greater for poor and working-class patients, nonwhite patients, female patients; and, as the class position of doctors advances, it becomes greater for everyone else, too.

It should be stressed that these features of the doctor-patient relationship do not apply only to doctors and "sick" patients; people seeking preventive care, prenatal care, contraceptives or abortions, or cosmetic surgery all experience intimate and authoritarian relationships with doctors. To a lesser degree, so do people who are only indirectly involved in the encounter—parents of children needing care, children of aged parents. To enter a situation of professional dominance, you do not have to enter a sick role. In fact, you do not even have to be a patient.

Why do people submit to—in fact, struggle for access to—this kind of relationship, given that it is characterized by a degree of intimacy and authority that would be considered humiliating in any other social relationship? The obvious answer is that people expect to get immediate relief or help, and very often this expectation is met. There are effective contraceptives, antibiotics, surgical interventions, and so on. Cutting through the inflated advertising of medical miracles, and even correcting for iatrogenic effects, there *is* a valid body of biomedical technology, and the only available route to it is through a relationship of professional dominance. But, quite apart from the technology, the relationship itself has a kind of therapeutic value: if the doctor cannot solve your problem—and in a society characterized by insidious chronic disorders, the likelihood is that he cannot "solve" it—he can at least manage it. The therapeutic value of professional dominance, from the patient's point of view, is that the problem becomes the *doctor's* problem. It is not for you to fret or question the treatment; it's in the doctor's hands now and "he ought to know what he's doing." The authoritarianism of the relationship fosters a magical transference of the problem from patient to

doctor. (This transference phenomenon, not to be confused with the kind of transference that Parsons discusses, is probably related to the inability of American medicine to deal adequately with problems that require the patient's willed participation in the cure—e.g., by giving up smoking. Patients expect to be cured, or at least to gain legitimate exemptions from work; they do not expect the doctor to impose new hardships.)

61 There are some crude similarities between the relationship of professional dominance and other relationships people enter into with powerful, socially advantaged others. Authoritarianism, rewards for submission, penalties for disobedience, and even "magical transference" ("I wouldn't want to be boss—or president, or foreman—think of all the responsibility") are common to such relationships. But the relationship that one has with a doctor is also profoundly different from any other relationship that one is likely to have with an authority figure, especially one who is of such elevated social class. It is a uniquely intimate and personal relationship. How many other important people are interested in you and concerned about you, even if only for a few minutes each month or year? And it is a manifestly benevolent relationship: disobeying a teacher or boss might be seen as gutsy, but disobeying a doctor can only be construed as irrational.

To backtrack a little: we have said that an expansionary medical system is characterized by cooptative social control. In order to understand the ideological nature of that control, we have examined the social relationships required for the delivery of medical care. These are relationships of intimate dominance by a professional elite consisting overwhelmingly of white, upper- and upper-middle-class males. These relationships are tolerated, in fact sought after, for their technologically and psychologically therapeutic effects. It should be evident that such relationships, often bridging the most powerful and the least powerful social groups, are rich in possibilities for social control: first, they are ideal vehicles for the transmission of ideological messages from the socially dominant group, and we shall consider this possibility in a moment. But at least as important, it seems to us, is the ideological impact of the relationship itself. A relationship of dominance and dependency, of intimacy and authority, between a person and a member of the upper class can only act *to promote acquiescence to a social system built on class- and sex-based inequalities in power.*

There is no conspiracy behind this. But neither is it true that ideological control of this type is a natural and inevitable concomitant of the delivery of medical services. It is possible—in fact it is easy—to imagine a highly technologically advanced medi-

62 cal system which engenders a very different sort of social relationship—one in which sickness is not an occasion for isolation of the individual or for his or her subjection to medical "management," but for collective concern and mutual assistance; one in which the experience of the patient is not self-alienation but self-help; one in which helping roles are occupied by social equals, and being helped has no stigma of submission. Of course, such a system would still be exerting social control, but in an entirely different ideological direction—one of self-determination, and solidarity among equals.

Perhaps we can generalize and state that the social mechanisms which arise in any society for the care of dependent persons—children, the aged, the handicapped, the ill—must always operate in the direction of social cohesion. (In fact, the existence of such mechanisms is one of the defining characteristics of a "society.") The question is, cohesion to whom, to what groups? In pretechnological situations, the social mechanisms for illness and other forms of dependency commonly involve the formation or tightening of bonds between individuals of similar social status—local midwife and pregnant women, grandmother and sick child, etc. In particular, such relationships often centered in and helped strengthen the family. By contrast, the situation in the United States is that not only disease, but also a growing number of other conditions, call for the formation of primary social bonds to members of the upper classes. The effect is certainly to promote social cohesion, only in this case it is cohesion between social groups whose ultimate interests are not the same.[21]

There is another aspect of cooptative social control that we have alluded to: the use of the doctor-patient relationship for the transmission of overt ideological messages. This is probably the most familiar type of social control exercised by the medical system—the racist and sexist put-downs, digs about a patient's lifestyle, etc.—but it is extremely difficult to pin down or document. The well-known confidentiality of the doctor-patient relationship (which is essential for the intimacy) has precluded any systematic studies of the social interaction that goes on. Furthermore, some of the most interesting ideological messages probably come through thoroughly disguised as technical directives or advice. All we can do here is to give some examples of the types of messages communicated by doctors, without attempting to establish their prevalence or impact. We distinguish three broad types of messages:

1. Messages that are completely unrelated to the technical requirements of the encounter. This would include comments by the doctor on elections, legislation, or any other broad public issues. Although this use of a doctor's time may seem highly improbable to those of us unaccustomed to clinic care, it is apparently not that unusual. AM-PAC (the AMA's Political Action Committee) unabashedly recommends that doctors make good use of their working hours to inform patients about public issues and candidates.[22] In the AMA's all-out fight against Medicare and pro-Medicare political candidates a few years ago, doctors resorted to such tactics as putting political flyers in with their bills, lecturing their patients before healing them, and threatening to drop politically uncongenial patients.[23]

2. Messages that are related to the technical aspects of the encounter, but that are patently gratuitous. For example, a black woman whom we know complained of weakness and tiredness; she was told by the doctor that "colored people are always lazy." Most of our knowledge about this kind of message comes from the women's movement, in which women have made a point of sharing with each other their experiences with doctors. Again, we can only be anecdotal. One woman had a doctor tell her that her breasts were "too small," and then say, "Oh well, as long as your husband is satisfied . . ." Another woman, a teacher, was advised

to douche every day because "professional women should always douche." In addition to these kinds of messages, which have the obvious effect of reinforcing the patient's sense of sexual or racial inferiority, doctors also transmit a great deal of conventional morality on such subjects as sex and drugs. In fact, some parents rely on the doctor to introduce their teenagers to these subjects. Doctors are important arbiters of what is moral (usually represented as what is "normal") in sexual activity, drug use, and drinking.

3. Messages disguised as technical communications. This category is potentially limitless. Who, especially among lay people, is able to distinguish between technically necessary and relevant communications and covert social opinions? For example, women's self-help groups report that a great many women are told that their uteruses are "tipped"—an apparently neutral observation which, by suggesting abnormalities of reproductive function, invariably has the effect of reinforcing feelings of inadequacy. However, in their own work, the self-help groups have discovered that most uteruses are tipped to one degree or another, including those of women who have successfully borne children. To take another case, pediatricians frequently counsel parents (in books written for the public as well as in office communications) not to put small children in day-care centers on the grounds that the children will catch too many infectious diseases. This advice obviously acts to discourage mothers from working, but it is scientifically unfounded: there are no studies in the English language medical literature showing significantly higher morbidity among children in day-care centers.[24] More generally, the actual treatment given by doctors to poor patients may differ from that given to middle-class and wealthy patients. One form of medical care, psychiatric treatment, is known to vary with class—the more affluent patients get psychotherapy while the less affluent are more likely to be treated with drugs. And differential attitudes of doctors toward patients of different socioeconomic class have been documented. There are certainly grounds for speculation, at least, that the actual technical medical treatment of the poor may be a factor in strengthening the feelings of "low self-worth" which many sociologists claim to detect in the poor—i.e., that the medical system reinforces the sense of class inferiority in those of lower class position when they use its services.

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The point is that the doctor-patient relationship is an ideal one for the transmission of almost any kind of message that doctors may feel inclined to convey. Given the intimacy and authoritarianism built into the relationship, and the prestige and presumed expertise of the doctor, the patient is likely to take such messages much more seriously than he or she would from other people. Whether there is any consistent content to these medical messages is a matter for further investigation. Certainly in the case of women's medical care there seems to be consistent bias toward sexism. It is tempting to speculate that medical messages in general may consistently reflect the attitudes of the social group to which doctors belong. If so, we would have to regard the medical system as a significant vehicle of communication between the upper classes and the general public.[25]

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CLASS DIFFERENCES IN THE SOCIAL CONTROL IMPACT OF THE MEDICAL SYSTEM

We have spent so much time analyzing the nature of the cooptative control exerted by the medical system because the expansionary nature of the present system makes this kind of control more important than it has been at any other time in our history. But disciplinary social control is still an extremely important social factor. The two kinds of control—cooptative and disciplinary—affect different groups of people in different ways and in different proportions. In fact, the exact mix of cooptative and disciplinary control experienced by different groups has been changing very rapidly. The result of these changes has been in many cases the very opposite of "social control"—public dissatisfaction and even upheaval.

We will confine our discussion to two very broad economic groups, largely omitting the dimensions of age, sex, and race. (1) The first group is what we will call the "medical poor"—people who are "medically indigent" though not necessarily on Medicaid or welfare. In the big cities, this group is made up predominately of nonwhites and the elderly of all races. Their major sources of care are institutional—hospital wards, clinics, and emergency rooms. (2) The second group is what we will call the "medical middle class"—people who are not medically indigent but who feel the effects of rapidly rising medical costs. Their major source of primary care is the private physician in group or solo practice.[26] (Above these two groups are wealthier groups who do not concern us as subjects of social control. They experience no barriers to medical care and, in fact, form the market for luxury care. They are in roughly the same social classes as physicians.)

The medical poor. Historically the poor and the near-poor were simply excluded from the medical system by their inability to pay. Even in urban areas where charity services were available, the poor showed considerably lower utilization rates than middle-class people—a difference made all the more striking by the fact that the poor have always had much higher *disease* rates than other groups. Utilization by the poor picked up somewhat in the sixties but there remain serious gaps: the black poor underutilize services even when they are free or financed by Medicaid, and the poor of all ethnic groups underutilize preventive services (immunizations, annual check-ups, cancer screening, etc.), again, even when these services are free.[27] To explain the persistence of underutilization even after financial barriers are removed, it has become fashionable to invoke a peculiar mind-set among the poor—they lack "future orientation," or they regard their bodies as machines "to be worn out but not repaired";[28] they are "alienated" or poorly "integrated" socially.[29]

A far simpler, though less comforting, explanation is that most of the services available to the poor are so unappealing that they actively discourage utilization. The picture of the bottom half of the two-class medical system has been painted often enough—the decaying public health centers presided over by equally decaying municipal doctors, the crowded clinic waiting rooms patrolled by security guards, the open wards with twenty or more beds staffed by a single practical nurse, and in some cases an active contingent of vermin—and so on. Medicaid or no, such services are a

painful deterrent to getting sick, and even to seeking the care that should prevent sickness. We would say that the services for the poor are constructed, wittingly or unwittingly, to exercise disciplinary social control.[30]

But there has been, in the last ten years, a significant expansion of services for the poor beyond the traditional clinic/ward type. This expansion has brought the poor, for the first time, into the sphere of cooptative social control by the medical system. In addition to the general class-bridging effects discussed above, cooptative control has taken some very specific and overt forms in the case of the poor. Consider the forms which this expansion of services has taken:

First, health services for the poor have not expanded uni-
67 formly. Certain specialized services, particularly birth control and out-patient mental health services, have expanded out of proportion to the expansion of general health services. For many ghetto residents, a simple infection still means a grim day spent at a hospital clinic, while for problems of fecundity or psychoneurosis there may be well-appointed centers equipped with interpreters, outreach workers, and baby-sitting services. This disproportionate concern with birth control and mental hygiene has been directly interpreted in Third World communities as a social control effort. Black militants have denounced ghetto birth control services as "genocidal," and have suggested that the mental health services represent a refined police surveillance system. Whether one considers birth control and mental health services to be desirable or not, it is clear that they do have the alleged effects—reduction of birth rates and more efficient detection of social deviants.

Second, there has been some expansion of general medical services in the form of comprehensive medical centers—government-financed group practices for the poor. These "neighborhood" or "community" health centers, as they are called, were designed to provide the poor with the kind of personal, continuous relationships with doctors which do not usually occur in the clinic setting. To the extent that this aim has been met (and it should be pointed out that many community health centers are little more than small-scale versions of the impersonal clinics in the sponsoring hospital), the community health centers are settings for the cooptative control of the poor as individuals, bringing them into relationships of professional dominance. In addition, the community health centers in many cases represented an attempt to control the poor *collectively*. At the most obvious level, many centers were created with the explicitly cooptative aim of cooling out a hostile community. The Watts community gained a center a year after the 1965 riot, and countless "Martin Luther King Health Centers" dot the land.

The community health centers also exert direct community control in an even more conventional sense. As institutions with budgets ranging from $2 million on up, they are often the most important economic centers in their localities. They have be-
68 come, in many cases, key centers of political patronage, offering scores of unskilled and semiskilled jobs to the friends of local power brokers (Democratic Party heavies, OEO officials, and a whole raft of other minor bosses resentfully termed "poverty pimps"). For example, the Hunts Point Multi-Service Center

in the South Bronx—a health center *cum* housing, legal, and social services—was the launching pad for Democratic city councilman and local party boss Ramon Velez.[31] His center, and dozens like it, have served as nuclei for the reconstruction of Democratic machines in the cities. It seems likely that this was the conscious intent of the Democratic administrations of the sixties when they designed that cornucopia of scant services and lush patronage called the "War on Poverty."[32]

On a less obvious level, the community health centers have had a *culturally* destructive effect. Fanon might have described them as outposts of the white man's culture planted in "the colonies" to undermine the cultural identity of the oppressed. Whether or not this was the intent, it was probably an important effect. The black, Puerto Rican, and Chicano target populations of most centers have (or did have) rich traditions of folk medicine which were integral to community structure—*curanderos*, botanical healers, spiritualists, not to mention skilled aunts and grandmothers. If professional medicine was to make significant inroads, it was essential that the community health centers discredit, destroy, or coopt the prevailing folkways. The doctors worked on this directly, and the most ambitiously cooptative centers employed anthropologists and other social scientists to assist them.

Professionals in the community health centers "movement" often felt themselves working uphill against community resistance or indifference. Underutilization was a widespread problem, especially in the early years. Accustomed to an exclusionary medical system, poor people tended to view these new expansionary enterprises with suspicion. Ever more cooptative tactics were employed to "win the hearts and minds of the people": the employment of local people to do outreach work, the addition of training programs for semiprofessional medical jobs, the creation of community advisory boards. (In the view of many medical progressives, such methods were not only appealing come-ons; they were therapeutic in themselves, helping to break through the "social pathology" of the ghetto.) The most ambitious and "sensitive" centers presented uniformly black or brown faces to the community (though the doctors and directors were still white); they virtually dragnetted their catchment areas for patients; they sent out trained community workers to track down appointment-breakers. The result, in a number of cases, was soon *overutilization*, and with it a rapid decay of the amenities which had distinguished these centers from mere clinics.

With the community health center movement, the advertising of professional medicine far exceeded its ability to deliver. Federal funds began to wane as early as 1968, and few doctors have enough Schweitzer in them to enter grantless ghettos. But, as is well known by now, expectations had been raised. If there was a life-giving center for Watts, why not for Hough, or south Chicago, or Bedford-Stuyvesant? In fact, the same may be said for all the tentative expansions of the medical system into the ghettos. To the extent that they did touch the hearts and the minds of the people, they raised dangerous and unmeetable expectations. If mental health meant peace of mind, then why didn't the community mental health center do something about slum landlords? If the hospital and its outreach center stood for

health, what were they doing about garbage in the streets? In the end, the medical approach to the problems of the ghetto succeeded only in putting the heat on the medical institutions of the ghetto—for *all* of the problems of the ghetto.

The medical middle class. It is this group, far more than the poor, that experienced the medical expansion of the forties through sixties. Here we find the fastest-rising utilization rates and the skyrocketing expenditures. Health insurance, whether in the form of a hard-won fringe benefit or an expensive private purchase, has made the increased consumption possible. Rising expectations have made it necessary. Members of this group, both blue- and white-collar, are better educated than ever before, more attuned to the benefits of technology, more accepting of professional expertise. And it is here that we find the TV medical drama viewers, the readers of doctor novels, diet books, and sex
70 manuals. Here are the weight-watchers and cholesterol watchers—anxious about the seven earliest signs of cancer, and anxious about anxiety itself. Here, much more than among the poor today or the working class of a generation ago, it is expected that birth, death, and any extremes of experience (pain, madness) will be overseen by physicians and sequestered in institutions. There are scattered pockets of cultural resistance—to mental health services among older blue-collar people, to family limitation services among some Catholic groups—but these are largely vestigial. The general orientation has been to rush headlong into the expanding medical system with whatever money one has, and get as much as one can take.

However, there is a very serious and growing exclusionary trend countering this rush to consumption. We have already emphasized the failure of the medical profession to expand numerically in proportion to the demand for medical services. For our medical middle class, this does not yet mean that doctors themselves are in short supply, but it does mean that doctors' *time* is getting scarce. Private practitioners have been increasing their patient loads without proportionately increasing their working time. For the individual patient, this means longer waits for appointments (four to six weeks is not unusual for a specialist), longer waiting times at the office, shorter, more impersonal encounters with the doctor, and, of course, no house calls at all. One may well ask what is left of the celebrated doctor-patient relationship when ten or fifteen minutes is allotted per patient and part of this time is spent with a nurse or medical assistant who takes histories, weighs the patient, gives instructions on prescribed regimens, etc. The suburban doctor's office is becoming no less an impersonal mill than the urban out-patient clinic.[33]

With the exclusionary trends in the care received by the medical middle class, disciplinary social control comes into operation. Long waits and frustrating encounters with doctors lead to the common feeling that "I don't want to bother the doctor." Even in the more educated strata, people are not fully utilizing preventive services such as Pap tests, breast exams, and vaccinations, nor are they reliably bringing the "first signs" of various diseases to medical attention. From a public health point of view, the results are
71 discouraging: diseases that are preventable or curable if caught early continue to be major killers. But people are only responding to the clear message *not* to bother the doctor—to keep on the job.[34]

There is every indication that the exclusionary trends in the care received by the medical middle class are the wave of the future. In fact, it is government policy to augment them, but by different means. "HMOs" (Health Maintenance Organizations) and "PSROs" (Professional Standards Review Organizations)—widely misinterpreted as consumer "victories"—are actually devices to reduce medical expenditures by reducing utilization of medical services.[35] HMOs sound like an expansion of services, something like community health centers for the medical middle class. In reality they are financial arrangements to provide participating doctors with incentives to curb utilization (particularly of expensive hospital services). HMOs can, in fact, substantially reduce costs without lowering the overall quality of care provided. But the HMO financial arrangement has the potential, at least, to permit doctors to profit personally from excessive underutilization; fragmentary evidence suggests that this may have happened in some HMOs.[36] PSROs sound like an effort to make doctors accountable to the public by forcing them to monitor each others' services. But the only thing that will really be monitored is utilization (was this lab test or this hospital admission really necessary, etc.)—not quality. These reforms are efforts to discipline the demanding public, with the doctors serving as the disciplinary agents.

CONCLUSION

In the last section we have attempted to dissect the uneasy mix of expansionary and exclusionary tendencies in people's medical experience. We have endeavored to show that both tendencies, both types of systems, exert social control and operate to maintain the status quo.

The exclusionary and expansionary tendencies arise in part from the internal dynamics of the medical system, but, as should be apparent to anyone who follows public policy in health, they are also shaped by the overt intervention of the ruling class. One element of the ruling class—the one that held sway over public policy during the Kennedy and Johnson years—is expansionist, and favors increased public spending to promote further expansion. The other, which was represented by the Nixon Administration, is exclusionary and favors government intervention to curb what are viewed as the "excesses" of the sixties.

The two groups are, of course, the groups usually distinguished as the "liberal" and "conservative" elements of the ruling class. Their different approaches to the medical system mirror their approaches to social control in general. The liberals, for example, favor rehabilitation of criminals, medical care for addicts, and less authoritarian structures of work and education. The conservatives favor punitive treatment of criminals, addicts, and other deviants, and even more authoritarianism in the family, the job, and the schools. One group seeks to manage discontent through cooptation; the other through repression. One believes that the structure of society can be held together by ideological persuasion: the other puts its trust ultimately only in force. To repeat what is almost a truism, but represents a central radical understanding of the sixties: neither group is about to remove the fundamental inequities that are the sources of discontent. And

neither group trusts the people to be unmanipulated and unpoliced—nor have they any reason to.

On the whole, the radical approach to health has been little more than an amplified echo of the liberal, expansionist faction of the ruling class. Radicals have simply demanded that medical services be more readily available to all, with the qualification that the services should represent technically high-quality care, delivered with dignity and without racism or sexism.

It is time that we transcended the argument in these terms. It is time that we got off the single axis of "more" or "less" and began to ask "more" of what, for what purpose, to what effect? The only way to do this is to free *ourselves* from the medical mystification that confines us to seeing medical care as something wholly ordained by technology—a "commodity" whose social nature cannot be examined because it is believed to have none.[37]

We have tried to make a start in this direction. But the more
73 serious tasks lie ahead. If the medical system is understood as something more than a system for distributing a "commodity," if it is understood as a system of direct *social relationships*, then the question becomes: what kinds of social relationships do we want a medical system to foster? How can we design a system so that the social relationships that it engenders promote *socialist* relationships in society in general?

The task that we are posing is not just an exercise in utopian engineering. It is not the same as asking how one would design an electrical power system under socialism, or how one would manage the water supply. The medical system itself has deluded us into thinking that the problems addressed by medicine are indeed "medical" or "technical" problems—that they are properly the preserve of specialists and experts who stand outside culture and politics. But the problems which our society relegates to the medical system—the care of the disabled and dependent, the management of reproduction, individual suffering, and death—are no less than some of the central problems which confront any human society. Medicine has allowed us to evade them too long.

NOTES

1. The most complete radical treatment of the health system are Barbara and John Ehrenreich, *The American Health Empire* (A Health-PAC Book) (New York: Random House, 1970); *Billions for Bandaids*, ed. T. Bodenheimer, S. Cummings, and E. Harding (San Francisco: Medical Committee for Human Rights, 1972); *Prognosis Negative: Crisis in the Health Care System*, ed. David Kotelchuck (A Health-PAC Book; New York: Vintage, 1976); Vicente Navarro, *Medicine Under Capitalism* (New York: Prodist, 1976).
2. *Going Crazy*, ed. H. M. Ruitenbeck (New York: Bantam Books, 1972); and P. Chesler, *Women and Madness* (New York: Avon, 1972).
3. Boston Women's Health Collective, *Our Bodies, Ourselves* (New York: Simon & Schuster, 1972); and *Health-PAC Bulletin*, (May 1970).
4. Talcott Parsons, *The Social System* (New York: Free Press, 1951), pp. 428-79; Eliot Freidson, *The Profession of Medicine* (New York: Dodd Mead & Co., 1970) esp. pp. 203-331; Talcott Parsons, "Definitions of Health and Illness in the Light of American Values and
74 Social Structure," in *Patients, Physicians and Illness*, ed. E. Gartly Jao, 2nd ed. (New York: Free Press, 1972), p. 107.

5. Parsons, *The Social System*, pp. 118, 121. In Parsons' scheme, sickness poses something of a moral dilemma to American society which, he argues, has an unusually high regard for health and activism. For humanitarian reasons, we feel obliged to treat the sick well—but never so well, or so visibly well, that others will be tempted to seek the same treatment by joining the ranks of the "sick." One may wonder why a people who supposedly value activism and work so highly find sickness so alluring. Could they possibly be *oppressed* and feel that, in Parsons' words, "the way to deal with the frustrating aspects of the social system is 'for everybody to get sick' " (Parsons, *The Social System*, p. 477)? But oppression is not a dimension of Parsons' analysis. Borrowing from psychoanalytic theory, Parsons explains this anomaly in terms of American patterns of child-raising.
6. Frances Fox Piven and Richard A. Cloward, *Regulating the Poor* (New York: Pantheon, 1971), pp. 33-36.
7. Freidson, *Profession of Medicine*, p. 304.
8. Ibid., pp. 329, 330.
9. Philip Rieff, *Freud: The Mind of the Novelist* (Garden City: Doubleday, 1961), p. 360, cited in Freidson, *Profession of Medicine*, p. 248.
10. Freidson, *Profession of Medicine*, p. 250.
11. A concept advanced by the Health Policy Advisory Center to describe the increasing centralization of urban medical services around medical schools and major teaching hospitals. Strictly speaking, an "empire" would include the core controlling institution (medical school or teaching hospital) plus all its affiliated lesser hospitals and health centers of various types. Usually, though, the word "empire" has been used in reference to the core institution only. See *The American Health Empire*, chapters 3-6.
12. Michel Foucault, *Madness and Civilization* (New York: Pantheon, 1965), pp. 46-64.
13. See B. Ehrenreich and D. English, *Complaints and Disorders: The Sexual Politics of Sickness* (Old Westbury, N.Y.: Feminist Press, 1973); excerpts appear in this volume.
14. Per capita expenditures on health services and supplies, adjusted for the increase in the medical care component of the consumer price index, rose (in 1970 dollars) from $169.92 in 1950 to $315.83 in 1970, an 86 percent increase. This represented a jump from 4.6 percent of GNP to 7.1 percent. Utilization of virtually all kinds of services has risen rapidly, although not entirely synchronously for all types.

    Out-of-hospital utilization of doctors rose from 2.6 visits per person per annum in 1928-31 to 4.7 per annum in 1958-59 and has stayed at about that level ever since. Hospital out-patient visits per capita increased 66 percent from 1962 to 1970 alone (541 visits per 1000 population to 899 visits per 1000 population). Out-patient psychiatric services (community mental health centers, day treatment services, clinics) increased 34.4 percent from 1955 to 1969 (2.3 visits/1000 population to 10.2 visits/1000).

    Utilization of in-patient services has also increased sharply: annual general hospital admissions and mental hospital admissions per 1000 population more than doubled between 1940 and 1970 (general hospitals: 74 per 1000 population per annum to 152 per 1000; mental hospitals: 1.4 per 1000 to 3.3 per 1000). The population of nursing homes increased from 491,000 to 850,000 (94 percent) from 1963 to 1969. (All data from *Statistical Abstract of the U.S.*, 1972, except physician utilization for 1928-31 cited in Odin W. Anderson and Ronald M. Anderson, "Patterns of Use of Health Services," in *Handbook of Medical Sociology*, ed. H. E. Freeman et al. (Englewood Cliffs, N.J.: Prentice-Hall, 1972).
15. It is not, strictly speaking, the technology itself which inflates expectations, but the *advertising* of the technology. In the popular family

and women's magazines, health and medical articles probably outnumber those on any other subject except marriage: "Researchers Claim New Pill Will Ease Tension Without Side Effects," "What You Should Know About Stomach Aches," etc. (A journal aimed at doctors recently ran a drug company ad for a new low-estrogen oral contraceptive: "Because her 'medical journals' alarm her about 'the pill' . . . and because she runs to you for her answer . . ." (*Medical World News*, January 11, 1974). Or look at TV: in a recent week in New York City, there were ten weekly shows, two daily shows, and two "specials" concerned with doctors or medicine, a total of fourteen hours of programming. The media both feed on and fan the public's fascination with medicine.

16. U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1957*; see also Rosemary Stevens, *American Medicine and the Public Interest* (New Haven: Yale University Press, 1971) for the full story of the turn-of-the-century reforms.
17. Occupational figures from R. Fein and G. Weber, *The Financing of Medical Education* (New York: McGraw-Hill, 1970); percentages of women and blacks from U.S. Bureau of the Census, *Statistical Abstract of the United States, 1972*.
18. Income figures from *Historical Statistics of the United States, Colonial Times to 1957* and *Statistical Abstract of the United States, 1972*; asset figures cited in Fein and Weber, *Financing of Medical Education*.

19. R. W. Hodge, P. M. Siegel, and P. H. Rossi, "Occupational Prestige in the United States, 1925-63," *American Journal of Sociology* 70 (1964): 286–302; C. Wright Mills, "The Middle Classes in Middle-Sized Cities," in C. Wright Mills, *Power, Politics and People* (New York: Oxford, 1967); G. William Domhoff, *Who Rules America?* (Englewood Cliffs, N.J.: Prentice-Hall, 1967).
20. Parsons, *The Social System*, p. 453.
21. In at least one country that is seeking to develop a technically modern medical system, China, the state has made it a conscious policy to diminish the social distance between medical personnel and the people. In China, we would suggest, the social organization of medicine operates to promote cohesion within the working classes and the nation. See Joshua Horn, *Away with All Pests* (New York: Monthly Review Press, 1970).
22. "How the Opinion Maker Makes Opinion in Politics," leaflet from the American Medical Political Action Committee (c. 1973).
23. Richard Harris, *A Sacred Trust* (Baltimore: Penguin, 1969).
24. Based on a review of the *Cumulative Index Medicus*, the standard index of medical literature, for the years 1963-1973 inclusive.
25. There are several reasons to hypothesize a consistent, class-oriented content:

    1. The intense socialization of doctors as students and interns and residents probably produces a certain uniformity of attitudes. It is interesting that certain features of their socialization—repeated sleeplessness and interrogations—resemble the supposed "brainwashing" of POWs.

    2. At least *moral* uniformity is rigidly imposed on practicing doctors by a system of peer surveillance which doctors would find intolerable if applied to their technical performance.

    3. The AMA provides doctors with pamphlets, lecture outlines, and the like, offering, at least, to "think" for the busy doctor on a variety of social issues.

    4. Doctors are fairly uniformly upper-middle or upper class. Especially in smaller cities, they are members of the local ruling class, associating with local businessmen, bankers, lawyers, etc. and presumably sharing moral and political attitudes with them.
26. Note: These broad categories gloss over some important differences in medical experience. Among the poor, there are major differences

between the young and the elderly, the urban and the rural, and probably between the working poor and welfare recipients. In the "medical middle" we should probably distinguish between a poorer and less urban group receiving most of its care from GPs and a more prosperous, urban group which is plugged into the network of specialists. 77

The working class includes both the "medical poor" and part of the "medical middle class." (Many members of the petty bourgeoisie and professional-managerial class are in the latter group, as well.) The division of the working class into two components reflects the complex internal stratification of the working class, which, in terms of medical care as well as of many other criteria, is not homogeneous. The impact of different patterns of medical care for different sectors of the working class in *maintaining* the internal stratification of the class remains to be explored more thoroughly.

27. William C. Richardson, "Poverty, Illness and the Use of Health Services in the United States," in Jaco, *Patients, Physicians, and Illness*, pp. 240–49; Anderson and Anderson, "Patterns of Use of Health Services"; Rashi Fein, *The Doctor Shortage: An Economic Diagnosis* (Washington, D.C.: Brookings Institution, 1967).
28. Daniel Rosenblatt and Edward A. Suchman, "The Underutilization of Medical-Care Services by Blue-Collarites," in *Blue-Collar World*, ed. Arthur B. Shostak and William Gomberg (Englewood Cliffs, N.J.: Prentice-Hall, 1964).
29. Philip M. Moody and Robert M. Gray, "Social Class, Social Integration, and the Use of Preventive Health Services," in Jaco, *Patients, Physicians, and Illness*, pp. 250–61.
30. Other immediate sources of underutilization of services include the costs of transportation and of taking time off from work, inconveniently located services, racism and simple rudeness from hospital workers, maintenance of "folk healing" traditions, and lack of knowledge about health facilities and about health itself.

    More fundamentally, it is notable that this one segment of the working class is excluded from medical care far more often than other segments. The reasons for this, we would speculate, lie in part, at least, in the lower value that our society places on the lives of economically marginally productive people, and in part on the "need" to instill values of "industrial" work discipline in peoples of more recent rural origin (as many urban slum dwellers are).
31. *New York Times*, November 19, 1973, p. 37.
32. See Piven and Cloward, *Regulating the Poor*, pp. 250–84.
33. In the large and reputedly "excellent" suburban group practice that we use, an affiliate of New York's Health Insurance Plan, ten minutes are allotted for each pediatric and gynecological visit, and the time for annual check-ups has recently been cut from thirty minutes to fifteen minutes. 78
34. A very significant medical tendency which we suspect is related to the time pressure on the private practitioner is the diagnosis of physical complaints as psychosomatic. The evidence for this is indirect, but impressive: (1) Private practitioners themselves commonly estimate that at least 50 percent of the cases they see are "psychosomatic." (2) Studies of prescribing habits of doctors show that tranquilizers are the most commonly prescribed drug. A psychosomatic diagnosis—medically accurate or not—clearly amounts to a diagnosis of *malingering*.
35. Both HMOs and PSROs are the children of Nixon Administration legislation. The former are provided for in the Health Maintenance Organization Act of 1973 and the latter in the Social Security Act Amendments of 1972. The immediate origins of both programs are in government concern over the fantastically rapid rise in government health-care expenditures in the years since 1965. We are indebted to Harry Becker for our interpretation of these programs.

36. See, for instance, *Medical World News*, June 5, 1973, pp. 17–19; and the California Council for Health Plan Alternatives, "Evaluation Report" on the California Medical Group, prepared for Teamsters and Food Employers Security Trust Fund, Los Angeles (mimeo, 1972). Studies of the Kaiser plans have suggested that the HMO mechanism leads to sharp declines in the accessibility of services resulting in considerable tendencies for subscribers to the plans to seek out-of-plan care, in substantial differences in utilization by socioeconomic status, and so forth (see *Health-PAC Bulletin*, November 1973).
37. Equally, we must free ourselves from the economic mystification of health care, which confines us to seeing the health-care system as little more than a system through which doctors, drug companies, insurance companies, etc. extract profits from the sick. In this article we have ignored economic approaches to the medical system. Instead we have described the medical system as a system of social relationships. The economic and sociological approaches are not alternatives, but complementary. The economic approach can be used to explain the development of the medical system and to make predictions about its future development. This is because profits (or at least the minimization of costs) are major motivations in the development of the system. But it cannot explain the *experience* of medical care, or the political implications of that experience for the larger social system. Conversely, the sociological approach that we have taken cannot explain the development of the medical system. The officials of the medical system are not motivated by a desire to exert ideological control in the interests of the larger capitalist system, and it would be ridiculous to imagine that they are. But the kind of approach that we have taken may help to point the way to an understanding of the cultural and political *impact* of the medical system on the larger society. And, though it may not help us to predict anything, it can help us to understand what kind of an ideological function a medical system might serve within a socialist society.

To say that the two approaches are complementary is to say that they must coexist in our understanding or else that understanding will be limited and superficial. A purely economic approach is often defended as the only "correct" Marxist approach. It is argued that the only Marxist understanding of capitalist society is an understanding in terms of the exchange of commodities. But it was Marx who insisted that under capitalism the relationships between commodities, or between people and commodities, obscure and mystify the underlying relationships between people. We must not allow ourselves to be mystified *especially* when examining a sector of the economy in which the "commodity" is not a material thing but is in fact a direct human encounter.

The danger of the purely economic approach is not only that it leads to faulty analysis, but that it leads to a programmatic strategy which is basically economistic in nature. The only demand becomes "more"; the only challenge to capitalism is to produce "more" within the framework of an irrational and oppressive system.

John Ehrenreich (ed.), *The cultural crisis of modern medicine*, Monthly Review Press, New York, 1978, pp. 38–79.

Carroll Smith-Rosenburg
and Charles Rosenberg

THE FEMALE ANIMAL: MEDICAL AND BIOLOGICAL VIEWS OF WOMAN AND HER ROLE IN 19th CENTURY AMERICA

SINCE at least the time of Hippocrates and Aristotle, the roles assigned 332
women have attracted an elaborate body of medical and biological justification. This was especially true in the nineteenth century as the intellectual and emotional centrality of science increased steadily. Would-be scientific arguments were used in the rationalization and legitimization of almost every aspect of Victorian life, and with particular vehemence in those areas in which social change implied stress in existing social arrangements.

This essay is an attempt to outline some of the shapes assumed by the nineteenth-century debate over the ultimate bases for woman's domestic and child-bearing role.[1] In form it resembles an exercise in the history of ideas; in intent it represents a hybrid with social and psychological 333
history. Biological and medical views serve as a sampling device suggesting and illuminating patterns of social continuity, change, and tension.

The relationships between social change and social stress are dismayingly complex and recalcitrant to both psychological theorists and to the historian's normal modes of analysis. In an attempt to gain insight into these relationships the authors have chosen an analytic approach based on the study

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[1] For historical studies of women's role and ideological responses to it in nineteenth-century America, see William L. O'Neill, *Everyone was Brave: A History of Feminism in America* (Chicago, 1969); William Wasserstrom, *Heiress of all the Ages: Sex and Sentiment in the Victorian Tradition* (Minneapolis, 1959); Eleanor Flexner, *Century of Struggle: The Woman's Rights Movement in the United States* (New York, 1968); Aileen S. Kraditor, *The Ideas of the Woman Suffrage Movement, 1890-1920* (New York, 1965). For studies emphasizing the interaction between social change and sex role conflict see, Carroll Smith Rosenberg, "Beauty, the Beast and the Militant Woman: A Case Study in Sex Roles and Social Stress in Jacksonian America," *American Quarterly*, XXIII (Oct. 1971), 562-84; Carroll Smith Rosenberg, "The Hysterical Woman: Sex Roles and Role Conflict in 19th-Century America," *Social Research*, XXXIX (Winter, 1972), 652-78. The problem of sexuality in the English-speaking world has been a particular subject of historical concern. Among the more important, if diverse, attempts to deal with this problem are Peter T. Cominos, "Late-Victorian Sexual Respectability and the Social System," *Internation Review of Social History*, VIII (1963), 18-48, 216-50; Stephen Nissenbaum, "Careful Love: Sylvester Graham and the Emergence of Victorian Sexual Theory in America, 1830-1840" (doctoral dissertation, University of Wisconsin, 1968); Graham Barker-Benfield, "The Horrors of the Half Known Life: Aspects of the Exploitation of Women by Men" (doctoral dissertation, University of California, Los Angeles, 1968); Nathan G. Hale, Jr., *Freud and the Americans: The Beginnings of Psychoanalysis in the United States, 1876-1917* (New York, 1971), 24-46; David M. Kennedy, *Birth Control in America: The Career of Margaret Sanger* (New Haven, 1970), 36-71; Steven Marcus, *The Other Victorians: A Study of Sexuality and Pornography in Mid-Nineteenth-Century England* (New York, 1966). See also Charles E. Rosenberg, "Sexuality, Class and Role in 19th-Century America," *American Quarterly*, XXV (May 1973), 131-54.

of normative descriptions of the female role at a time of widespread social change; not surprisingly emotion-laden attempts to reassert and redefine this role constitute one response to the stress induced by such social change.

This approach was selected for a variety of reasons. Role definitions exist on a level of prescription beyond their embodiment in the individuality and behavior of particular historical persons. They exist rather as a formally agreed upon set of characteristics understood by and acceptable to a significant proportion of the population. As formally agreed upon social values they are, moreover, retrievable from historical materials and thus subject to analysis. Such social role definitions, however, have a more than platonic reality; for they exist as parameters with which and against which individuals must either conform or define their deviance. When inappropriate to social, psychological, or biological reality such definitions can themselves engender anxiety, conflict, and demands for change.

During the nineteenth century, economic and social forces at work within Western Europe and the United States began to compromise traditional social roles. Some women at least began to question—and a few to challenge overtly—their constricted place in society. Naturally enough, men hopeful of preserving existing social relationships, and in some cases threatened themselves both as individuals and as members of particular social groups, employed medical and biological arguments to rationalize traditional sex roles as rooted inevitably and irreversibly in the prescriptions of anatomy and physiology. This essay examines the ideological attack mounted by prestigious and traditionally minded men against two of the ways in which women expressed their dissatisfaction and desire for change: women's demands for improved educational opportunities and their decision to resort to birth control and abortion. That much of this often emotionally charged debate was oblique and couched in would-be scientific and medical language and metaphor makes it even more significant; for few spokesmen could explicitly and consciously confront those changes which impinged upon the bases of their particular emotional adjustment.

The Victorian woman's ideal social characteristics—nurturance, intuitive morality, domesticity, passivity, and affection—were all assumed to have a deeply rooted biological basis. These medical and scientific arguments formed an ideological system rigid in its support of tradition, yet infinitely flexible in the particular mechanisms which could be made to explain and legitimate woman's role.

Woman, nineteenth-century medical orthodoxy insisted, was starkly different from the male of the species. Physically, she was frailer, her skull smaller, her muscles more delicate. Even more striking was the difference between the nervous system of the two sexes. The female nervous system was finer, "more irritable," prone to overstimulation and resulting exhaustion. "The female sex," as one physician explained in 1827,

> is far more sensitive and susceptible than the male, and extremely liable to those distressing affections which for want of some better term, have been denominated nervous, and which consist chiefly in painful affections of the head, heart, side, and indeed, of almost every part of the system.[2]

"The nerves themselves," another physician concurred a generation later, "are smaller, and of a more delicate structure. They are endowed with greater sensibility, and, of course, are liable to more frequent and stronger

impressions from external agents or mental influences."[3] Few if any questioned the assumption that in males the intellectual propensities of the brain dominated, while the female's nervous system and emotions prevailed over her conscious and rational faculties. Thus it was only natural, indeed inevitable, that women should be expected and permitted to display more affect than men; it was inherent in their very being.

Physicians saw woman as the product and prisoner of her reproductive system. It was the ineluctable basis of her social role and behavioral characteristics, the cause of her most common ailments; woman's uterus and ovaries controlled her body and behavior from puberty through menopause. The male reproductive system, male physicians assured, exerted no parallel degree of control over man's body. Charles D. Meigs, a prominent Philadelphia gynecologist, stated with assurance in 1847 that a woman is "a moral, a sexual, a germiferous, gestative and parturient creature."[4] It was, another physician explained in 1870, "as if the Almighty, in creating the female sex, had taken the uterus and built up a woman around it."[5] A wise deity had designed woman as keeper of the hearth, as breeder and rearer of children.

Medical wisdom easily supplied hypothetical mechanisms to explain the interconnection between the female's organs of generation and the functioning of her other organs. The uterus, it was assumed, was connected to the central nervous system; shocks to the nervous system might alter the reproductive cycle—might even mark the gestating fetus—while changes in the reproductive cycle shaped emotional states. This intimate and hypothetical link between ovaries, uterus, and nervous system was the logical basis for the "reflex irritation" model of disease causation so popular in middle and late nineteenth-century medical texts and monographs on psychiatry and gynecology. Any imbalance, exhaustion, infection, or other disorders of the reproductive organs could cause pathological reactions in parts of the body seemingly remote.[6] Doctors connected not only the paralyses and headaches of the hysteric to uterine disease but also ailments in virtually every part of the body. "These diseases," one physician explained,

[3] Marshall Hall, *Commentaries on some of the more important of the Diseases of Females*, in three parts (London, 1827), 2. Although this discussion centers on the nineteenth century, it must be understood that these formulations had a far longer pedigree.

[4] Stephen Tracy, *The Mother and her Offspring* (New York, 1860), xv; William Goodell, *Lessons in Gynecology* (Philadelphia, 1879), 332; William B. Carpenter, *Principles of Human Physiology: With Their Chief Applications to Pathology, Hygiène, and Forensic Medicine* (4th ed., Philadelphia, 1850), 727. In mid-nineteenth century many of these traditional views of woman's peculiar physiological characteristics were restated in terms of the currently fashionable phrenology. For example, see Thomas L. Nichols, *Woman, in All Ages and Nations: A Complete and Authentic History of the Manners and Customs, Character and Condition of the Female Sex in Civilized and Savage Countries, from the Earliest Ages to the Present Time* (New York, *ca.* 1849), xi.

[5] Charles D. Meigs, *Lecture on Some of the Distinctive Characteristics of the Female. Delivered before the Class of the Jefferson Medical College, January 5, 1847* (Philadelphia, 1847), 5.

[6] M. L. Holbrook, *Parturition without Pain: A Code of Directions for Escaping from the Primal Curse* (New York, 1882), 14-15. See also Edward H. Dixon, *Woman, and her Diseases, from the Cradle to the Grave: Adapted Exclusively to her Instruction in the Physiology of her System, and all the Diseases of her Critical Periods* (New York, 1846), 17; M. K. Hard, *Woman's Medical Guide: Being a Complete Review of the Peculiarities of the Female Constitution and the Derangements to which it is Subject. With a Description of Simple yet Certain Means for their Cure* (Mt. Vernon, Ohio, 1848), 11.

[6] In the hypothetical pathologies of these generations, the blood was often made to serve the same function as that of the nerves; it could cause general ills to have local manifestations and effect systemic changes based on local lesions. By mid-century, moreover, physicians had come to understand that only the blood supply connected the gestating mother to her child.

336 "will be found, on due investigation, to be in reality, no disease at all, but merely the sympathetic reaction or the symptoms of one disease, namely, a disease of the womb."[7]

Yet despite the commonsensical view that many such ailments resulted from childbearing, physicians often contended that far greater difficulties could be expected in childless women. Motherhood was woman's normal destiny, and those females who thwarted the promise immanent in their body's design must expect to suffer. The maiden lady, many physicians argued, was fated to a greater incidence of both physical and emotional disease than her married sisters and to a shorter life-span.[8] Her nervous system was placed under constant pressure, and her unfulfilled reproductive organs —especially at menopause—were prone to cancer and other degenerative ills.

Woman was thus peculiarly the creature of her internal organs, of tidal forces she could not consciously control. Ovulation, the physical and emotional changes of pregnancy, even sexual desire itself were determined by internal physiological processes beyond the control or even the awareness of her conscious volition.[9] All women were prisoners of the cyclical aspects of their bodies, of the great reproductive cycle bounded by puberty and menopause, and by the shorter but recurrent cycles of childbearing and menstruation. All shaped her personality, her social role, her intellectual abilities and limitations; all presented as well possibly "critical" moments in her development, possible turning points in the establishment—or deterioration—of future physical and mental health. As the president of the American Gynecological Society stated in 1900: "Many a young life is battered and forever crippled in the breakers of puberty; if it crosses these unharmed and is not dashed to pieces on the rock of childbirth, it may still ground on the ever-recurring shallows of menstruation, and lastly, upon the
337 final bar of the menopause ere protection is found in the unruffled waters of the harbor beyond the reach of sexual storms."[10]

Woman's physiology and anatomy, physicians habitually argued, oriented her toward an "inner" view of herself and her worldly sphere. (Logically enough, nineteenth-century views of heredity often assumed that the father was responsible for a child's external musculature and skeletal development, the mother for the internal viscera, the father for analytical abili-

[7] M. E. Dirix, *Woman's Complete Guide to Health* (New York, 1869), 24. So fashionable were such models in the late-nineteenth century that America's leading gynecologist in the opening years of the present century despaired of trying to dispel such exaggerated notions from his patients' minds. "It is difficult," he explained, "even for a healthy girl to rid her mind of constant impending evil from the uterus and ovaries, so prevalent is the idea that woman's ills are mainly 'reflexes' from the pelvic organs." Gynecological therapy was the treatment of choice for a myriad of symptoms. Howard A. Kelly, *Medical Gynecology* (New York, 1908), 73.

[8] [Dr. Porter,] *Book of Men, Women, and Babies. The Laws of God applied to Obtaining, Rearing, and Developing the Natural, Healthful, and Beautiful in Humanity* (New York, 1855), 56; Tracy, *Mother and Offspring*, xxiii; H. S. Pomeroy, *The Ethics of Marriage* (New York, 1888), 78.

[9] On the involuntary quality of female sexuality, see Alexander J. C. Skene, *Education and Culture as Related to the Health and Diseases of Women* (Detroit, 1889), 22.

[10] George Engelmann, *The American Girl of To-Day: Modern Education and Functional Health* (Washington, 1900), 9-10.

ties, the mother for emotions and piety.[11]) Their secret internal organs, women were told, determined their behavior; their concerns lay inevitably within the home.[12] In a passage strikingly reminiscent of some mid-twentieth-century writings, a physician in 1869 depicted an idealized female world, rooted in the female reproductive system, sharply limited socially and intellectually, yet offering women covert and manipulative modes of exercising power:

> Mentally, socially, spiritually, she is more interior than man. She herself is an interior part of man, and her love and life are always something interior and incomprehensible to him. . . . Woman is to deal with domestic affections and uses, not with philosophies and sciences. . . . She is priest, not king. The house, the chamber, the closet, are the centres of her social life and power, as surely as the sun is the centre of the solar system. . . . Another proof of the interiority of woman, is the wonderful secretiveness and power of dissimulation which she possesses. . . . Woman's secrecy is not cunning; her dissimulation is not fraud. They are intuitions or spiritual perceptions, full of tact and wisdom, leading her to conceal or reveal, to speak or be silent, to do or not to do, exactly at the right time and in the right place.[13]

The image granted women in these hypothetical designs was remarkably consistent with the social role traditionally allotted them. The instincts connected with ovulation made her by nature gentle, affectionate, and nurturant. Weaker in body, confined by menstruation and pregnancy, she was both physically and economically dependent upon the stronger, more forceful male, to whom she necessarily looked up to with admiration and devotion.

Such stylized formulae embodied, however, a characteristic yet entirely functional ambiguity. The Victorian woman was more spiritual than man, yet less intellectual, closer to the divine, yet prisoner of her most animal characteristics, more moral than man, yet less in control of her very morality. While the sentimental poets placed woman among the angels and doctors praised the transcendent calling of her reproductive system, social taboos made woman ashamed of menstruation, embarrassed and withdrawn during pregnancy, self-conscious and purposeless during and after menopause. Her body, which so inexorably defined her personality and limited her role, appeared to woman often degrading and confining.[14] The very romantic rhetoric which tended to suffocate nineteenth-century discussions of femininity only underlined with irony the distance between behavioral reality and the forms of conventional ideology.

[11] Alexander Harvey, "On the Relative Influence of the Male and Female Parents in the Reproduction of the Animal Species," *Monthly Journal of Medical Science*, XIX (Aug. 1854), 108-18; M. A. Pallen, "Heritage, or Hereditary Transmission," *St. Louis Medical & Surgical Journal*, XIV (Nov. 1856), 495. William Warren Potter, *How Should Girls be Educated? A Public Health Problem for Mothers, Educators, and Physicians* (Philadelphia, 1891), 9.

[12] As one clerical analyst explained, "All the spare force of nature is concerned in this interior nutritive system, unfitting and disinclining the woman for strenuous muscular and mental enterprise, while providing for the shelter and nourishment of offspring throughout protracted periods of embryo and infancy." William C. Conant, "Sex in Nature and Society," *Baptist Quarterly*, IV (April 1870), 183.

[13] William H. Holcombe, *The Sexes here and hereafter* (Philadelphia, 1869), 201-02. William Holcombe was a Swedenborgian, and these contrasting views of the masculine and feminine also reflect New Church doctrines.

[14] In regard to pregnancy many middle-class women "sought to hide their imagined shame as long as possible," by tightening corsets and then remaining indoors, shunning even the best of friends—certainly never discussing the impending event. Henry B. Hemenway, *Healthful Womanhood and Childhood: Plain Talks to Non-Professional Readers* (Evanston, Ill., 1894); Elizabeth Evans, *The Abuse of Maternity* (Philadelphia, 1875), 28-29.

The nature of the formalistic scheme implied as well a relationship between the fulfilling of its true calling and ultimate social health. A woman who lived "unphysiologically"—and she could do so by reading or studying in excess, by wearing improper clothing, by long hours of factory work, or by a sedentary, luxurious life—could produce only weak and degenerate offspring. Until the twentieth century, it was almost universally assumed that acquired characteristics in the form of damage from disease and improper life-styles in parents would be transmitted through heredity; a nervous and debilitated mother could have only nervous, dyspeptic, and undersized children.[15] Thus appropriate female behavior was sanctioned not only by traditional injunctions against the avoidance of individual sin in the form of inappropriate and thus unnatural modes of life but also by the higher duty of protecting the transcendent good of social health, which could be maintained only through the continued production of healthy children. Such arguments were to be invoked with increasing frequency as the nineteenth century progressed.

In mid-nineteenth-century America it was apparent that women—or at
339 least some of them—were growing dissatisfied with traditional roles. American society in mid-nineteenth century was committed—at least formally—to egalitarian democracy and evangelical piety. It was thus a society which presumably valued individualism, social and economic mobility, and free will. At the same time it was a society experiencing rapid economic growth, one in which an increasing number of families could think of themselves as middle class and could seek a life-style appropriate to that station. At least some middle-class women, freed economically from the day-to-day struggle for subsistence, found in these values a motivation and rationale for expanding their roles into areas outside the home. In the Jacksonian crusades for piety, for temperance, for abolition, and in pioneering efforts to aid the urban poor, women played a prominent role, a role clearly outside the confines of the home. Women began as well to demand improved educational opportunities—even admission to colleges and medical schools. A far greater number began, though more covertly, to see family limitation as a necessity if they would preserve health, status, economic security, and individual autonomy.

Only a handful of nineteenth-century American women made a commitment to overt feminism and to the insecurity and hostility such a commitment implied. But humanitarian reform, education, and birth control were all issues which presented themselves as real alternatives to every respectable churchgoing American woman.[16] Contemporary medical and biological arguments identified, reflected, and helped to eliminate two of these threats to traditional role definitions: demands by women for higher education and family limitation.

[15] For a brief summary of late nineteenth-century assumptions in regard to human genetics, see Charles E. Rosenberg, "Factors in the Development of Genetics in the United States: Some Suggestions," *Journal of the History of Medicine*, XXII (Jan. 1967), 31-33.

[16] Since both male and female were ordinarily involved in decisions to practice birth control, the cases are not strictly analogous. Both, however, illustrate areas of social conflict organized about stress on traditional role characteristics. This discussion emphasizes only those aspects of the birth control debate which placed responsibility on the woman. Commentators did indeed differ in such emphases; in regard to abortion, however, writers of every religious and ideological persuasion agreed in seeing the matter as woman's responsibility.

Since the beginnings of the nineteenth century, American physicians and social commentators generally had feared that American women were physically inferior to their English and Continental sisters. The young women of the urban middle and upper classes seemed in particular less vigorous, more nervous than either their own grandmothers or European contemporaries. Concern among physicians, educators, and publicists over the physical deterioration of American womanhood grew steadily during the nineteenth century and reached a high point in its last third.

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Many physicians were convinced that education was a major factor in bringing about this deterioration, especially education during puberty and adolescence. It was during these years that the female reproductive system matured, and it was this process of maturation that determined the quality of the children which American women would ultimately bear. During puberty, orthodox medical doctrine insisted, a girl's vital energies must be devoted to development of the reproductive organs. Physicians saw the body as a closed system possessing only a limited amount of vital force; energy expended in one area was necessarily removed from another. The girl who curtailed brain work during puberty could devote her body's full energy to the optimum development of its reproductive capacities. A young woman, however, who consumed her vital force in intellectual activities was necessarily diverting these energies from the achievement of true womanhood. She would become weak and nervous, perhaps sterile, or more commonly, and in a sense more dangerously for society, capable of bearing only sickly and neurotic children—children able to produce only feebler and more degenerate versions of themselves.[17] The brain and ovary could not develop at the same time. Society, mid-century physicians warned, must protect the higher good of racial health by avoiding situations in which adolescent girls taxed their intellectual faculties in academic competition. "Why," as one physician pointedly asked, "spoil a good mother by making an ordinary grammarian?"[18]

Yet where did America's daughters spend these years of puberty and adolescence, doctors asked, especially the daughters of the nation's most virtuous and successful middle-class families? They spent these years in schools; they sat for long hours each day bending over desks, reading thick books, competing with boys for honors. Their health and that of their future children would be inevitably marked by the consequences of such unnatural modes of life.[19] If such evils resulted from secondary education, even more dramatically unwholesome was the influence of higher education upon the

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health of those few women intrepid enough to undertake it. Yet their num-

[17] "The results," as Edward H. Clarke put it in his widely discussed polemic on the subject, "are monstrous brains and puny bodies; abnormally active cerebration, and abnormally weak digestion; flowing thought and constipated bowels; lofty aspirations and neuralgic sensations. . . ." Edward H. Clarke, *Sex in Education: Or, a Fair Chance for Girls* (Boston, 1873), 41. Thomas A. Emmett, in his widely used textbook of gynecology, warned in 1879 that girls of the better classes should spend the year before and two years after puberty at rest. "Each menstrual period should be passed in the recumbent position until her system becomes accustomed to the new order of life." Thomas Addis Emmett, *The Principles and Practice of Gynecology* (Philadelphia, 1879), 21.

[18] T. S. Clouston, *Female Education from a Medical Point of View* (Edinburgh, 1882), 20; Potter, *How Should Girls be Educated?* 9.

[19] The baleful hereditary effects of woman's secondary education served as a frequent sanction against this unnatural activity. Lawrence Irwell, "The Competition of the Sexes and its

bers increased steadily, especially after a few women's colleges were established in the East and state universities in the Midwest and Pacific Coast began cautiously to accept coeducation. Women could now, critics agonized, spend the entire period between the beginning of menstruation and the maturation of their ovarian systems in nerve-draining study. Their adolescence, as one doctor pointed out, contrasted sadly with those experienced by healthier, more fruitful forebears: "Our great-grandmothers got their schooling during the winter months and let their brains lie fallow for the rest of the year. They knew less about Euclid and the classics than they did about housekeeping and housework. But they made good wives and mothers, and bore and nursed sturdy sons and buxom daughters and plenty of them at that."[20]

Constant competition among themselves and with the physically stronger males disarranged the coed's nervous system, leaving her anxious, prey to hysteria and neurasthenia. One gynecologist complained as late as 1901:

> the nervous force, so necessary at puberty for the establishment of the menstrual function, is wasted on what may be compared as trifles to perfect health, for what use are they without health? The poor sufferer only adds another to the great army of neurasthenia and sexual incompetents, which furnish neurologists and gynecologists with so much of their material . . . bright eyes have been dulled by the brain-fag and sweet temper transformed into irritability, crossness and hysteria, while the womanhood of the land is deteriorating physically.
>
> She may be highly cultured and accomplished and shine in society, but her future husband will discover too late that he has married a large outfit of headaches, backaches and spine aches, instead of a woman fitted to take up the duties of life.[21]

Such speculations exerted a strong influence upon educators, even those connected with institutions which admitted women. The state universities, for example, often prescribed a lighter course load for females or refused to permit women admission to regular degree programs. "Every physiologist is well aware," the Regents of the University of Wisconsin explained in 1877, "that at stated times, nature makes a great demand upon the energies of early womanhood and that at these times great caution must be exercised lest injury be done. . . . Education is greatly to be desired," the Regents concluded:

> but it is better that the future matrons of the state should be without a University training than that it should be produced at the fearful expense of ruined health; better that the future mothers of the state should be robust, hearty, healthy women, than that, by over study, they entail upon their descendants the germs of disease.[22]

This fear for succeeding generations born of educated women was widespread. "We want to have body as well as mind," one commentator noted,

Results," *American Medico-Surgical Bulletin*, X (Sept. 19, 1896), 319-20. All the doyens of American gynecology in the late-nineteenth century—Emmett, J. Marion Sims, T. Gaillard Thomas, Charles D. Meigs, William Goodell, and Mitchell—shared the conviction that higher education and excessive development of the nervous system might interfere with woman's proper performance of her maternal functions.

[20] William Goodell, *Lessons in Gynecology* (Philadelphia, 1879), 353.

[21] William Edgar Darnall, "The Pubescent Schoolgirl," *American Gynecological & Obstetrical Journal*, XVIII (June 1901), 490.

[22] Board of Regents, University of Wisconsin, *Annual Report, for the Year Ending, September 30, 1877* (Madison, 1877), 45.

"otherwise the degeneration of the race is inevitable."[23] Such transcendent responsibilities made the individual woman's personal ambitions seem trivial indeed.

One of the remedies suggested by both educators and physicians lay in tempering the intensely intellectualistic quality of American education with a restorative emphasis on physical education. Significantly, health reformers' demands for women's physical education were ordinarily justified not in terms of freeing the middle-class woman from traditional restrictions on bodily movement, but rather as upgrading her ultimate maternal capacities. Several would-be physiological reformers called indeed for active participation in house-cleaning as an ideal mode of physical culture for the servant-coddled American girl. Bedmaking, clothes scrubbing, sweeping, and scouring provided a varied and highly appropriate regimen.[24]

Late nineteenth-century women physicians, as might have been expected, failed ordinarily to share the alarm of their male colleagues when contemplating the dangers of coeducation. No one, a female physician commented sardonically, worked harder or in unhealthier conditions than the washerwoman; yet, would-be saviors of American womanhood did not inveigh against this abuse—washing, after all, was appropriate work for women. Women doctors often did agree with the general observation that their sisters were too frequently weak and unhealthy; however, they blamed not education or social activism but artificialities of dress and slavery to fashion, aspects of the middle-class woman's life-style which they found particularly demeaning. "The fact is that girls and women can bear study," Alice Stockham explained, "but they cannot bear compressed viscera, tortured stomachs and displaced uterus," the results of fashionable clothing and an equally fashionable sedentary life. Another woman physician, Sarah Stevenson, wrote in a similar vein: " 'How do I look?' is the everlasting story from the beginning to the end of woman's life. Looks, not books, are the murderers of American women."[25]

[23] Clouston, *Female Education*, 19.

[24] James E. Reeves, *The Physical and Moral Causes of Bad Health in American Women* (Wheeling, W.Va., 1875), 28; John Ellis, *Deterioration of the Puritan Stock and its Causes* (New York, 1884), 7; George Everett, *Health Fragments or, Steps Toward a True Life: Embracing Health, Digestion, Disease, and the Science of the Reproductive Organs* (New York, 1874), 37; Nathan Allen, "The Law of Human Increase; Or Population based on Physiology and Psychology," *Quarterly Journal of Psychological Medicine*, II (April 1868), 231; Nathan Allen, "The New England Family," *New Englander* (March 1882), 9-10; Pye Henry Chavasse, *Advice to a Wife on the Management of her Own Health. And on the Treatment of Some of the Complaints Incidental to Pregnancy, Labour and Suckling with an Introductory Chapter especially Addressed to a Young Wife* (New York, 1886), 73-75.

[25] Sarah H. Stevenson, *The Physiology of Woman, Embracing Girlhood, Maternity and Mature Age* (2nd ed., Chicago, 1881), 68, 77; Alice Stockham, *Tokology: A Book for Every Woman* (rev. ed., Chicago, 1887), 257. Sarah H. Stevenson noted acidly that "the unerring instincts of woman have been an eloquent theme for those who do not know what they are talking about." Stevenson, *Physiology of Woman*, 79. The dress reform movement held, of course, far more significant implications than one would gather from the usually whimsical attitude with which it is normally approached; clothes were very much a part of woman's role. Health reformers, often critical as well of the medical establishment whose arguments we have—essentially—been describing, were often sympathetic to women's claims that not too much, but too little, mental stimulation was the cause of their ills, especially psychological ones. M. L. Holbrook, *Hygiene of the Brain and Nerves and the Cure of Nervousness* (New York, 1878), 63-64, 122-23; James C. Jackson, *American Womanhood: Its Peculiarities and Necessities* (Dansville, N.Y., 1870), 127-31.

Even more significant than this controversy over woman's education was a parallel debate focusing on the questions of birth control and abortion. These issues affected not simply a small percentage of middle- and upper-middle-class women, but all men and women. It is one of the great and still largely unstudied realities of nineteenth-century social history. Every married woman was immediately affected by the realities of childbearing and child rearing. Though birth control and abortion had been practiced, discussed—and reprobated—for centuries, the mid-nineteenth century saw a dramatic increase in concern among spokesmen for the ministry and medical profession.[26]

Particularly alarming was the casualness, doctors charged, with which seemingly respectable wives and mothers contemplated and undertook abortions, and how routinely they practiced birth control. One prominent

New York gynecologist complained in 1874 that well-dressed women walked into his consultation room and asked for abortions as casually as they would for a cut of beefsteak at their butcher.[27] In 1857, the American Medical Association nominated a special committee to report on the problem; then appointed another in the 1870s; between these dates and especially in the late 1860s, medical societies throughout the country passed resolutions attacking the prevalence of abortion and birth control and condemning physicians who performed and condoned such illicit practices. Nevertheless, abortions could in the 1870s be obtained in Boston and New York for as little as ten dollars, while abortifacients could be purchased more cheaply or through the mail. Even the smallest villages and rural areas provided a market for the abortionist's services; women often aborted any pregnancy which occurred in the first few years of marriage. The Michigan Board of Health estimated in 1898 that one third of all the state's pregnancies ended in abortion. From 70 to 80 percent of these were secured, the board contended, by prosperous and otherwise respectable married women who could not offer even the unmarried mother's "excuse of shame."[28] By

[26] For documentation of the progressive drop in the white American birth rate during the nineteenth century, and some possible reasons for this phenomenon, see Yasukichi Yasuba, *Birth Rates of the White Population in the United States, 1800-1860: An Economic Study* (Baltimore, 1962); J. Potter, "American Population in the Early National Period." Paul Deprez, ed., *Proceedings of Section V of the Fourth Congress of the International Economic History Association* (Winnipeg, Canada, 1970), 55-69. For a more general background to this trend, see A. M. Carr-Saunders, *World Population: Past Growth and Present Trends* (London, 1936).

[27] A. K. Gardner, *Conjugal Sins against the Laws of Life and Health* (New York, 1874), 131. H. R. Storer of Boston was probably the most prominent and widely read critic of such "conjugal sins." Abortion had in particular been discussed and attacked since early in the century, though it was not until the postbellum years that it became a widespread concern of moral reformers. Alexander Draper, *Observations on Abortion. With an Account of the Means both Medicinal and Mechanical, Employed to Produce that Effect . . .* (Philadelphia, 1839); Hugh L. Hodge, *On Criminal Abortion; A Lecture* (Philadelphia, 1854). Advocates of birth control routinely used the dangers and prevalence of abortion as one argument justifying their cause.

[28] *Report of the Suffolk District Medical Society On Criminal Abortion and Ordered Printed . . . May 9, [1857]* (Boston, 1857), 2. The report was almost certainly written by Storer. The Michigan report is summarized in William D. Haggard, *Abortion: Accidental, Essential, Criminal.* Address before the Nashville Academy of Medicine, Aug. 4, 1898 (Nashville, Tenn., 1898), 10. For samples of contemporary descriptions of prevalence, cheapness, and other aspects of abortion and birth control in the period, see Ely Van De Warker, *The Detection of Criminal Abortion, and a Study of Foeticidal Drugs* (Boston, 1872); Evans, *Abuse of Maternity*; Horatio R. Storer, *Why Not? A Book for Every Woman* (2nd ed., Boston, 1868); [N. F. Cook,] *Satan in Society: By A Physician* (Cincinnati, 1876); Discussion, *Transactions of the Homeopathic Medical Society of New York*, IV

the 1880s, English medical moralists could refer to birth control as the "American sin" and warn against England's women following in the path of America's faithless wives.[29]

So general a phenomenon demands explanation. The only serious attempts to explain the prevalence of birth control in this period have emphasized the economic motivations of those practicing it—the need in an increasingly urban, industrial, and bureaucratized society to limit numbers of children so as to provide security, education, and inheritance for those already brought into the world. As the nineteenth century progressed, it has been argued, definitions of appropriate middle-class life-styles dictated a more and more expansive pattern of consumption, a pattern—especially in an era of recurring economic instability—particularly threatening to those large numbers of Americans only precariously members of the secure economic classes. The need to limit offspring was a necessity if family status was to be maintained.[30]

Other aspects of nineteenth-century birth control have received much less historical attention. One of these needs only to be mentioned for it poses no interpretative complexities; this was the frequency with which childbirth meant for women pain and often lingering incapacity. Death from childbirth, torn cervixes, fistulae, prolapsed uteri were widespread "female complaints" in a period when gynecological practice was still relatively primitive and pregnancy every few years common indeed. John Humphrey Noyes, perhaps the best-known advocate of family planning in nineteenth-century America, explained poignantly why he and his wife had decided to practice birth control in the 1840s:

> The [decision] was occasioned and even forced upon me by very sorrowful experiences. In the course of six years my wife went through the agonies of five births. Four of them were premature. Only one child lived. . . . After our last disappointment, I pledged my word to my wife that I would never again expose her to such fruitless suffering. . . .[31]

(1866), 9-10; H. R. Storer and F. F. Heard, *Criminal Abortion* (Boston, 1868); H. C. Ghent, "Criminal Abortion, or Foeticide," *Transactions of the Texas State Medical Association at the Annual Session 1888-89* (1888-1889), 119-46; Hugh Hodge, *Foeticide, or Criminal Abortion: A Lecture Introductory to the Course on Obstetrics, and Diseases of Women and Children. University of Pennsylvania* (Philadelphia, 1869), 3-10. Much of the medical discussion centered about the need to convince women that the traditional view that abortion was no crime if performed before quickening was false and immoral and to pass and enforce laws and medical society proscriptions against abortionists.

[29] Compare the warning of Pomeroy, *Ethics of Marriage*, v, 56, with the editorial, "A Conviction for Criminal Abortion," *Boston Medical & Surgical Journal*, CVI (Jan. 5, 1882), 18-19. It is significant that discussions of birth control in the United States always emphasized the role and motivations of middle-class women and men; in England, following the canon of the traditional Malthusian debate, the working class and its needs played a far more prominent role. Not until late in the century did American birth control advocates tend to concern themselves with the needs and welfare of the working population. It is significant as well that English birth control advocates often used the prevalence of infanticide as an argument for birth control; in America this was rarely discussed. And one doubts if the actual incidence of infanticide was substantially greater in London than New York.

[30] For a guide to literature on birth control in nineteenth-century America, see Norman Himes, *Medical History of Contraception* (Baltimore, 1936). See also J. A. Banks, *Prosperity and Parenthood: A Study of Family Planning among the Victorian Middle Classes* (London, 1954), and J. A. and Olive Banks, *Feminism and Family Planning in Victorian England* (Liverpool, 1964); Margaret Hewitt, *Wives and Mothers in Victorian Industry* (London, *ca.* 1958). For the twentieth century, see David M. Kennedy, *Birth Control in America.*

[31] John Humphrey Noyes, *Male Continence* (Oneida, N.Y., 1872), 10-11.

346 The Noyeses' experience was duplicated in many homes. Young women were simply terrified of having children.[32]

Such fears, of course, were not peculiar to nineteenth-century America. The dangers of disability and death consequent upon childbirth extended back to the beginning of time, as did the anxiety and depression so frequently associated with pregnancy. What might be suggested, however, was that economic and technological changes in society added new parameters to the age-old experience. Family limitation for economic and social reasons now appeared more desirable to a growing number of husbands; it was, perhaps, also, more technically feasible. Consequently married women could begin to consider, probably for the first time, alternative life-styles to that of multiple pregnancies extending over a third of their lives. Women could begin to view the pain and bodily injury which resulted from such pregnancies not simply as a condition to be borne with fatalism and passivity, but as a situation that could be avoided. It is quite probable, therefore, that, in this new social context, increased anxiety and depression would result once a woman, in part at least voluntarily, became pregnant. Certainly, it could be argued, such fears must have altered women's attitudes toward sexual relations generally. Indeed the decision to practice birth control must necessarily have held more than economic and status implications for the family; it must have become an element in the fabric of every marriage's particular psycho-sexual reality.[33]

A third and even more ambiguous aspect of the birth control controversy in nineteenth-century America relates to the way in which attitudes toward contraception and abortion reflected role conflict within the family. Again and again, from the 1840s on, defenders of family planning—including
347 individuals as varied and idealistic as Noyes and Stockham, on the one hand, and assorted quack doctors and peddlers of abortifacients, on the other—justified their activities not in economic terms, but under the rubric of providing women with liberty and autonomy. Woman, they argued with remarkable unanimity, must control her own body; without this she was a slave not only to the sexual impulses of her husband but also to endless childbearing and rearing. "Woman's equality in all the relations of life," a New York physician wrote in 1866, "implies her absolute supremacy in the sexual relation. . . . it is her absolute and indefeasible right to determine when she will and when she will not be exposed to pregnancy." "God and

[32] It is not surprising that the design for a proto-diaphragm patented as early as 1846 should have been called "The Wife's Protector." J. B. Beers, "Instrument to Prevent Conception, Patented Aug. 28th, 1846," design and drawings (Historical Collections, Library of the College of Physicians of Philadelphia).

[33] In some marriages, for example, even if the male had consciously chosen, indeed urged, the practice of birth control, he was effectively deprived of a dimension of sexual pleasure and of the numerous children which served as tangible and traditional symbols of masculinity as well as the control over his wife which the existence of such children implied. In some marriages, however, birth control might well have brought greater sexual fulfillment because it reduced the anxiety of the female partner. Throughout the nineteenth century withdrawal was almost certainly the most common form of birth control. One author described it as "a practice so universal that it may well be termed a national vice, so common that it is unblushingly acknowledged by its perpetrators, for the commission of which the husband is even eulogized by his wife." [Cook,] *Satan in Society*, 152. One English advocate of birth control was candid enough to argue that "the real objection underlying the opposition, though it is not openly expressed, is the idea of the deprivation of pleasure supposed to be involved." Austin Holyyoake, *Large or Small Families* (London, 1892), 11.

Nature," another physician urged, "have given to the female the complete control of her own person, so far as sexual congress and reproduction are concerned."[34] The assumption of all these writers was clear and unqualified: women, if free to do so, would choose to have sexual relations less frequently, and to have far fewer pregnancies.

Implied in these arguments as well were differences as to the nature and function of sexual intercourse. Was its principal and exclusively justifiable function, as conservative physicians and clergymen argued, the procreation of children, or could it be justified as an act of love, of tenderness between individuals? Noyes argued that the sexual organs had a social, amative function separable from their reproductive function. Sex was justifiable as an essential and irreplaceable form of human affection; no man could demand this act unless it was freely given.[35] Nor could it be freely given in many cases unless effective modes of birth control were available to assuage the woman's anxieties. A man's wife was not his chattel, her individuality to be violated at will, and forced—ultimately—to bear unwanted and thus almost certainly unhealthy children.

Significantly, defenders of women's right to limit childbearing employed many of the same arguments used by conservatives to attack women's activities outside the home; all those baleful hereditary consequences threatened by over-education were seen by birth control advocates as resulting from the bearing of children by women unwilling and unfit for the task, their vital energies depleted by excessive childbearing. A child, they argued, carried to term by a woman who desired only its death could not develop normally; such children proved inevitably a source of physical and emotional degener-

[34] R. T. Trall, *Sexual Physiology: A Scientific and Popular Exposition of the Fundamental Problems in Sociology* (New York, 1866), xi, 202. As women awoke to a realization of their own "individuality," as a birth control advocate explained it in the 1880s, they would rebel against such "enforced maternity." E. B. Foote, Jr., *The Radical Remedy in Social Science: Or, Borning Better Babies* (New York, 1886), 132. See also Stevenson, *Physiology of Women*, 91; T. L. Nichols, *Esoteric Anthropology* (New York, 1824); E. H. Heywood, *Cupid's Yokes: Or, the Binding Force of Conjugal Life* (Princeton, Mass., 1877); Stockham, *Tokology*, 250; Alice Stockholm, *Karezza: Ethics of Marriage* (Chicago, 1896); E. B. Foote, *Medical Commonsense Applied to the Causes, Prevention and Cure of Chronic Diseases and Unhappiness in Marriage* (New York, 1864), 365; J. Soule, *Science of Reproduction and Reproductive Control. The Necessity of Some Abstaining from Having Children. The Duty of all to Limit their Families According to their Circumstances Demonstrated. Effects of Continence Effects of Self-Pollution—Abusive Practices. Seminal Secretion—Its Connection with Life. With all the Different Modes of Preventing Conception, and the Philosophy of Each* (n.p., 1856), 37; L. B. Chandler, *The Divineness of Marriage* (New York, 1872). To radical feminist Tennie C. Claflin, man's right to impose his sexual desires upon woman was the issue underlying all opposition to woman suffrage and the expansion of woman's role. Tennie C. Claflin, *Constitutional Equality: A Right of Woman: Or a Consideration of the Various Relations Which She Sustains as a Necessary Part of the Body of Society and Humanity; With Her Duties to Herself—together with a Review of the Constitution of the United States, Showing that the Right to Vote Is Guaranteed to All Citizens. Also a Review of the Rights of Children* (New York, 1871), 63. Particularly striking are the letters from women desiring birth control information. Margaret Sanger, *Motherhood in Bondage* (New York, 1928); E. B. Foote, Jr., *Radical Remedy*, 114-20; Henry C. Wright, *The Unwelcome Child; or, the Crime of an Undesigned and Undesired Maternity* (Boston, 1858). This distinction between economic, "physical," and role consideration, is, quite obviously, justifiable only for the sake of analysis; these considerations must have coexisted within each family in particular configuration.

[35] Noyes, *Male Continence*, 16; Frederick Hollick, *The Marriage Guide, Or Natural History of Generation; A Private Instructor for Married Persons and Those About to Marry, Both Male and Female* (New York, *ca.* 1860), 348; Trall, *Sexual Physiology*, 205-06.

acy. Were women relieved from such accustomed pressures, they could produce fewer but better offspring.[36]

Many concerned mid-nineteenth-century physicians, clergymen, and journalists failed to accept such arguments. They emphasized instead the unnatural and thus necessarily deleterious character of any and all methods of birth control and abortion. Even coitus interruptus, obviously the most common mode of birth control in this period, was attacked routinely as a source of mental illness, nervous tension, and even cancer. This was easily demonstrated. Sex, like all aspects of human bodily activity, involved an exchange of nervous energy; without the discharge of such accumulated energies in the male orgasm and the soothing presence of the male semen "bathing the female reproductive organs," the female partner could never, the reassuring logic ran, find true fulfillment. The nervous force accumulated and concentrated in sexual excitement would build up dangerous levels of undischarged energy, leading ultimately to a progressive decay in the unfortunate
349 woman's physical and mental health. Physicians warned repeatedly that condoms and diaphragms—when the latter became available after mid-century—could cause an even more startlingly varied assortment of ills. In addition to the mechanical irritation they promoted, artificial methods of birth control increased the lustful impulse in both partners, leading inevitably to sexual excess. The resultant nervous exhaustion induced gynecological lesions, and then through "reflex irritation" caused such ills as loss of memory, insanity, heart disease, and even "the most repulsive nymphomania."[37]

Conservative physicians similarly denounced the widespread practice of inserting sponges impregnated with supposedly spermicidal chemicals into the vagina immediately before or after intercourse. Such practices, they warned, guaranteed pelvic injury, perhaps sterility. Even if a woman seemed in good health despite a history of practicing birth control, a Delaware physician explained in 1873 that ". . . as soon as this vigor commences to decline . . . about the fortieth year, the disease [cancer] grows as the energies fail—the cancerous fangs penetrating deeper and deeper until, after excruciating suffering, the writhing victim is yielded up to its terrible embrace."[38] Most importantly, this argument followed, habitual attempts at contraception meant—even if successful—a mother permanently injured

[36] Indeed, in these post-Darwinian years it was possible for at least one health reformer to argue that smaller families were a sign of that higher nervous evolution which accompanied civilization. [M. L. Holbrook,] *Marriage and Parentage* (New York, 1882). For the eugenic virtues of fewer but better children, see E. R. Shepherd, *For Girls: A Special Physiology: Being a Supplement to the Study of General Physiology. Twentieth Edition* (Chicago, 1887), 213; M. L. Griffith, *Ante-Natal Infanticide* (n.p. [1889]), 8.

[37] See Louis François Étienne Bergeret, *The Preventive Obstacle: Or Conjugal Onanism*, P. de Marmon, trans. (New York, 1870); C. H. F. Routh, *Moral and Physical Evils Likely to Follow if Practices Intended to Act as Checks to Population be not Strongly Discouraged and Condemned* (2nd ed., London, 1879), 13; Goodell, *Lessons in Gynecology*, 371, 374; Thomas Hersey, *The Midwife's Practical Directory; Or Woman's Confidential Friend: Comprising, Extensive Remarks on the Various Casualties and Forms of Diseases Preceding, Attending and Following the Period of Gestation, with appendix* (2nd ed., Baltimore, 1836), 80; William H. Walling, *Sexology* (Philadelphia, 1902), 79.

[38] J. R. Black, *The Ten Laws of Health; Or, How Disease Is Produced and Can Be Prevented* (Philadelphia, 1873), 251. See also C. A. Greene, *Build Well. The Basis of Individual, Home, and National Elevation. Plain Truths Relating to the Obligations of Marriage and Parentage* (Boston, *ca.* 1885), 99; E. P. LeProhon, *Voluntary Abortion, or Fashionable Prostitution, with Some Remarks upon the Operation of Craniotomy* (Portland, Me., 1867), 15; M. Solis-Cohen, *Girl, Wife, and Mother* (Philadelphia, 1911), 213.

and unable to bear healthy children. If unsuccessful, the children resulting from such unnatural matings would be inevitably weakened. And if such grave ills resulted from the practice of birth control, the physical consequences of abortion were even more dramatic and immediate.[39]

Physicians often felt little hesitation in expressing what seems to the historian a suspiciously disproportionate resentment toward such unnatural females. Unnatural was of course the operational word; for woman's presumed maternal instinct made her primarily responsible for decisions in regard to childbearing.[40] So frequent was this habitual accusation that some medical authors had to caution against placing the entire weight of blame for birth control and abortion upon the woman; men, they reminded, played an important role in most such decisions.[41] In 1871, for example, the American Medical Association Committee on Criminal Abortion described women who patronized abortionists in terms which conjured up fantasies of violence and punishment:

> She becomes unmindful of the course marked out for her by Providence, she overlooks the duties imposed on her by the marriage contract. She yields to the pleasures—but shrinks from the pains and responsibilities of maternity; and, destitute of all delicacy and refinement, resigns herself, body and soul, into the hands of unscrupulous and wicked men. Let not the husband of such a wife flatter himself that he possesses her affection. Nor can she in turn ever merit even the respect of a virtuous husband. She sinks into old age like a withered tree, stripped of its foliage; with the stain of blood upon her soul, she dies without the hand of affection to smooth her pillow.[42]

The frequency with which attacks on family limitation in mid-nineteenth-century America were accompanied by polemics against expanded roles for the middle-class woman indicates with unmistakable clarity something of one of the motives structuring such jeremiads. Family limitation necessarily added a significant variable within conjugal relationships generally; its successful practice implied potential access for women to new roles and a new autonomy.

Nowhere is this hostility toward women and the desire to inculcate guilt over women's desire to avoid pregnancy more strikingly illustrated than in

[39] There is an instructive analogy between these ponderously mechanistic sanctions against birth control and abortion and the psychodynamic arguments against abortion used so frequently in the twentieth century; both served precisely the same social function. In both cases, the assumption of woman's childbearing destiny provided the logical basis against which a denial of this calling produced sickness, in the nineteenth century through physiological, and ultimately, pathological processes—in the twentieth century through guilt and psychological but again, ultimately, pathological processes.

[40] A. K. Gardner, for example, confessed sympathy for the seduced and abandoned patron of the abortionist, "but for the married shirk, who disregards her divinely-ordained duty, we have nothing but contempt. . . ." Gardner, *Conjugal Sins*, 112. See also E. Frank Howe, *Sermon on Ante-Natal Infanticide delivered at the Congregational Church in Terre Haute, on Sunday Morning, March 28, 1869* (Terre Haute, Ind., 1869); J. H. Tilden, *Cursed before Birth* (Denver, *ca.* 1895); J. M. Toner, *Maternal Instinct, or Love* (Baltimore, 1864), 91.

[41] It must be emphasized that this is but one theme in a complex debate surrounding the issue of birth control and sexuality. A group of more evangelically oriented health reformers tended to emphasize instead the responsibility of the "overgrown, abnormally developed and wrongly directed amativeness of the man" and to see the woman as victim. John Cowan, Henry C. Wright, and Dio Lewis were widely read exemplars of this point of view. This group shared a number of assumptions and presumably psychological needs, and represents a somewhat distinct interpretive task. John Cowan, *The Science of A New Life* (New York, 1874), 275.

[42] W. L. Atlee and D. A. O'Donnell, "Report of the Committee on Criminal Abortion," *Transactions of the American Medical Association*, XXII (1871), 241.

351 the warnings of "race suicide" so increasingly fashionable in the late-nineteenth century. A woman's willingness and capacity to bear children was a duty she owed not only to God and husband but to her "race" as well.[43] In the second half of the nineteenth century, articulate Americans forced to evaluate and come to emotional terms with social change became, like many of their European contemporaries, attracted to a world view which saw racial identity and racial conflict as fundamental. And within these categories, birthrates became all-important indices to national vigor and thus social health.

In 1860 and again in 1870, Massachusetts census returns began to indicate that the foreign born had a considerably higher birthrate than that of native Americans. Indeed, the more affluent and educated a family, the fewer children it seemed to produce. Such statistics indicated that native Americans in the Bay State were not even reproducing themselves. The social consequences seemed ominous indeed.

The Irish, though barely one quarter of the Massachusetts population, produced more than half of the state's children. "It is perfectly clear," a Boston clergyman contended in 1884, "that without a radical change in the religious ideas, education, habits, and customs of the natives, the present population and their descendants will not rule that state a single generation."[44] A few years earlier a well-known New England physician, pointing to America's still largely unsettled western territories, had asked: "Shall they be filled by our own children or by those of aliens? This is a question that our own women must answer; upon their loins depends the future destiny of the nation." Native-born American women had failed themselves as individuals and society as mothers of the Anglo-Saxon race. If matters continued for another half century in the same manner, "the wives who are to be mothers in our republic must be drawn from trans-Atlantic homes. The Sons of the New World will have to re-act, on a magnificent scale, the old story of unwived Rome and the Sabines."[45]

352 Such arguments have received a goodly amount of historical attention, especially as they figured in the late-nineteenth and early twentieth centuries as part of the contemporary rationale for immigration restriction.[46] His-

The most tireless advocate of these views was Nathan Allen, a Lowell, Massachusetts, physician and health reformer. Nathan Allen, "The Law of Human Increase; Or Population based on Physiology and Psychology," *Quarterly Journal Psychological Medicine*, II (April 1868), 209-66; Nathan Allen, *Changes in New England Population. Read at the Meeting of the American Social Science Association, Saratoga, September 6, 1877* (Lowell, Mass., 1877); Nathan Allen, "The Physiological Laws of Human Increase," *Transactions of the American Medical Association*, XXI (1870), 381-407; Nathan Allen, "Physical Degeneracy," *Journal of Psychological Medicine*, IV (Oct. 1870), 725-64; Nathan Allen, "The Normal Standard of Woman for Propagation," *American Journal of Obstetrics*, IX (April 1876), 1-39.

[44] Ellis, *Deterioration of Puritan Stock*, 3; Storer, *Why Not?* 85.

[45] Clarke, *Sex in Education*, 63. For similar warnings, see Henry Gibbons, *On Feticide* (San Francisco, 1878), 4; Charles Buckingham, *The Proper Treatment of Children, Medical or Medicinal* (Boston, 1873), 15; Edward Jenks, "The Education of Girls from a Medical Stand-Point," *Transactions of the Michigan State Medical Society*, XIII (1889), 52-62; Paul Paquin, *The Supreme Passions of Man* (Battle Creek, Mich., 1891), 76.

[46] These arguments, first formulated in the 1860s, had become clichés in medical and reformist circles by the 1880s. See Barbara Miller Solomon, *Ancestors and Immigrants: A Changing New England Tradition* (Cambridge, Mass., 1956); John Higham, *Strangers in the Land: Patterns of American Nativism, 1860-1925* (New Brunswick, N.J., 1955). Such arguments exhibited a growing consciousness of class as well as of ethnic sensitivity; it was the better-educated and more sensitive members of society, anti-Malthusians began to argue, who would curtail their progeny, while the uneducated and coarse would hardly change their habits. H. S. Pomeroy, *Is Man Too Prolific? The So-Called Malthusian Idea* (London, 1891), 57-58.

torians have interpreted the race suicide argument in several fashions. As an incident in a general Western acceptance of racism, it has been seen as product of a growing alienation of the older middle and upper classes in the face of industrialization, urbanization, and bureaucratization of society. More specifically, some American historians have seen these race suicide arguments as rooted in the fears and insecurities of a traditionally dominant middle class as it perceived new and threatening social realities.

Whether or not historians care to accept some version of this interpretation—and certainly such motivational elements seem to be suggested in the rhetorical formulae employed by many of those bemoaning the failure of American Protestants to reproduce in adequate numbers—it ignores another element crucial to the logical and emotional fabric of these arguments. This is the explicit charge of female sexual failure. To a significant extent, contemporaries saw the problem as in large measure woman's responsibility; it was America's potential mothers, not its fathers, who were primarily responsible for the impending social cataclysm. Race suicide seemed a problem in social gynecology.

Though fathers played a necessary role in procreation, medical opinion emphasized that it was the mother's constitution and reproductive capacity which most directly shaped her offspring's physical, mental, and emotional attributes. And any unhealthy mode of life—anything in short which seemed undesirable to contemporary medical moralists, including both education and birth control—might result in a woman becoming sterile or capable of bearing only stunted offspring. Men, it was conceded, were subject to vices even more debilitating, but the effects of male sin and imprudence were, physicians felt, "to a greater extent confined to adult life; and consequently do not, to the same extent, impair the vitality of our race or threaten its physical destruction." Women's violation of physiological laws implied disaster to "the unborn of both sexes."[47]

Though such social critics tended to agree that woman was at fault, they expressed some difference of opinion as to the nature of her guilt. A few felt that lower birthrates could be attributed simply to the conscious and culpable decision of American women to curtail family size. Other physicians and social commentators, while admitting that many women felt little desire for children, saw the roots of the problem in somewhat different—and perhaps even more apocalyptic—terms. It was not, they feared, simply the conscious practice of family limitation which resulted in small families; rather the increasingly unnatural life-style of the "modern American woman" had undermined her reproductive capacities so that even when she would, she could not bear adequate numbers of healthy children. Only if American women returned to the simpler life-styles of the eighteenth and early nineteenth centuries could the race hope to regain its former vitality; women must from childhood see their role as that of robust and self-sacrificing mothers. If not, their own degeneration and that of the race was inevitable.

Why the persistence and intensity of this masculine hostility, of its recurring echoes of conflict, rancor, and moral outrage? There are at least several

[47] Ellis, *Deterioration of Puritan Stock*, 10.

possible, though by no means exclusive, explanations. One centers on the hostility implied and engendered by the sexual deprivation—especially for the male—implicit in many of the modes of birth control employed at this time. One might, for example, speculate—as Oscar Handlin did some years ago—that such repressed middle-class sexual energies were channeled into a xenophobic hostility toward the immigrant and the black and projected into fantasies incorporating the enviable and fully expressed sexuality of these alien groups.[48] A similar model could be applied to men's attitudes toward women as well; social, economic, and sexual tensions which beset late nineteenth-century American men might well have caused them to express their anxieties and frustrations in terms of hostility toward the middle-class female.[49]

Such interpretations are, however, as treacherous as they are inviting. Obviously, the would-be scientific formulations outlined here mirror something of post-bellum social and psychic reality. Certainly some middle-class men in the late-nineteenth century had personality needs—sexual inadequacies or problems of status identification—which made traditional definitions of gender roles functional to them. The hostility, even the violent imagery expressed toward women who chose to limit the number of children they bore indicates a significant personal and emotional involvement on the part of the male author. Some women, moreover, obviously used the mechanisms of birth control and, not infrequently sexual rejection, as role-sanctioned building blocks in the fashioning of their particular adjustment. Their real and psychic gains were numerous: surcease from fear and pain, greater leisure, a socially acceptable way of expressing hostility, and a means of maintaining some autonomy and privacy in a life which society demanded be devoted wholeheartedly to the care and nurturance of husband and children. Beyond such statements, however, matters become quite conjectural. At this moment in the development of both historical methodology and psychological theory great caution must be exercised in the development of such hypotheses—especially since the historians of gender and sexual behavior have at their disposal data which from a psychodynamic point of view is at best fragmentary and suggestive.[50]

What the nineteenth-century social historian can hope to study with a greater degree of certainty, however, is the way in which social change both caused and reflected tensions surrounding formal definitions of gender roles. Obviously, individuals as individuals at all times and in all cultures have experienced varying degrees of difficulty in assimilating the prescriptions of expected role behavior. When such discontinuities begin to affect comparatively large numbers and become sufficiently overt as to evoke a marked ideological response one can then speak with assurance of having

[48] Oscar Handlin, *Race and Nationality in American Life* (5th ed., Boston, 1957), 139-66.

[49] One might postulate a more traditionally psychodynamic explanatory model, one which would see the arguments described as a male defense against their own consciousness of sexual inadequacy or ambivalence or of their own unconscious fears of female sexual powers. These emphases are quite distinct. The first—though it also assumes the reality of individual psychic mechanisms such as repression and projection—is tied very much to the circumstances of a particular generation, to social location, and to social perception. The second kind of explanation is more general, time-free, and based on a presumably ever-recurring male fear of female sexuality and its challenge to the capacity of particular individuals to act and live an appropriately male role. For the literature on this problem, see Wolfgang Lederer, *The Fear of Women* (New York, 1968).

located fundamental cultural tension.[51]

Students of nineteenth-century American and Western European society 355
have long been aware of the desire of a growing number of women for a choice among roles different from the traditional one of mother and housekeeper. It was a theme of Henry James, Henrik Ibsen, and a host of other, perhaps more representative if less talented, writers. Women's demands ranged from that of equal pay for equal work and equal education for equal intelligence to more covert demands for abortion, birth control information, and sexual autonomy within the marriage relationship. Their demands paralleled and were in large part dependent upon fundamental social and economic developments. Technological innovation and economic growth, changed patterns of income distribution, population concentrations, demographic changes in terms of life expectancy and fertility all affected woman's behavior and needs. Fewer women married; many were numbered among the urban poor. Such women had to become self-supporting and at the same time deal with the changed self-image that self-support necessitated. Those women who married generally did so later, had fewer children, and lived far beyond the birth of their youngest child. At the same time ideological developments began to encourage both men and women to aspire to increased independence and self-fulfillment. All these factors interacted to create new ambitions and new options for American women. In a universe of varying personalities and changing economic realities, it was inevitable that some women at least would—overtly or covertly—be attracted by such options and that a goodly number of men would find such choices unacceptable. Certainly for the women who did so the normative 356
role of home-bound nurturant and passive woman was no longer appropriate or functional, but became a source of conflict and anxiety.

[50] At this time, moreover, most psychiatric clinicians and theoreticians would agree that no model exists to extend the insights gained from individual psychodynamics to the behavior of larger social groups such as national populations or social classes.

[51] Most societies provide alternative roles to accommodate the needs of personality variants —as, for example, the shaman role in certain Siberian tribes or the accepted man-woman homosexual of certain American Indian tribes. In the nineteenth-century English-speaking world such roles as that of the religious enthusiast and the chronic female invalid or hysteric may well have provided such modalities. But a period of peculiarly rapid or widespread social change can make even such available role alternatives inadequate mechanisms of adjustment for many individuals. Others in the same society may respond to the same pressures of change by demanding an undeviating acceptance of traditional role prescriptions and refusing to accept the legitimacy of such cultural variants. The role of the hysterical woman in late nineteenth-century America suggests many of the problems inherent in creating such alternative social roles. While offering both an escape from the everyday duties of wife and mother, and an opportunity for the display of covert hostility and aggression, this role inflicted great bodily (though non-organic) pain, provided no really new role or interest, and perpetuated—even increased—the patient's dependence on traditional role characteristics, especially that of passivity. The reaction of society, as suggested by the writings of most male physicians, can be described as at best an unstable compromise between patronizing tolerance and violent anger. See Carroll Smith Rosenberg, "The Hysterical Woman: Sex Roles and Role Conflict in 19th-Century America," 652-78. For useful discussions of hysteria and neurasthenia, see Ilza Veith, *Hysteria: The History of a Disease* (Chicago, 1965); Henri F. Ellenberger, *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry* (New York, 1970); Charles E. Rosenberg, "The Place of George M. Beard in Nineteenth-Century Psychiatry," *Bulletin of the History of Medicine*, XXXVI (May-June 1962), 245-59; John S. Haller, Jr., "Neurasthenia: The Medical Profession and the 'New Woman' of Late Nineteenth-Century," *New York State Journal of Medicine*, LXXI (Feb. 15, 1971), 473-82. Esther Fischer-Homberger has recently argued that these diagnostic categories masked an endemic male-female conflict: "Hysterie und Mysogynie—ein Aspekt der Hysteriegeschichte," *Gesnerus*, XXVI (1969), 117-27.

It was inevitable as well that many men, similarly faced with a rapidly changing society, would seek in domestic peace and constancy a sense of the continuity and security so difficult to find elsewhere in their society. They would—at the very least—expect their wives, their daughters, and their family relationships generally to remain unaltered. When their female dependents seemed ill-disposed to do so, such men responded with a harshness sanctioned increasingly by the new gods of science.

Carroll Smith-Rosenberg and Charles Rosenberg, 'The female animal: medical and biological views of woman and her role in nineteenth century America', *Journal of American history*, vol. 40, 1973, pp. 332–356.

2

MEDICINE AND ITS CRITICS

René Dubos

BIOMEDICAL PHILOSOPHIES

2.1

. . .

The Gods of Medicine

Like animals, primitive man had health instincts to help him 76
overcome or minimize the effects of accidents or disease. In addition to these instincts, he must early have recognized some direct and obvious cause-and-effect relationships between certain empirical practices and the improvements of wounds or the alleviation of symptoms. Also, many forces he regarded as mysterious because they were indirect or outside the range of his conscious apprehension affected the health of primitive 77
man. Magic thus early became an essential component of his attitude toward the causation and control of disease.

Medicine therefore had a dual nature from its very beginning. It included the empirical knowledge of effective procedures and belief in magical influences. Even today, medicine men in primitive populations supplement their practical skill in surgical technques and the use of drugs with a large variety of weird practices based on the tribal lore. Throughout history, and whatever the level of civilization, the structure of medicine has been determined not only by the state of science but also by the prevailing attitudes toward disease. These in turn are influenced by religious and philosophical beliefs. This is just as true of the most evolved urban and industrialized societies as it is of the most primitive populations. Like his Stone Age ancestors, modern man lives by myths.

With health and disease so inextricably related to every aspect of life, all ancient peoples have naturally given a prominent place in their theological systems to gods of medicine. Imhotep in Egypt, Shen Nung in China and Asclepius in Greece are but a few of the many gods of medicine whose names have come down to us and who are known to have inspired widespread cults thousands of years ago.

Ancient texts describe in detail the powers and virtues attributed by early civilizations to the various gods of medicine, and many documents describing them and their temples exist. Despite the abundance of information, it is extremely difficult to recapture the true medical significance of the knowledge and attitudes symbolized by the various deities. The Yellow Emperor's 'Classic of Internal Medicine', published in China several thousand years ago, asserts that health can be maintained through a way of life based on the doctrine of the *yin* and the *yang* and on respect for the laws of the seasons. Although modern scholarship has analysed at length these abstract principles of traditional Chinese medicine, their meaning remains obscure to us, so intimately interwoven is it with the philosophical subtleties of Chinese concepts of nature and

78 existence. We cannot apprehend clearly how belief in the *yin* and the *yang* and in the laws of the seasons affected the professional activities of Chinese physicians or the expectations of their patients. We do not even know precisely how medieval mysticism or eighteenth-century rationalism affected the practice of medicine in Europe.

We can comprehend the thoughts and practices of physicians in classical Greece and Rome better than the doctrines of their Egyptian and Asian predecessors or contemporaries. At least we can legitimately claim to understand those aspects of Greco-Roman medicine surviving in our own medical culture. Like other ancient peoples, the Greeks traced the art of medicine to several different gods. Among them, Asclepius gained such prominence that his name became the symbol of the perfect physician. The Asclepian tradition is very ancient, complex and often obscure, but it encompasses several approaches to the problems of disease of significance to us because they have been incorporated in modern medicine.

During the classical period, the cult of Asclepius was under the control of a priesthood which practised faith-healing based on dreams. Drawn by a widespread and deep belief in the healing power of the god, many patients came to seek cures in sanctuaries dedicated to his worship but not organized for true medical care. These sanctuaries were built in beautiful surroundings, usually near a spring in the mountains or not far from the sea. Purifying baths, anointments, abstinence, a religious atmosphere, and the interpretation of dreams took the place of medical treatment in the temples of Asclepius. The immense number of offerings left by grateful patients healed in these temples – by the god, as they thought – is testimony to the effectiveness of faith-healing against certain diseases, especially when patients come to beautiful, healthy surroundings infused with a religious aura.

Faith healing as carried out in the temples did not, however, constitute the only form of the Asclepian tradition. Supposedly, Asclepius not only performed miracles but also knew the curative properties of drugs and was a master of surgical
79 skills. Many lay physicians organized in medical guilds were trained in technical knowledge assumed to have originated with Asclepius. Called Asclepiads, these lay physicians nevertheless did not belong to the priesthood of Asclepius and had no connexion with temple medicine.

While acknowledging the healing powers of gods and goddesses, the lay Asclepiads practised a form of medicine based on the anatomical and physiological knowledge of their time and on the clinical experience acquired treating the sick. Probably they adapted a great portion of Mesopotamian and Egyptian medicine to the conditions of Greek life and thus acquired an extensive knowledge of surgery, drugs and regimens. As we shall see, the lay Asclepiad tradition, rather than the faith-healing performed in the temples, gave rise to Hippocratic medicine and indirectly to modern medicine.

Two goddesses, Hygieia (Health) and Panacea (All Heal or Cure All) represented the purely medical practices carried out by the lay Asclepiads. Both are often associated in classical iconography with Asclepius and are commonly described in Greek mythology as his daughters.

Hygieia was one of the manifestations of Athena, the goddess of reason. She was concerned not so much with the treat-

ment of disease as with its prevention and with the maintenance of health. She symbolized the belief that men would remain healthy if they lived wisely, within the golden rule, and according to the laws of reason. *Mens sana in corpore sano* remains today the goal of all-embracing hygiene, even though men have found it difficult to do more than pay lip service to the teachings of Hygieia.

Panacea specialized in the knowledge of drugs. She symbolized the belief that ailments can be cured by skilful use of the proper kinds of substances derived either from plants or from the earth. The illusion that drugs can solve all medical problems survives today in our use of the word 'panacea'.

Hygieia and Panacea, along with Asclepius, were specifically mentioned in the opening invocation of the Hippocratic Oath taken by physicians when they were admitted to the Asclepiad guild. The association of the three deities in the oath indicates that ancient physicians differentiated between prevention and treatment of disease and recognized the importance of both types of medical activity. Greek legend thus anticipated some of the most important theoretical attitudes of modern medicine.

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Hygieia and Panacea symbolize two radically different yet complementary approaches to the control of disease. These two attitudes have their counterparts in all great cultures, particularly in the Judaeo-Christian tradition. in the Old Testament, the ancient Hebrews codified many precepts of behaviour based on sanitation and on purity in all its forms, physical and mental. These precepts certainly contributed to the control of crowd diseases as well as to the maintenance of individual health. The tradition of succouring the sick and bringing them back to health also has deep roots in the Old Testament. Hebrew precepts eventually were identified with Christ, the Healer, and later assimilated the Asclepian beliefs and practices which had spread from Greece to the whole Mediterranean world. A beautiful marble head of Christ, adapted from a bust of Asclepius, found in Palestine, symbolizes the merger of the Greek and Christian healing traditions. As in Greece, dreams played a large part in the miracles performed by Christian healers, particularly by Cosmas and Damian, the two saints identified with medicine and pharmacy.

The legendary attributes of the ancient gods of health and medicine appear at first sight completely unrelated to the scientific concepts and practical achievements of modern medicine. When we reflect that our world has two different kinds of medical establishments corresponding to the two general methods of disease control symbolized in the Greco-Roman world by Hygieia and Panacea, we can understand the relevance of the ancient medical tradition. The schools of hygiene (or public health) emphasize the *prevention* of disease in the community as a whole through healthy social practices. The schools of medicine are primarily concerned with the *treatment* of disease and with the care of individual patients. Like Asclepius, a modern physician needs the knowledge of these two sister branches of medicine. He must teach ways of life and sanitary practices that minimize the occurrence of disease. He must also help stricken persons by any means at his disposal. In the performance of his profession, he must not only use drugs and surgery but also exert psychic influ-

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ences not far removed from the health-restoring practices which benefited so many patients in the Greek temples of Asclepius.

The Hippocratic Tradition

In all the countries of Western civilization, physicians recite the Hippocratic Oath, or a modification of it, either when they graduate from medical school or during the ceremonies of initiation into learned medical societies. This gesture implies allegiance to the high ethical principles inherited by the medical profession from its distant past. It constitutes also a tacit acknowledgment of the profound influence of Hippocratic doctrines on the development of Western medicine.

Nothing is known of Hippocrates the man except that a famous physician by that name lived around 400 B.C. on the Greek island of Cos where he practised and taught medicine as a lay Asclepiad. Although the several books attributed to Hippocrates are quoted so frequently and with such respect that together they are almost the equivalent of a medical Bible, we have no valid historical information concerning their real authorship. The various parts of the *Hippocratic Collection* contain many differences in style and contradictions in medical doctrine, sound evidence that the texts collected under this name were written at different times, in different places and by different authors. The consensus now is that the so-called Hippocratic writings represent a compendium of the medical knowledge shared by the members of various Asclepiad guilds. The texts were probably assembled into a unified body of teaching by the Alexandrian scholars of the third century.

The fundamental philosophy of Hippocratic medicine is that diseases are not caused by capricious gods or irrational forces, as primitive people are wont to believe. They constitute natural phenomena developing in accordance with natural laws. Disturbances of the body and the mind can therefore be studied just as objectively as any other natural phenomenon; they can be understood by reason and controlled by the wise management of human life. Hippocratic philosophy contends that medicine is not an appendage to religion; it can and should be practised as a true scientific discipline. Commonplace as this attitude appears today, it developed slowly and has yet to be adopted universally. Even partial acceptance of the Hippocratic doctrines has led, nevertheless, to the formulation of a number of principles shaping the theory and practice of modern medicine.

The primary Hippocratic principle is that medicine should be based on the natural sciences. The physician should have profound knowledge of the biological phenomena of life in health and in disease; he should be able to recognize the logical relations between cause and effect. According to the Hippocratic doctrines, this scientific approach leads to the following conclusions:

1. The well-being of man is influenced by all environmental factors: the quality of the air, water and food; the winds and the topography of the land; and the general living habits. Understanding the effects of environmental forces on man is thus the fundamental basis of the physician's art.

2. Health is the expression of harmony among the environment, the ways of life, and the various components of man's nature. For the Greco-Roman physicians, four humours determined man's nature: the relationship between blood, phlegm, yellow bile and black bile controlled all human activities.

3. Whatever happens in the mind influences the body and the body has a like influence on the mind. Mind and body cannot be considered independently of each other. Health means therefore a healthy mind in a healthy body. It can be achieved only by governing all activities of life in accordance with natural laws so as to create an equilibrium between the forces of the organism and those of the environment.

4. Whenever the equilibrium is disturbed, rational therapeutic procedures should be used to restore it by correcting the ill effects of natural forces; these procedures should include the use of regimens, drugs and surgical techniques.

5. The practice of medicine implies an attitude of reverence for the human condition and must be based on a strict code of ethics.

Paraphrasing Whitehead's remark on the debt of European philosophy to Plato, one can state with much justification that modern medicine is but a series of commentaries and elaborations on the Hippocratic writings. By their comprehensive coverage and their depth of understanding they have retained a universal appeal into our day. The scientist recognizes in them the first known systematic attempt to explain the phenomena of disease in terms of natural laws; he shares the interest of the Greek physicians in precise observations objectively made and carefully recorded. The clinician admires Hippocrates for his shrewd observation of signs and symptoms characteristic of each disease, for his knowledge of prognosis based on clinical experience, and for his penetrating concern with the patient as a complex human being integrated in his community. The student of public health points to Hippocratic emphasis on the roles of environment and ways of life in the occurrence of disease. The student of man's natural history is impressed by the statement in *Airs, Waters and Places* – one of the most searching books of the *Hippocratic Collection* – that the general characteristics of human populations in the normal state are conditioned by the topographic and climatic factors of the locality. Much of modern medicine consists in the unfolding and elaboration of Hippocratic concepts.

The Body Machine

Practising physicians have always known that the various aspects of human life are closely interdependent and that effective care of the body demands attention to the mind,[1] and the reverse. Medical scientists also are interested in the whole

1. Many scholars object to the use of words such as 'mind' or 'mental' because these do not refer to well-defined attributes. They find no justification in particular for using the word 'mind' as a noun, and they urge that it be restricted to its grammatical function as a verb. According to many psychiatrists and experimental psychologists, it is correct to say 'mind the baby' or 'mind your own business', but not 'he has a fine mind' or 'his mind is deranged'. Admittedly, there is no evidence that 'mind' refers to a location, a structure, or a substance in the body. In practice, however, even the most materialistic philosopher has no doubt that his own 'mind' is better than that of the village fool. For reasons of convenience, we shall therefore continue here to use the word 'mind' as a noun, even without convincing knowledge of the structures and processes thereby implied.

man, but they know from experience that to apply the scientific method to the study of human problems they must first artificially simplify them. In practice, the various components of man's nature must be studied either separately as independent structures and functions or in arbitrarily simplified combinations.

René Descartes and his followers introduced the most far-reaching scientific simplification of the study of man in health and in disease. Descartes predicated the assumption that man consists of two separate entities, body and mind, linked during life but profoundly different in kind. He claimed that since the mind is a direct expression of God its nature cannot be understood by science. In contrast, he taught that the body is a machine whose structure and operations fall within the province of human knowledge. Many scientists, philosophers and theologians question the validity of the body-mind dualism concept, but no one doubts that Descartes' philosophy has exerted an immense influence on the evolution of biological sciences in general, particularly in medicine.

Whatever its philosophical limitations, the concept of body-mind dualism has proven operationally useful; it has helped
85 scientists to delineate more precisely the scope of their investigations. Instead of attempting the hopeless task of understanding man as a whole, scientists have felt free to deal *seriatim* with the various aspects of man's nature.

Descartes' philosophy led scientists to neglect questions pertaining to the nature of the mind and the soul and encouraged them to focus their efforts on the much simpler, more concrete, problems of body structure and operation. They could apply knowledge of physics and chemistry, derived from the study of inanimate matter, to the problems of the body without fear of debasing the more lofty manifestations of man's nature, those of his soul. The self-imposed limitations and the intellectual freedom that biologists derived from Cartesian dualism gave them a general tendency to study man as a non-thinking, nonfeeling entity.

Since Descartes' time, the study of the body machine, its structure and its functions, has reflected directly the state of knowledge in physics, chemistry and other natural sciences. At first, scientists delighted in describing and measuring the mechanical aspects of the body; they built mechanical contrivances in the image of animals and human beings, machines capable of performing complex manoeuvres. During the nineteenth and twentieth centuries the emphasis shifted to the chemical interpretation of living processes. Physiologists became impressed by the resemblance between bodily operations and those in a factory; as a result, the physicochemical problems of nutrition, metabolism and energy requirements have been foremost in the study of man.

The physicochemical analysis of life has progressed so far that the fabric and the functions of the human body can now be described in precise laboratory language. Molecular biology can provide approximate pictures of the giant molecules constituting the most essential parts of the body and of the chemical reactions that keep it functioning. The nucleic acids and their associated proteins have been shown, furthermore, to act as information-carrying systems, transmitting hereditary characteristics from one generation to the next and integrating
86 the multifarious activities of the organism. Even the brain

is being described in physicochemical terms. Increasing knowledge of feedbacks and of servomechanisms has revealed that mental activities exhibit some of the characteristics of complex electronic computers.

René Descartes pictured the nervous system as a complicated hydrostatic system of hollow tubes conducting animal spirits to and from the brain. Charles Sherrington borrowed models from early twentieth-century physics and electricity for his classical analysis of spinal-reflex mechanisms. F. R. Lillie compared the events in nerve conduction to those of an iron wire bathed in acid and coated with a salt. More recently, many operations of the brain have been compared to the workings of an electronic computer that can 'learn', 'remember' and 'make decisions'. In the words of the English physiologist J. Z. Young, 'The brain can be regarded as an exploratory, self-instructing computer that acts as a controller of the homeostat represented by the organism.'

Biological science is continuing to develop along the channels first opened during Descartes' time. From contrivances imitating the mechanical motions of the body, biologists have moved to models representing the genetic code and to electronic problem-solving machines that learn from experience. This trend in biology has carried over to other aspects of medical science. When a physician wants to become a scientist, he is prone to act as a Cartesian. He studies not the whole man but either the body or the mind and usually limits himself to even narrower aspects of man's total nature.

Modern physicochemical knowledge of the structures and mechanisms through which the body machine operates has facilitated diagnosis and treatment of disease. The development of new medical procedures is now so dependent on general biology, chemistry and physics that a more extensive application of these sciences to the study of living things is a *sine qua non* of medical progress. The practical problems posed by the prevention and treatment of disease, however, involve many factors other than those encompassed within the present physiocochemical formulation of the body machine.

Though Descartes' philosophy of body-mind dualism provided a favourable environment for the emergence of the modern biomedical sciences, the validity of the philosophy itself is open to question. Many medical scientists believe that Cartesian dualism, useful as it has been, is leading medicine into a blind alley precisely because it is philosophically unsound. They contend that the processes of the 'mind' are not different in principle from those of the 'body' but are merely less understood because of their complexity. Presently, great efforts are being made to apply the methods of the natural sciences to the problems of the mind. These efforts can be classified in two general groups. Some investigators are following what might be called the 'components' approach. They use the analytical methods of biochemistry, biophysics and molecular neurology to determine the intimate structures and mechanisms involved in such processes and attributes of the 'mind' as learning and memory. Others follow the 'systems' approach and use the more functional procedures of neurophysiology, psychology and the social sciences. The components approach leads to a detailed knowledge of the brain, whereas the systems approach is more concerned with the functions referred to by the word 'mind'.

These efforts to account for the operations going on in the brain have produced some new, exciting theories. Experience shows that most physicians, however, irrespective of their professional activities and philosophical views on the nature of the mind, behave in practice as if they were still Cartesian dualists. Their conservative attitudes are largely a matter of practical convenience. So far, the knowledge acquired by studying the brain with the techniques of the physicochemical sciences has not contributed significantly to an understanding of the mind's processes and their relation to the body mechanisms. From the pragmatic point of view, it is still usually more useful to think of the mind as a distinct attribute of life associated with the body as long as consciousness lasts but different from it in practical manifestations. Since the welfare of

the body and of the mind are differently affected by various factors in the environment, the tendency on the part of physicians to separate the two is understandable. Conditions for mental misery may be compatible with glowing physical health, and happiness may reside in a diseased body.

The only safe generalization at the present time is that the body and the mind constantly interact and constitute an integrated whole. Furthermore, all the problems of health and disease are the expressions of the effects of the environment on the genetic apparatus. Today, as in Hippocrates' time, good medical care implies attention not only to the body but to the whole person and to his total environment.

René Dubos, *Man, medicine and environment,* Penguin, Harmondsworth, 1970, pp. 76–88.

Elliott Krause

2.2

HEALTH WORK IN HISTORY: A PREVIEW OF ISSUES

Down through the ages a hierarchy of health workers parallels the 10
social hierarchies of the day. In each era, this "division of labor" is primarily not a technical one, relating to the different tasks of health work, but is a division by class of patient, with a class of practitioner for each patient class in the wider society. Within this occupational hierarchy, of course, one often finds specialization at each level. In general, however, there is regularly a difference between the curers of the masses and the curers of the elite. The important exception to this is the craftsman class in the ancient world, which was usually able to afford community practitioners but not the medicine of the ruling class. Examples of this ancient hierarchy can be found in pharonic Egypt and in Periclean Athens. After inspecting the pattern, it may be helpful to inquire into the relationship between the governing power centers of the nation and these occupations, especially those serving the ruling class. This is all by the way of introduction, however, and should not be taken for definitive historical analysis.

Egypt provides us with the first example of a three-level practice hierarchy. At the top was temple medicine: the ancient god associated with each temple and its group of priests assembled to 11
"cure" the sick. What was practiced in these places was apparently a combination of rest cure and faith healing for the land-owning upper class, the only class which had both the wealth and the leisure to enjoy the treatment. Community practitioners, the next step down, were medical craftsmen operating out of their own homes, practicing fee-for-service medicine.[1] Herodotus observed: "Each physician is a healer of one disease, and one only. All the country is full of physicians, some of the eye, some of the head, some of the teeth".[2] At the bottom were the folk curers, from the ancient tribes that had been welded together to form the Egyptian nation.

In Greece, temple medicine operated in ways parallel to the earlier Egyptian case. The leisure class—the aristocracy—patronized the temples. There is evidence, however, that in Greece the temple priests interacted more frequently than in Egypt with the community workers. This may be due in part to the reputation of the Hippocratic community practice group, who were good scientific

observers and good bone-setters and wound surgeons, and who did not usually overprescribe the often dangerous medicines of the day.[3] Eventually this craftsman-class medicine became the model for practice in America today, in the form of fee-for-service medicine; perhaps the temple physicians have their functional descendants in the medical school teaching hospitals and pure research institutions of the foundations and the government. It is important for a perspective to single out the second-class status of the community practitioner. He was not a member of the aristocracy:

> As a man who worked for money, who sold his services in the open market, who practiced a *techne*, a craft, much of which was manual, the Greek doctor would not have held a very high social position.[4]

In the ancient world, as in the Middle Ages and the Renaissance, most of the common people, whether of slave, indentured, or free status, could usually afford neither the temple medicine of the class elite nor the craftsman medicine of the small bourgeoisie and merchant class. Consequently folk medicine, often carried from generation to generation by an oral pathway, and often practiced by women, was the only source of care for the majority. Yet the activity is poorly documented and almost unstudied, because it was not the work of the social elites who have been the subject of much past historical research. The few studies available, such as Ehrenreich and English, suggest that much more of importance can be found out about these lower-status workers.[5]

Health occupations, then as now, did not stand in a vacuum but were dependent—especially in the case of the worker elite—on the relations between the ruling economic class and the state, and on the ideology which supported both. Three cases are helpful in introducing this theme: the role of the medieval church with respect to health work; the actions of Henry VIII of England with respect to his health-worker hierarchy; and the actions of the American population in certain social movements in Jacksonian America.

The first of these three periods—the High to late Middle Ages—can give us some idea of the relationship in any society between the legitimating authority, the class structure, and the role of the service professions. The Church sponsored most official health care settings during the early Middle Ages, and with the rise of the universities began to form the degree system in such a way that curriculum and the awarding of the degree had to have official church backing. At the same time the Church worked in tandem with secular property interests and held the political world in balance through its role in legitimating the rule of kings (divine right of the king, coronation by the representative of the Pope). Simultaneously, this very social

order bred illness out of the abject poverty of the peasantry, and the order was upheld by the ideology of the Church. One often-quoted passage from 2 Corinthians was "Eiusquisque maneat in vos dignoscatur est", or "Everyone should remain in that calling to which he has been designated" (by God)[6]. The illness bred from the system was then treated in the Church's institutions by nursing nuns and church-degreed physicians.

Replacement of Church hegemony by more secular rule, as when 13
Henry VIII took England out of Catholicism, did not essentially change the basic relationship between elite segments of the profession and state power. Henry personally founded the Royal College of Physicians in 1518, and the College of Barber-Surgeons a few years later.[7] Yet in 1542 he became angry with the barber-surgeons (but not with the physicians) for refusing to serve the poor, and he temporarily revoked their charter.[8] Note, however, that his power legitimated the occupational hierarchy and that he did not use his power to rearrange this hierarchy. And, as 2,000 years earlier, physicians and surgeons were both scarce and expensive:

> In most small towns it was probably the apothecary practicing from his shop who would serve the legitimate medical needs of the neighborhood. There is no doubt, however, that the bulk of day-to-day doctoring in Tudor England, after the dissolution of the monasteries, was carried out by the barbers, itinerant empirics, ignorant quacks, and "wise women", of whom there was no scarcity.[9]

Finally, the example of Jacksonian America is useful. In each of the original thirteen colonies a social class elite had gotten restrictive monopoly licensing laws established just after the Revolution. Yet the scarcity of practitioners, their high fees, and their lack of empirical knowledge, led to revolt. A mass-based populist health movement—the Thompsonian herbalist group—acted in the spirit of the times and organized the rural population, the poor, the other nonorthodox physician and health worker groups, and in all states except Massachusetts (which had the least restrictive laws), the barriers against legal practice were torn down.[10] This era—from 1820 to 1830—was *not* a revolutionary one, but was definitely one of populist uprising, for it saw also the repeal of licensing laws for lawyers and the rise of nonestablished evangelical sect religion. Even if the licensing laws were observed—which they were not because there was no policing—this phenomenon is important as a precedent for present and future action concerning privileged health 14
worker groups.

The rebirth of the American medical profession at the time of America's industrial revolution signifies much that will be of impor-

tance to us later in the book. The historical record is clear: private associations slowly grouped together after the licensing debacle of the Jacksonian era, and finally formed, in 1868, the American Medical Association (AMA). But almost half a century elapsed before the medical profession began to gain real power; its role depended to a great degree on its technological effectiveness, a consequence, in turn, of progress in science. The leverage of the modern profession did increase, therefore, at least in part because the ability to cure increased and this began to become obvious to all.[11]

A second factor in the birth of the modern medical profession is more controversial. The thesis has recently been advanced that because the Carnegie Foundation supported the Flexner report and other rationalizing studies—which led to the modern practice of "professional birth control" and extended graduate education—that the capitalist class therefore had a direct interest in the birth of such a profession.[12] Certainly there was some sympathy in each group for the other but the case is not proven. In the present day the two are gradually becoming interrelated, but it is a relation of opposition. Since cost cutting may require greater state control of medical practice, and this cost cutting may benefit some sectors of the capitalist class (e.g., insurance companies), the state may be used more and more against the interests of the basically petit-bourgeois physician group. In any case, it is in this wider field of forces that we can understand the trends for any occupational group in health, in the present as in the past.

To sum up, these examples illustrate that the existing record is incomplete, especially with respect to the nature of health work by the majority of health workers with the majority of the population.

The history of elites serving elites, however, indicates close relations between such groups within the profession and within the state and the owning and controlling class. In the struggle over resources and control of life directions, the health-worker elite often served a custodial or supportive role, gaining much of its influence and power from the groups which sponsored it. Occasionally, however, history provides us with examples of people gaining more control over their lives, their government, and the productive process itself. At these times the consequences for health occupational elites have been marked. Their existing system of practice and their method of operation have in such times come under direct challenge.

SERVICE SYSTEMS: THE POLITICS OF ARCHITECTURE

Any society needs support to keep it functioning, and the health service system is usually one of the more critical of these supports. Since most societies through history have been divided at least in

major outline between a primary class of "haves" and a far larger class of "have-nots", the maintenance of this unequal status quo can in part be related to each functional support of the system. We should not be surprised, therefore, that whatever the type of political economy and whatever the type of technology, the existing service system can be seen to be performing functions that ultimately result in greater support of the position of the "haves", even if in the short run the "have-nots" can, to some degree, benefit from the service. These issues are complex, and in each historical period the precise story is yet to be completely documented. But the overall issue can be introduced using the cases of slavery economies, the imperialism of ancient Rome, and the transition from feudalism to early mercantile capitalism—and that of postrevolutionary France from 1789 to 1848. These cases can supply a few details on the intimate relationships that always exist between a particular form of political economy and the precise shape—the architecture—of the society's health care system.

In the ancient world, slaves had an economic value, a value to be guarded. To some degree the evidence indicates that service systems provided the basic care to keep them productive as laborers. Yet the evidence from Periclean Athens refines our understanding by making the distinction—undoubtedly true for other times and places in the ancient world—between the care given to industrial slaves (such as in the silver mines of Laurium) and the far better care given to domestic household slaves. We should contrast the more personal household slave relationship with that of the mines, where an order far closer to modern capitalism existed, with similar consequences for occupational health and life span.[13] In the slave economy of the American South, on the great rice plantations of Charleston, South Carolina or the cotton plantations of the Mississippi delta, the house physician (if there was one) or the plantation owner himself dispensed medical care to all.[14] Given the economic value of slaves in the southern plantation economy, the care was dispensed in most cases with seriousness. In fact, it became one of the aspects of psychological and social dependency of blacks on the slave owner.

Rome built an empire on the basis of its disciplined army, but maintained it through its administrative skill. The health service system of ancient Rome reflected both the military origins and the imperialist aims of the society and also its efficiency at large public works of engineering. For example, the creation of the field medical paraprofessional role or "medicus" was a Roman army invention, as was the creation of small field hospitals, built across a creek and using the creek as a running water system. These field hospitals, when enlarged, often became the provincial service centers, and had a function in co-opting the local leadership to serve the

economic and political interests of the Roman conquerors. According to records, the local field hospitals were offered as services to the
17 indigenous chiefs of the conquered regions, as a kind of side benefit for the local leaders and their family. At home, the massive water system provided free public baths for all, including the unemployed. Health levels were thus higher in this ancient capital than in cities for centuries to come, and the large number of unemployed were at least healthy, as well as entertained by the "bread and circuses" policy of the ruling class. In these ways, the service system supported the power structure in the provinces and colonies of the Empire, while working to support the status quo at home.[15]

The transition from feudalism to early mercantile capitalism provides a third illustration of the complex relationship between a given form of political economy and a given form of health service system. The Church provided a wide range of human services in addition to health care, such as homes for the aged and orphanages. It built "hospices" (the early hospitals) at the site of cathedrals, and rural clinics on the foundations of Roman field hospitals.[16] An important contrast between the actions of Henry VIII in England and the actions of secular authorities on the continent is that the Church did not have a unilateral effect on health care or on the secular world, that in fact it depended upon which nation was in process of formation. For example, in England Henry seized the Church's lands and drove the ill and dependent out of the church service buildings, which he then burned to the ground, allowing the ill and helpless to wander the roads of England.[17] Only Elizabeth I made a formal step to change this situation, but her "Poor Law" was weak indeed by comparison with what the Church had provided. On the continent the accommodation between Catholic kings and the Church remained, and the gradual rise in power by the craftsmen and merchant guilds led to slow relinquishing of major control over human services by the Church, though they often kept a supervisory function and a legitimating one, much as the Church does even today in some Catholic hospitals in western nations. It was the rise in power of the new capitalist class, however, that ultimately spelled the end of church ideological hegemony, and thus of the Church's
18 ability to gain the resources necessary to run the human service system for the old feudal order, itself a casualty of the new rising class.

Elliot A. Krause, *Power and illness,* Elsevier, New York, 1977, pp. 10–18.

Ivan Illich

2.3

CULTURAL IATROGENESIS: INTRODUCTION

We have dealt so far with two ways in which the 127
predominance of medicalized health care becomes an obstacle to a healthy life: first, clinical iatrogenesis, which results when organic coping capacity is replaced by heteronomous management; and, second, social iatrogenesis, in which the environment is deprived of those conditions that endow individuals, families, and neighborhoods with control over their own internal states and over their milieu. Cultural iatrogenesis represents a third dimension of medical health-denial. It sets in when the medical enterprise saps the will of people to suffer their reality. It is a symptom of such iatrogenesis that the term "suffering" has become almost useless for designating a realistic human response because it evokes superstition, sadomasochism, or the rich man's condescension to the lot of the poor. Professionally organized medicine has come to function as a domineering moral enterprise that advertises industrial expansion as a war against all suffering. It has thereby undermined the ability of individuals to face their reality, to express their own values, and to accept inevitable and often irremediable pain and impairment, decline, 128
and death.

To be in good health means not only to be successful in coping with reality but also to enjoy the success; it means to be able to feel alive in pleasure and in pain; it means to cherish but also to risk survival. Health and suffering as experienced sensations are phenomena that distinguish men from beasts. Only storybook lions are said to *suffer* and only pets to merit compassion when they are in ill health.

Human health adds openness to instinctual performance. It is something more than a concrete behavior pattern in customs, usages, traditions, or habit-clusters. It implies performance according to a set of control mechanisms: plans, recipes, rules, and instructions, all of which govern personal behavior. To a large extent culture and health coincide. Each culture gives shape to a unique *Gestalt* of health and to a unique conformation of attitudes towards pain, disease, impairment, and death, each of which designates a class of that human performance that has traditionally been called the art of suffering.

129 Each person's health is a responsible performance in a social script. How he relates to the sweetness and the bitterness of reality and how he acts towards others whom he perceives as suffering, as weakened, or as anguished determine each person's sense of his own body, and with it, his health. Body-sense is experienced as an ever-renewed gift of culture. In Java people flatly say, "To be human is to be Javanese." Small children, boors, simpletons, the insane, and the flagrantly immoral are said to be *ndurung djawa* (not yet Javanese). A "normal" adult capable of acting in terms of the highly elaborate system of etiquette, possessed of the delicate aesthetic perceptions associated with music, dance, drama, and textile design, and responsive to the subtle promptings of the divine residing in the stillness of each individual's inward-turning consciousness is *ampun djawa* (already Javanese). To be human is not just to breathe; it is also to control one's breathing by yogalike techniques so as to hear in inhalation and exhalation the literal voice of God pronouncing his own name, *hu Allah.*

130 Cultured health is bounded by each society's style in the art of living, feasting, suffering, and dying.

All traditional cultures derive their hygienic function from this ability to equip the individual with the means for making pain tolerable, sickness or impairment understandable, and the shadow of death meaningful. In such cultures health care is always a program for eating, drinking, working, breathing, loving, politicking, exercising, singing, dreaming, warring, and suffering.

131 Most healing is a traditional way of consoling, caring, and comforting people while they heal, and most sick-care a form of tolerance extended to the afflicted. Only those cultures survive that provide a viable code that is adapted to a group's genetic make-up, to its history, to its environment, and to the peculiar challenges represented by competing groups of neighbors.

The ideology promoted by contemporary cosmopolitan medical enterprise runs counter to these functions. It radically undermines the continuation of old cultural programs and prevents the emergence of new ones that would provide a pattern for self-care and suffering. Wherever in the world a culture is medicalized, the traditional framework for habits that can become conscious in the personal practice of the virtue of hygiene is progressively trammeled by a mechanical system, a medical code by which individuals submit to the instructions emanating from hygienic custodians. Medicalization constitutes a prolific bureaucratic program based on the denial of each man's need to deal with pain, sickness, and death. The modern medical enterprise represents an

endeavor to do for people what their genetic and cultural heritage formerly equipped them to do for themselves. Medical civilization is planned and organized to kill pain, to eliminate sickness, and to abolish the need for an art of suffering and of dying. This progressive flattening out of personal, virtuous performance constitutes a new goal which has never before been a guideline for social life. Suffering, healing, and dying, which are essentially intransitive activities that culture taught each man, are now claimed by technocracy as new areas of policy-making and are treated as malfunctions from which populations ought to be institutionally relieved. The goals of metropolitan medical civilization are thus in opposition to every single cultural health program they encounter in the process of progressive colonization. 132

The Killing of Pain 133

When cosmopolitan medical civilization colonizes any traditional culture, it transforms the experience of pain. The same nervous stimulation that I shall call "pain sensation" will result in a distinct experience, depending not only on personality but also on culture. This experience, as distinct from the painful sensation, implies a uniquely human performance called *suffering*. Medical civilization, however, tends to turn pain into a technical matter and thereby deprives suffering of its inherent personal meaning. People unlearn the acceptance of suffering as an inevitable part of their conscious coping with reality and learn to interpret every ache as an indicator of their need for padding or pampering. Traditional cultures confront pain, impairment, and death by interpreting them as challenges soliciting a response from the individual under stress; medical civilization turns them into demands made by individuals on the economy, into problems that can be managed or *produced* out of existence. Cultures are systems of meanings, cosmopolitan civilization a system of techniques. Culture makes pain tolerable by integrating it into a meaningful setting; 134 cosmopolitan civilization detaches pain from any subjective or intersubjective context in order to annihilate it. Culture makes pain tolerable by interpreting its necessity; only pain perceived as curable is intolerable.

A myriad virtues express the different aspects of fortitude that traditionally enabled people to recognize painful sensations as a challenge and to shape their own experience accordingly. Patience, forbearance, courage, resignation, self-control, perseverance, and meekness each express

a different coloring of the responses with which pain sensations were accepted, transformed into the experience of suffering, and endured. Duty, love, fascination, routines, prayer, and compassion were some of the means that enabled pain to be borne with dignity. Traditional cultures made everyone responsible for his own performance under the impact of bodily harm or grief. Pain was recognized as an inevitable part of the subjective reality of one's own body in which everyone constantly finds himself, and which is constantly being shaped by his conscious reactions to it. People knew that they had to heal on their own, to deal on their own with their migraine, their lameness, or their grief.

135 The pain inflicted on individuals had a limiting effect on the abuses of man by man. Exploiting minorities sold liquor or preached religion to dull their victims, and slaves took to the blues or to coca-chewing. But beyond a critical point of exploitation, traditional economies which were built on the resources of the human body had to break down. Any society in which the intensity of discomforts and pains inflicted rendered them culturally "insufferable" could not but come to an end.

Now an increasing portion of all pain is man-made, a side-effect of strategies for industrial expansion. Pain has ceased to be conceived as a "natural" or "metaphysical" evil. It is a social curse, and to stop the "masses" from cursing society when they are pain-stricken, the industrial system delivers them medical pain-killers. Pain thus turns into a demand for more drugs, hospitals, medical services, and other outputs of corporate, impersonal care and into political support for further corporate growth no matter what its human, social, or economic cost. Pain has become a political issue which gives rise to a snowballing demand on the part of anesthesia consumers for artificially induced insensibility, unawareness, and even unconsciousness.

Traditional cultures and technological civilization start from opposite assumptions. In every traditional culture the psychotherapy, belief systems, and drugs needed to withstand most pain are built into everyday behavior and reflect the conviction that reality is harsh and death inevitable. In the twentieth century dystopia, the neces-

136 sity to bear painful reality, within or without, is interpreted as a failure of the socio-economic system, and pain is treated as an emergent contingency which must be dealt with by extraordinary interventions ...

137 ..As culture is medicalized, the social determinants of pain are distorted. Whereas culture recognizes pain as an intrinsic, intimate, and incommunicable "disvalue," medical civilization focuses primarily on pain as a systemic reaction that can be verified, measured, and regulated. Only pain perceived by a third person from a distance

constitutes a diagnosis that calls for specific treatment. This objectivization and quantification of pain goes so far that medical treatises speak of painful diseases, operations, or conditions even in cases where patients claim to be unaware of pain. Pain calls for methods of control by the physician rather than an approach that might help the person in pain take on responsibility for his experience.[16] The medical profession judges which pains are authentic, which have a physical and which a psychic base, which are imagined, and which are simulated.[17] Society recognizes and endorses this professional judgment. Compassion becomes an obsolete virtue. The person in pain is left with less and less social context to give meaning to the experience that often overwhelms him.

Ivan Illich, *Limits to medicine*, Marion Boyars, London, 1976, pp. 127–138 (footnotes deleted).

Vincente Navarro

2.4

THE INDUSTRIALISATION OF FETISHISM: A CRITIQUE OF IVAN ILLICH

Industrialism in Illich's Writings

The ideology of industrialism, placing the credit and in Illich's case the 106
blame for our social development and its problematique on the inevitable process of industrialization, underlies the theoretical constructs used by most analysts of our Western society, including its critics, such as Illich.

Indeed, Illich believes that industrialism is the main force shaping our societies and that unavoidable "rising irreparable damage accompanies industrial expansion in all sections" (5, p. 920), including medicine (4), education (17), and so on. For example, the industrialization of medicine leads to the creation of a corps of engineers—the medical profession—comparable to the technocrats of the main social formation of industrialized societies, the bureaucracy. Thus, the industrialization of 107
medicine means its professionalization and bureaucratization. Moreover, and reflecting the assumed universality claimed by the ideology of industrialism, Illich believes that all societies, either capitalist or socialist, converge toward the same model, following a similar evolutionary process. Indeed, "the frustrations [due to industrialization] which have become manifest from private-enterprise systems and from socialized care have come to resemble each other frighteningly" (5, p. 921). The same problematique that appears in Houston is likely to appear in Moscow, in Bogata to appear in Havana, and in Taiwan to appear in People's China as well. The differences in the expression of that problematique are more quantitative, depending on the level of industrialization and stage of development of those countries, than qualitative. Capitalism and socialism are indeed outmoded concepts, since they are basically converging toward the same path of industrialization that overwhelms and directs their social formations.

In this interpretation, then, the class conflict has been replaced by the conflict between those at the top, the managers of the bureaucracies, indispensable to the running of an industrialized society, and those at the bottom, the consumers of the products—goods and services—administered by those bureaucracies. As applied specifically to medicine, that conflict is the one between the medical bureaucracy, primarily the medical profession and the medical care system, and the consumers, the patients. This antagonistic conflict appears as iatrogenesis (damage done by the provider), and it is

> *clinical,* when pain, sickness, and death result from the provision of medical care; it is *social,* when health policies reinforce an industrial organization which generates dependency and ill health; and it is *structural,* when medically sponsored behaviour and delusions restrict the vital autonomy of people by undermining their competence in growing up, caring for each other and aging (4, p. 165).

The first and most documented type of iatrogenesis is the *clinical* one, damage done by the physicians and providers of services, and is

caused primarily by their engineering approach to medicine in which the individual is seen as a machine, an aggregate of different pieces that have to be put right through therapeutic intervention. Adding to that cause, there is also much injury that is due simply to much arrogance, sheer incompetence, and misunderstanding of what health is about (4, pp. 15–25).

108 *Social iatrogenesis* is the addictive dependency of the populace on the medical care institutions. Indeed,

> public [demand and] support for a nationwide addiction to therapeutic relationships is pathogenic on a much deeper level, but this is usually not recognized. More health damages are caused by the belief of people that they cannot cope with illness without modern medicines than by doctors who foist their ministrations on patients (4, p. 39).

In that respect,

> the proliferation of medical institutions, no matter how safe and well engineered, unleashes a social pathogenic process. Over-medicalization changes adaptive ability into passive medical consumer discipline (4, p. 39).

According to Illich, the cause for that addiction is the manipulative behavior of the medical bureaucracy that perpetuates and encourages that passive and addictive consumer behavior. In this scheme of things the power of that bureaucracy is its exclusive and monopolistic power of definition of what is health and what method of care may be publicly funded.

Last but certainly not least, *structural iatrogenesis* is the loss of autonomy of the patient and the creation of his dependency. In this iatrogenesis, the medical bureaucracy goes further than creating addiction, and destroys "the potential of people to deal with their human weakness, vulnerability and uniqueness in a personal and autonomous way" (4, pp. 87–150). According to Illich, the responsibility for health and care is taken away—expropriated—from the individual by the medical industry. Moreover, this structural iatrogenesis is assumed to be intrinsic in the values and modus operandi of the medical industry and civilization. Thus the intervention of the medical industry has the same effect as that of any other industry, i.e. it breaks with those social values and cultures, such as acceptance of death, disease, and pain, assumed to be in existence in the preindustrial societies and that are capable of providing the self-realization of the individual (4, p. 160).

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110 *Clinical Iatrogenesis: The Illusion of Doctors' Effectiveness*

Perhaps not surprisingly, most of the debate on Illich's writings on medicine has focused on his postulate that individual clinical intervention may be doing more harm than good (clinical iatrogenesis). Actually, not only medical journals such as the *Lancet* in Britain, but popular magazines like *Le Nouvel Observateur* in France have focused primarily on Illich's skepticism about the therapeutic value of medical intervention. In this skepticism he follows the by now well established and known tradition of non-medical writers such as Montesquieu, Tolstoy, Bernard Shaw, and many others who have questioned the effectiveness of the professionals' tasks throughout the passing of decades. Unfortunately, the medical profession has dismissed too frequently and too uncritically those questions as being too perverse and frivolous to merit serious consideration. And the inquiring minds within the profession that kept asking the same questions and providing evidence to support such skepticisms were and still are equally dismissed or boycotted as unwelcome prophets of an unwelcome change. (For a further discussion of this point see reference 22.)

Illich, in a short but meaningful review of what he defines as the effectiveness of medical care, summarizes the available information on the effectiveness of some therapeutic interventions, and thus provides evidence on the limitations of those interventions. Not unexpectedly, he is more pessimistic about the value of those interventions than most clinicians would be, but paradoxically is far more optimistic about the effectiveness of some of those interventions, e.g. skin cancer treatment or early surgical intervention for cervical cancer (4, pp. 16–19), than most health care researchers would be. (See, for example, reference 23.)

Still, he adds his iconoclastic voice (a welcome voice, I might add) to an increasing chorus of doubters of the effectiveness of medical tasks. A major weakness of his evaluation, however, is that he takes as an indicator of the effectiveness of medical *care,* indicators of *cure.* Indeed, he seems to confuse care with cure. And in evaluating the effectiveness of medical care he does what most clinicians—Illich's engineers in the medical system—do; he analyzes the degree to which medical intervention has reduced mortality and morbidity, i.e. the effectiveness of health care intervention in *curing* disease and avoiding mortality. But, at a time when the most important type of morbidity in our Western developed societies is chronic, a much better indicator of the effectiveness of the medical *care* intervention would be the way that care is provided in that intervention, i.e. the degree to which the system provides supportive and attentive care to those in need. And the limited evidence available does seem to indicate that medical *care* may make a difference, i.e. it may reduce disability and discomfort in people's lives. (For a sketchy review of this *care* effectiveness, see reference 24.) But for that taking *care* to occur, our medical care system would have to change very profoundly to better enable the system to provide that care.

Still, since Illich seems to see an inevitable progress toward the present cure-oriented system, he does not seem to accept the possibility of creating another system in which the priorities would be opposite to those of the present ones, with emphasis given to care as opposed to cure services. Actually, Illich would not even welcome such a care-oriented system since it would increase the dependency of the individual on the physician and on the system of medical care, preventing the much needed self-reliance and autonomy. Indeed, according to Illich, whatever good medical cure or care may do is certainly outbalanced by the damage that it creates. And he finds the greatest damage to be the dependency that medical care creates in the population, i.e. social iatrogenesis.

Social Iatrogenesis: Addiction to Medical Care Institutions, Cause or Symptom?

Illich considers social iatrogenesis, the addictive behavior of the population to medical care, to be the result of manipulation by the medical bureaucracy—the medical care system. It is a manipulation that aims at creating dependency and consumption. Indeed, Illich postulates that the consumer behavior of our citizenry is primarily determined by its manipulation by the bureaucracies created as a result of industrialization. Allow me to focus on this postulate, and to discuss the consumer behavior of our citizenry, not only in the health sector of our economy but in all others as well. Disagreeing with Illich, I find that manipulation of addiction and consumption by bureaucracies (including the medical care bureaucracy) is not the cause, as he postulates, but the symptom of the basic needs of the economic and social institutions of what he calls industrialized societies, but what I would call industrialized capitalist societies.[3]

But, by focusing on the medical bureaucracy as the "enemy," Illich misses the point because those bureaucracies are the servant of a higher category of power that I would define as the dominant class. Indeed, the empirical analysis of the health industry shows that contrary to what Illich believes, that industry is administered but not controlled by the medical profession. The analysis of power in the health sector in most Western developed societies shows that that power is primarily one of class, not of professional control. Indeed, those who have the first and final voice in the most important "corridors of power" in the health sector are the same corporate groups (composed mainly of the upper, corporate, or capitalist class) that control and/or have dominant influence in the organs—Illich's bureaucracies—of production, consumption, and legitimation in our societies. Indeed, as I have shown elsewhere,[8] members of the corporate class (owners and managers of financial capital), the class that has a dominant influence in the most important sphere of the U.S. economy—the monopolistic sector—have a dominant influence as well in the funding and reproductive institutions of the health industry (commercial insurance agencies, foundations, and teaching institutions). And members of the upper-middle class (executive and corporate representatives of middle-size enterprises and professionals, primarily corporate lawyers and financiers) have dominant influence in the delivery institutions. A similar situation appears with the executive and legislative branches of federal government that oversee and regulate the activities in the health sector. And in all these top agencies of power, the medical profession is represented only to a small degree. Indeed, the medical bureaucracy administers but does not control the health sector. And its power is delegated to it from the corporate and the upper-middle classes.

Vincente Navarro, *Medicine under capitalism,* Croom Helm, London, 1976, pp. 106–118 (excerpts).

Thomas McKeown

MEDICINE AS AN INSTITUTION

Having touched on various ideas related to the medical role, I must 190
now try to bring them together in a more coherent form. Before doing so, however, it will be desirable to remove some possible sources of misunderstanding.

First, the aim of health services. We know from personal experience that the feeling of well-being, sometimes referred to as positive health, is something more than the absence of recognizable disease and disability, and it is tempting to define objectives, as the World Health Organization has defined them, in terms which recognize this.[1] However, there are at least two objections to so broad a definition: one, that positive health cannot be measured accurately, so that success or failure in achieving it can only be judged subjectively; the other, that since many influences, personal, religious, educational, and economic as well as medical, contribute to a state of well-being, the concept goes far beyond the responsibilities of health services. I shall therefore define the aim more modestly as the prevention of sickness and premature death and the care of the sick and disabled. In these terms the task of medicine is not to create happiness, but so far as possible to remove a major source of unhappiness, that which results from illness and early death.

By this definition, medicine is concerned both with improving the quality of life and with extending its duration, in so far as these aims can be achieved by preventing or treating disease. (This is quite different from attempting to increase the normal life span.) However, some people have suggested that only the first aim is realistic. In an interesting review of prospects for clinical pharmacology, Modell concluded:

> It should be the primary function of clinical pharmacology in the last quarter of this century to secure the achievements in drug therapy of the preceding half century. . . . We must also make life more tolerable. Drugs for the relief of 191
> symptoms rather than etiology is a goal truly worthy of intensive study and originally the only realistic goal of medicine. . . . I think that these goals have a better chance of success in the future than attempts to reduce the death-rate further or lengthen the lifespan.[2]

These views are based on recognition that the therapeutic advances of the last few decades have had little effect on death rates, and that in developed countries we are approaching the 'normal' lifespan which medicine cannot be expected to extend. One can accept both conclusions without agreeing that cure is no longer a realistic aim. The patient with a life threatening illness – malignant hypertension, multiple sclerosis, leukaemia, nephritis etc. – wishes above all to be restored to a life of normal duration, and this is a goal which deserves to be rated

1. In the constitution of the World Health Organization health was defined as a 'state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'.

2. Modell, W., 'Clinical Pharmacology: a retrospective view of its future', *Triangle*, 16 (1977), p. 123.

at least equally with improvements in quality of life. This conclusion is not invalidated because extension of life in such diseases could not be expected to have much effect on national death rates from all causes, or on life expectancy at birth, since the numbers of people affected by the diseases is small in relation to the total population, and many illnesses occur in late life when the possible addition of years is limited. Success in prolonging life from a specific disease should be assessed in relation to those affected, rather than to the general population.

At the outset I should like to sidestep the trade union disputes which arise over the role of the doctor in relation to other health workers. These roles are changing, and at some future time the respective trainings and responsibilities of the physician and nurse in primary care, and of the physician and social worker in care of the subnormal, may be quite different from those which exist today. When commenting on the medical role I am therefore referring to the work done by doctors and others concerned with 'prevention of sickness and premature death and care of the sick and disabled', and I am not specifying or implying any unique role for the physician. My concern is with the work to be done rather than with who should do it.

Finally, it is important to remove a common source of misunderstanding, by distinguishing clearly between clinical practice on the one hand and the larger responsibilities of medicine as an institution on the other.

For many people this distinction scarcely exists. Medicine is the profession of doctors, and doctors are thought to be concerned essentially

with the diagnosis and treatment of disease in individual patients. Having this role, they cannot be held responsible for health maintenance in well people, or for the work of non-personal services in the community at large. It is not a denial of the importance of these services to recognize that they are incompatible with clinical practice, and hence, it is concluded, they fall outside medicine's responsibilities.

This interpretation results from equating medicine as an institution with clinical practice. Of course the doctor who treats sick people cannot be expected to deal with national food policies, changes in the environment and public attempts to modify behaviour, although an understanding of these influences on health seems at least as relevant to his work as knowledge of the chemistry of the drugs he uses. But there are serious objections to limiting the institutional role of medicine in the same way. Medicine would no longer be concerned comprehensively with health matters, and there would be a particularly regrettable division between professions dealing with the prevention and treatment of disease. Education and training of health workers of different types would become even more widely separated than at the present time, and medical research would be increasingly polarized towards investigation of disease mechanisms, with serious risk of neglect of disease origins. It is indeed one of the most unfortunate features of the contemporary professional organizations (colleges, faculties, associations, societies) that they represent sectional interests and collectively provide no forum for consideration of the larger issues which should be the concern of medicine as an institution.

For these and other reasons the role of medicine as an institution should be considered to cover prevention as well as treatment of disease, and to include concern with non-personal as well as personal services. I suggest that it should be interpreted as follows: To assist us to come safely into the world and comfortably out of it, and during life to protect the well and care for the sick and disabled.

Since I shall certainly be told that we can come into the world (and out of it) without medical assistance, I have taken care to suggest for medicine only a supplementary role. But under it I am referring to much more than the act of delivery itself: to prevention of the birth of the seriously abnormal, and to limitation of the number of births, as well as the safeguarding of normal pregnancy and labour.

I do not think medicine has anything to contribute in relation to such 193
questionable and technically remote objectives as selection of parents in order to improve the human race. But it is reasonable to identify parents whose likelihood of having a seriously abnormal birth can be specified – for example to tell those who have had a child with a malformation of the heart or central nervous system that the risk of malformation in a later birth is increased above the average risk, but is still relatively low. It would be even better if it were possible to specify the risk of congenital abnormalities for parents who have not previously had an abnormal child; but since the common ones are probably determined by intra-uterine conditions, this is not at present a very promising objective.

Identification of deleterious influences during pregnancy is equally important, and perhaps equally difficult. Nevertheless it is possible that other agents such as thalidomide and rubella will be discovered, and if they are external to the uterus they may be easily removed. Influences arising within the uterus are much more difficult to recognize and control.

On the basis of present knowledge, or of any probable extension of it, neither of these approaches – identification of parents likely to have abnormal births or of deleterious influences during pregnancy which can be removed – offers much prospect of control of most serious congenital conditions. It is therefore important to seek means of recognizing the abnormal foetus in early pregnancy when it can be aborted.

Doctors have no more and no less right than other people to define the limits of population growth, but the limits having been defined they have a role in the prevention of conception and termination of pregnancy, unless, as Illich suggests, abortion is to be managed on a do-it-yourself basis.[3] In making this proposal he underestimates the technical difficulties, particularly the risk of infection and of later complications.

Clear thinking is needed about the contribution of medicine to the conduct of normal pregnancy and labour. It is quite true that the large majority of people have come into the world without professional assistance, but the mortality of mothers and children was very high until the present century. It is also true that mortality can be reduced dramatically by relatively simple measures, particularly in literate populations which enjoy a high standard of living. In most developed countries maternal mortality is now very low and perinatal and infant mortality are both about 20 (per 1,000). But the difference between low rates and the lowest rates is determined by the handling of occasional 194
unforeseen emergencies which require facilities and skill of the kind available in hospitals. A society which wishes to get the best results will therefore need to provide simple care for all pregnancies with more sophisticated measures in reserve for the unpredictable complications.

3. Illich, I., *Medical Nemesis.*

PROTECTION OF THE WELL

The conclusion which I hope emerges from the preceding chapters is that the improvement in health hitherto has been due predominantly to protection of people born free of congenital disabilities, and that it is to the same approach that we must look mainly for the solution of the residual problems of the common diseases. Most of those who are born well will remain well, apart from minor morbidity, at least until late life, if they have enough to eat, if they are not exposed to serious hazards, and if they do not injure themselves by unwise behaviour, particularly by departing radically from the conditions under which man evolved.

What part has medicine to play in achieving these objectives? First, since doctors are concerned more comprehensively with human health than any other professional group, they should make it their business to know and to make known, the relative importance of the major influences. Second, the medical contribution in the fields of nutrition and environmental health, where the measures are essentially non-personal, should be in the hands of specialists, who need to be attracted to these subjects as undergraduates and trained in them as graduates. The responsibility which falls on doctors who provide personal care is that of influencing their patients' behaviour in relation to their health. Having regard for the determinants of health a doctor can say to himself quite accurately: In pursuit of the major objectives of preventing sickness and premature death, I can often do more for my patients, particularly young patients, by persuading them to modify their habits than by any treatment that can be offered. The scope for this approach will be even greater when more is known about the common diseases, particularly in the field of mental health where investigation of the major influences has scarcely begun.

CARE OF THE SICK AND DISABLED

Under this heading I include all aspects of care: investigation and treatment of acute illness as well as rehabilitation and prolonged care.

Until the present time the emphasis in medicine has been on only a part of this task, on the kind of work done in acute hospitals: investigation of disease, treatment of acute illness or of acute phases of chronic illness, and treatment of some non-acute conditions (such as hernias, piles, and varicose veins).

At first sight it is not easy to see what determines these interests and excludes others; for example, there is less concern with acute illness in the severly handicapped (the congenitally malformed, the mentally ill, the subnormal, and the very old). Since the eighteenth century the administrations and staffs of general hospitals would have said that they took patients who could make the best use of their resources; but this is not a convincing explanation, since some are admitted who derive little or no benefit, while others are excluded who could be helped. I suggest that there are at least three determinants of the admissions policies of acute hospitals which both reflect and influence the interests of their staffs: they prefer patients who are acutely ill, who are not permanently handicapped, and who provide scope for the current range of investigative and therapeutic procedures. At the present time, with the enormous growth of technology the last is possibly the main determinant; even mongols are occasionally admitted now that they have been shown to have interesting chromosomes.

It is, I believe, a fair criticism of the selective medical interests, that

they lead to the neglect of some patients, indeed of the majority, and to concern with only a limited part of the needs of those who are helped. But the omissions had this justification, that the work in the acute phase of an illness was thought to be critical and largely responsible for the modern improvement in health.

This assumption was mistaken. The treatment of established disease, although important for patients, does not usually restore them to a life of normal duration and quality; and the modern improvement in health was due to the prevention of disease rather than to treatment after it occurred.

The conclusion to be drawn is that the achievements of the acute hospital do not justify the relative neglect of the majority of hospital patients who are not admitted. Three things are needed: (*a*) a critical appraisal of the effectiveness and efficiency of procedures already in use or to be brought into use; (*b*) recognition that investigation and treatment of the acute episode does not usually change the underlying condition, and that the patient needs advice and care throughout his illness; (*c*) a reshaping of services which removes the arbitrary divisions between the patients in acute, mental, chronic, and mental subnormality hospitals.

I have discussed the approach to effectiveness and efficiency in Chapter 10. On the second point, treatment of patients, in these days usually elderly patients, in acute episodes of heart disease, cancer, pneumonia, etc., is not a sufficient basis for the main work of a hospital, still less for a concept of the essence of the medical task. This service is vital to the patients concerned, but it often fails to meet their requirements in the later stages of the illness, or in the months and years which follow when they are no longer in the acute phase. I have written elsewhere at length on the third point, about the origins and consequences of the separation of acute from mental and other hospitals.[4] In the present context all that need be added is that the differences in standards have no justification in the different contributions the hospitals are making to the care of the sick and disabled.

COMFORTABLY OUT OF THE WORLD

I refer here not only to terminal care in the period immediately before death, but also to the assistance of patients who may be disabled for months or years before their final illness. Although elderly patients with prolonged incapacity are seen frequently in general practice and in hospital, many people complete their lives without serious handicap from chronic disease or disability.[5]

The health and related social services need to make much better provision for chronic and terminal care. Both have been relatively neglected, partly because the work is unattractive to many doctors, but also because it is considered less important than investigation and treatment of acute illness. The elderly patient and his relatives cannot be expected to see it in this way. The diagnosis of untreatable cancer (for example) is necessary, but meets only a small fragment of the patient's needs in the months or years which follow. And although most people end their lives without a prolonged period of incapacity, many welcome medical attention in their last illness. Their relatives almost invariably do.

4. McKeown, T., *Medicine in Modern Society* (London: George Allen and Unwin Ltd, 1965).

5. Sheldon, J. H., *The Social Medicine of Old Age* (London: Oxford University Press, 1948).

Some centres are concerned with terminal care, and a few devote
197 themselves entirely to patients who face extreme physical and mental distress in their last illness. In effect they are saying: Give us the worst that can happen, and we will show that when professional skill is combined with humane care, the last days of life can be made tolerable, even cheerful, for the most afflicted people. Their work is beyond praise; but it should be taken as an example rather than a model, for the size and character of the problem is such that it cannot be divorced from the rest of medical care. Doctors need to regard prolonged and terminal care as an important and rewarding part of their task which should not be transferred to other people or to special institutions. For the patient and relatives the medical contribution at the end of life is as significant as attempts made at an earlier stage to protect or prolong it.

CONCLUSIONS

In the broadest terms, the medical role is in three areas: prevention of disease by personal and non-personal measures; care of patients who require investigation and treatment; and care of the sick who are not thought to need active intervention. Medical interest and resources are focused on the second area and, to a lesser extent, on personal prevention by immunization; the other responsibilities are relatively neglected.

The immediate determinant of the traditional range of interests is the patient's demand for acute care and the physician's wish to provide it. But the approach rests also on a conceptual model, on the belief that health depends primarily on intervention in disease processes.

This concept is not in accord with past experience. The improvement of health during the past three centuries was due essentially to provision of food, protection from hazards, and limitation of numbers.

Assessment of the determinants of human health (Chapter 7) suggests that the same influences are likely to be effective in future; but there is this difference, that in developed countries personal behaviour (in relation to diet, exercise, tobacco, alcohol, drugs, etc.) is now even more important than provision of food and control of hazards. According to this interpretation few diseases, except for an ill-defined group at the end of life, are determined irreversibly at fertilization; most congenital abnormalities are probably due to intra-uterine conditions operating during implantation and early embryonic development, and most other common diseases are due to post-natal influences. Prenatal determinants are likely to be difficult to identify and control; those which are post-natal vary widely, from some which are simple and tractable (as in the
198 case of many infections) to others which are complex and difficult (for various reasons) to remove. Nevertheless it is on recognition of such influences that hopes for a solution of the problems of the common diseases, both physical and mental, largely rest.

Nothing in these conclusions suggests that the traditional lines of medical research are no longer needed. They have contributed greatly, by extending the scope and precision of hygienic measures, by immunization and therapy, and by providing an understanding of the body and its diseases on which the security of effective measures, originally largely intuitive, now substantially rests. However, there is need for a shift in the balance of effort, in recognition that improvement in health is likely to come in future, as in the past, from modification of the conditions which lead to disease, rather than from intervention in the mechanism of disease after it has occurred.

In health services the provision of acute care will continue to be predominant, needless to say, for it is a response to what the patient usually considers to be his most urgent need. But this service does not justify the place it has occupied until now in medical thought and practice. It is sometimes extremely effective; but often it is ineffective, or merely tides the patient over a short illness, leaving the underlying disease condition and prognosis essentially unchanged. The limitations of the traditional concept of the medical role would have been recognized much earlier, if health had not been transformed in the past three centuries by other influences.

What is needed is an adjustment in the balance of interest and resources between the three main areas of service referred to above. It is essential to give sufficient attention to the personal and non-personal influences which are the major determinants of health: to food and the environment, which will be mainly in the hands of specialists, and to personal behaviour, which should be the concern of every practising doctor. These interests should no longer be peripheral to the medical role, in the way that health education, nutrition, and environmental medicine have been peripheral hitherto. In the field of personal care, the making of a diagnosis and provision of acute care should be regarded as the beginning of a responsibility which will continue so long as the patient is unwell; and the arbitrary and largely artificial distinctions between different types of patients (acute, chronic, mental, subnormal, etc.) should end.

Thomas McKeown, *The role of medicine: dream, mirage or nemesis*? Basil Blackwell, Oxford, 1979, pp. 190–198.

Peter W.G. Wright

THE RADICAL SOCIOLOGY OF MEDICINE

2.6

V. Navarro, *Medicine Under Capitalism* (New York: Prodist, and London: Croom Helm, 1976), 230pp., $14.95 (£7.95). ISBN 0-88202-116-8.

V. Navarro, *Class Struggle, the State and Medicine: An Historical and Contemporary Analysis of the Medical Sector in Great Britain* (London: Martin Robertson, 1978), 156pp., £7.95. ISBN 0-85520-248-3.

E. Krause, *Power and Illness: The Political Sociology of Health and Medical Care* (New York and London: Elsevier, 1977), 383pp., $16.50 (£9.20), paperback (Amsterdam), $8.75 (£4.90). ISBN 0-444-99037-2 (paperback -99056-9).

J. Ehrenreich (ed.), *The Cultural Crisis of Modern Medicine* (New York and London: Monthly Review Press, 1978), 300pp., $15.00 (£8.85). ISBN 0-85345-438-8.

In the course of the last ten years there have been striking — and widely remarked — changes in both the history and the sociology of science. Although these changes have taken a variety of forms, they have one essential element in common: the denial of traditional conceptions of science. No longer are most scholars prepared to assume that scientific knowledge must be granted a uniquely privileged status; regarded as a disinterested mirror of nature, immune from the impulsion of social forces — and, hence, of sociological analysis. Few today, for example, would uphold Ben-David's declaration — made as recently as 1971 — that the possibility of a sociology of the conceptual and theoretical content of science was 'extremely limited'.[1] Instead, many are now carrying out work founded on a view of science fundamentally opposed to that implicit in the writing of Ben-David, and of many of his contemporaries. This new approach has been variously described as 'naturalistic',[2] as seeing science as the product of social negotiation,[3] or as the result of social construction.[4]

Two Approaches to Science: the Distributional and the Social Definitional

What is distinctive about recent social studies of science may, perhaps, be most readily grasped by setting up two extreme models of how science might be studied. On the one hand, one can envisage what could be termed a 'distributional' perspective. In this, the boundaries and content of science would be taken as given — and thus unproblematic. Attention would centre on those factors which were believed to make possible its existence and practice. Such an approach would tend to generate research on the historical conditions for scientific activity; the social background of scientists; the reception of science; the means of instruction, communication, and

diffusion of scientific knowledge; and so forth. It would not enquire how the frontiers between science and non-science were erected, nor would it regard the content of science as being something generally moulded by social factors. Accordingly, one might expect writers in such a tradition to dwell upon the most highly institutionalized forms of those disciplines furthest removed from everyday experience; to concentrate on university researchers rather than on school teachers; to study theoretical physics rather than meteorology; and, as a rule, to ignore questionable fields like parapsychology, mesmerism and astrology. The outstanding characteristic of such an approach would be its assumption that scientific knowledge and the structure of social formations were autonomous and incommensurable spheres. The task of the sociology of science, conceived thus, would be inherently humble: that of searching for the seedbeds where science had taken root, and explaining away error where it had warped the course of scientific development.

In contrast with this model, another can be devised in which the forms and bounds of scientific knowledge are regarded as being 'socially defined'. As a consequence, the apparent separateness of the scientific from the non-scientific would become something to be explained, and the chief question that of determining how the frontiers of science are set up and maintained — and how, in the course of time, they change. Issues to do with the distribution of scientific activity, and with the conditions under which it may flourish, would become not simply secondary, but inappropriate, and in need of reformulation, once the definition of science was seen as the fruit of social and historical contingency. A sociology in this vein would tend to investigate how particular practices, and accumulations of knowledge, came to acquire the status of 'scientific': this is a problem that would involve — among other things — an account of the means by which certain research comes to be classified as 'important', 'sound', 'authoritative', or whatever. Typically, one might expect those working within this approach to be particularly interested in the practice of science in contexts like schools, journalism and industrial laboratories where there was relatively little institutionalization. Correspondingly, one would anticipate that they would pay most regard to the life sciences and social sciences, as well as to the uncertain areas around the margins of science. The essential element of this view would be the assumption that there were no inherent, natural, qualities that distinguished the world of science from that of society: science would be science because of the particular character of the institutions which produce it, and the social esteem it is accorded; not because of the privileged truth-status of its knowledge.

Inevitably, these two hypothetical positions do not correspond exactly with any that are actually practised. Nonetheless, if they are understood as two extreme poles, it is hard to resist the conclusion that there has been a considerable shift in recent years — both in the history and sociology of science — from the 'distributional' towards the 'social definitional'. This shift, which may also be represented as an aspect of the decline of Positivism and its claim that science is the sole road to true knowledge — the standard against which all human endeavours might be judged — can easily be discerned in the way the preoccupations of research have chang-

ed over the years. It is not implausible to see the work of Ben-David and Merton, for instance, as closer to the former position, and that of recent writers such as Webster, Barnes, Collins, the Jacobs, Bloor and Young[5] as closer to the latter.

There is no reason to suppose that such developments should have affected only the social study of science. The factors which prompted them — the impact of Thomas Kuhn's work; the rising influence of Structuralism; an increased familiarity outside social anthropology with the writings of Mary Douglas and Robin Horton; a reworking of many aspects of Marxist theory, particularly those touching science and culture — all these have certainly affected the assumptions and concepts employed in many disciplines close to the social sciences. What could be more natural, then, than to expect to find parallel transformations in a region as close to the social study of science as the sociology of medicine? The more so, because here — as in the study of science — groups of explicitly radical and Marxist writers have come to the fore during the nineteen-seventies.

The purpose of this extended review is to examine recent books by three of the best known exponents of the radical sociology of medicine in order to sketch the main lines of their position, and to set it against what has been accomplished lately by those studying science.

The Political Economy of Medical Care

Vincente Navarro is almost certainly the most widely known of the three authors. A Spaniard, now teaching at Johns Hopkins University, he is not only the founder editor of *The International Journal of the Health Services*, but also author of four books and numerous papers in which he advocates a Marxist sociology — or, rather, 'political economy', as he usually terms it — of medicine. The principal elements of his position are to be found in *Medicine Under Capitalism* (*MUC*), a collection of papers which he had originally presented, or published, between 1973 and 1976. There can be no doubt that he sees himself as carrying out work very different from most sociology of medicine. In the very first sentence of his introduction he lays down that he seeks to challenge 'the prevailing ideologies in the social sciences' and their application to the study of the Western system of medicine. All the essays in the book, he explains, have the 'underlying purpose of questioning prevalent explanations of health and medicine and presenting alternative ones' (*MUC*, vii). What is needed is to reject the assumption that '...forces and actors *within* medicine' (*MUC*, vii) are the main determinants of what happens in that sphere, and to acknowledge, instead, that the system of medicine '...is determined primarily — although not exclusively — by the same forces that determine the overall social formation, society' (*MUC*, vii).

What Navarro has in mind becomes clear when one turns to the studies that make up *Medicine Under Capitalism*. In one, for example, he argues that the distribution of medical care in Latin America 'follows and parallels' that of other resources such as wealth or power; and that the fearful prevalence there of sickness and early death is a direct result of the workings of imperialism —

as is the region's under-underdevelopment (*MUC*, 3). Again, when considering medicine in the USA, he maintains that there, too, the bad health and shocking death rates common to groups such as blacks, migrant workers and the rural poor are the result of the workings of American capitalism. 'Public health problems', he tells us, 'are political problems' (*MUC*, 94).

He goes further, however, and insists also that the institutions dealing with medical treatment are permeated, through and through, by the forces of capitalism. 'The composition, nature and functions of...[the US Health sector] are', he writes, 'the result of the degree of ownership, control, and influence that primarily the corporate and the upper middle classes have on the means of production, reproduction and legitimization...' (*MUC*, 164). Later in the book, he touches briefly on the links between social forces and medical knowledge. In a section entitled 'The Reproduction of Bourgeois Ideology', he introduces the notion of 'medical ideology', which he sees as subsumed by the general 'ideology of capitalism'. Medical ideology, he asserts, has two aspects in capitalist society. The first is the assumption 'that disease is the imbalance of the components of the machine-like body'; the second is the presupposition that 'the cause of disease is primarily individual, and thus the therapeutic response to it is individually oriented' (*MUC*, 206-07). He then proposes that these assumptions are not only associated with the rise of capitalism, but serve an 'apologist function' (*MUC*, 207).

A further — and more detailed — application of Navarro's approach is his later book, *Class Struggle, the State and Medicine* (*CSSM*). In this work, which is also presented as a repudiation of conventional treatments of the subject, he contends that: '...the timing and shape of all major medical legislation in Britain, from 1911 to 1974, were primarily determined by the nature of the class struggle...' (*CSSM*, xv). In order to examine this thesis, and the argument which he employs to support it, it is convenient to consider how Navarro analyzes the origins of one particular piece of legislation. The one I have chosen is the National Insurance Act of 1911 — or the 'National Health Insurance Act', as he misleadingly persists in calling it.

In the chapter dealing with this topic, Navarro devotes by far the greater part of his space to a sketch of what he sees as the political economy of Britain in the nineteenth century and early twentieth. While doing so, he gives a short description of the medical profession, remarking that the rise of general practitioners, and their conflicts with the medical élite, should be understood as part of the general changes taking place, at that time, in the relative positions of the 'middle' and 'upper' classes. When he eventually comes to give an account of the origins of the 1911 Act, he proposes two general — and interrelated — causes: the strength of demands for a system of medical care by labour; and the self-interest of capitalists that made them willing to concede it.

As evidence for the first, Navarro cites the growing size and degree of unionization of the British working class which he sees as epitomized by the coming into being of the Triple Alliance between railwaymen, coalminers and transport workers. This grouping, he claims, was more receptive to the socialist ideas which were spreading 'all over Europe' and which were being '...transmitted to the labour movement by the Fabians, the Christian Socialists,

and by the most radical and influential force of all — the Social Democratic Federation, which joined Marx in the First International' (*CSSM*, 9). Given that these developments were taking place in the context of such upheavals abroad as the 1905 Revolution in Russia, the pressures from the working class were becoming irresistible:

> Concessions had to be made. And in the health sector, the need to respond to that social unrest led first to the National Health Insurance Act [sic] and later on to the Dawson Report. (*CSSM*, 9)

Sadly, such historical analysis is unlikely to inspire great confidence: even the short passage quoted is replete with errors. The Triple Alliance, for instance, first formally established in 1911, is most unlikely to have been politicized by the Christian Social Movement, as the latter had only been influential in the mid-nineteenth century and had languished thereafter; what is more, even then, it was largely preoccupied with promoting co-operation — not political action — within the trade unions. Again, the Social Democratic Federation neither had direct contact with Marx, nor was ever a member of the First International: it was only established in July 1884, sixteen months after Marx's death, and eight years after the winding up of the First International.

The principal weakness of Navarro's account, however, is not slovenly scholarship, but the fact that he proceeds as if medicine were a self-evident and unproblematic category. He writes as if the need for medical treatment were a timeless biological constant. Whenever the working class achieves some relative improvement in its position under capitalism, he seems to imply, it must necessarily make a bid for a little more medical care. It is as if medicine were an uncontestable good in insatiable demand.

Even if it is the case that concessions by the dominant groups were unavoidable in 1911 — and to show this requires something more than emphatic assertion — the problem still stands: why did these concessions involve medical care? Why did they take the form of the 1911 Act, rather than other measures? Why, for instance, could the provision of, say, family allowances or four week's paid holiday not have done instead? We are never told. There are no signs of an awareness that such terms as 'medicine', 'illness' and 'therapy' are social categories which are used by various groups — and individuals — to give meaning to social experience, with connotations that may vary widely according to social context and historical period. Nowhere, for example, in this book is there a hint that what was called 'medicine' in 1850 was different in social position, cultural weight or claimed field of competence, from what was so described in 1911 or 1974.

As a result, Navarro's explanations of the causes of particular changes in British medical practice always tend to appear, on careful scrutiny, vacuous or truistic. Thus, we are told that the reforms of the pre-World War I period appealed to capitalists because it was believed that they would '. . . increase productivity by cutting down on absenteeism due to sickness' (*CSSM*, 10). What we are not told is why they should hold such opinions then, when they had not found them convincing a few decades earlier. Why should it be, that medicine was beginning to be perceived as a set of efficacious techniques capable of eradicating some of the defects of capitalist society?

Certainly, the answer to this question is likely to be complex, and to involve unravelling the tangle of connections between shifts in the class struggle, changes in ideology, developments in medicine, and so on. To do this would mean, amongst other things, examining the literature or dealing with the changes that were taking place, at that time, in ideology and conceptions of welfare legislation — work such as that by Gilbert, Semmel, or Stedman Jones.[6] No such discussion occurs in Navarro's account, save a supplementary reference to Gilbert's book on a matter of fact only.

Similarly, no explanation is ever given of why trade unionists should have seen the provision of regular treatment by medical men as a desirable and attainable end. After all, there had been a persistent tradition of belief among the poor — frequently connected with radicalism, and dating back, at least, to Culpeper and Walwyn in the seventeenth century — that doctors were self-aggrandizing and ineffective imposters whose ministrations were to be avoided, not sought; and that the real way to health lay through simple herbal treatments, political change, godliness, or whatever. It is possible to argue, following Foucault's thesis — yet another relevant source ignored by Navarro — that the spread of hospitals was part of a much larger movement of control and containment taking place in the epoch. Marxists might well want to go further and present the rise, and institutionalization, of allopathic medicine in the nineteenth century — at the expense of rivals like homeopathy, herbalism and osteopathy — as one facet of the establishment of a particular form of bourgeois cultural hegemony, the drive towards the ideological assimilation of the working class. Of this, too, there is not a word in Navarro. His method is simply to take as natural, and unquestionable, the dominant modern signification of medicine — to overlook that it is the end product of centuries of moulding, of negotiation.

The only causal mechanism to which he refers is the crude, unmediated, pressure of the relations of production and political power. The fine texture of possible causation — the examination of how particular forms of medical practice may foster certain kinds of medical ideas; the discussion of how particular conceptions of the physician's ethos may (in good faith) lead to the neglect of certain kinds of illness; the consideration of the intricate relationship of power and professionalism, as dealt with, for example, in the work of Terry Johnson[7] — all are neglected, or reduced, to a succession of programmatic assertions about the class struggle, self-interest, and so on.

The Distinctiveness of Medical Knowledge

The consequence of all this is that the reality of medicine as a relatively autonomous field dissolves and disappears from the account: Navarro's study of the British health service in the twentieth century appears as hardly more than a derivative social history, heavily flavoured with vulgar Marxism, and illustrated with examples drawn from the field of medicine. Such a fate seems to me to be the inevitable result of his fundamental proposition that medicine is mainly shaped by social forces. To leave the matter there, without qualification, without a discussion of how the unique status and social significance of medicine has arisen — to

place, that is, all the accent on social determination, and none on relative autonomy — is necessarily to fall into the view that medicine is just one product, among many, of the dominant social relations.

But the essential point, to which one might have expected a professed Marxist to be especially alert, is that medicine *is not* just like any other social field. Nor is medical knowledge just like any commonplace instance of ideology. On the contrary, medicine has a uniquely privileged position in modern societies which invest it with prodigious powers to convince, to persuade — and to control. When doctors in the last century, for instance, advised ladies that to indulge in higher education, or to enter a career, would damage their reproductive functions, they were not simply reflecting the dominant ideology — as politicians or journalists might have done. Their office was qualitatively different: they were transmitting these views as elements of, what claimed to be, a scientific practice. They could draw on a pantheon of scientific heroes to underwrite their authority and lend credence to their injunctions. They were using, one might say, their special access to the supposed structure of the natural world to reinforce existing social arrangements.

What underlies Navarro's social determinism, I believe, is the assumption that there are only two ways of envisaging the relationship between medicine and social factors: either medicine is primarily the product of purely internal forces; or it is mainly determined by the external society. To assume that these two positions exhaust all conceivable ways of setting about the social study of medical phenomena is to disregard the possibility that medicine may be a social category, and its boundaries a social creation. This is the case because in the first — the common internalist view of medicine — the bounds are seen as given directly by some inherent, epistemological, quality of medical knowledge: in the second, the bounds are simply denied; medicine is seen as socially promiscuous, of a piece with all other social artefacts.

To cling unflinchingly to either one of the two standpoints is not easy. Internalists are buffeted by repeated evidence of the interpenetration of medicine and society; social determinists, by the manifest signs that medicine has some special status. As a result, it is not surprising if exponents of both positions are sometimes inconsistent. Thus, in Navarro's work, despite the fact that he emphasizes persistently that medical care in the USA serves the interest of capitalism, and is perverted by it in innumerable ways, we also find him arguing that the oppressed groups which he supports (like blacks) should have more access to it. Beneath the relativist veneer, it seems that there lingers on the conventional assumption that medicine is — at least, in principle — a set of autonomous instrumental techniques.

Parallels with the History of Science

Neither Navarro's background assumptions nor, indeed, his apparent inconsistency, is likely to come as a surprise to those familiar with the study of the history of science. Very close parallels are to be found in the dispute between internalists and externalists that was once something of a set piece in that discipline. Just as Navarro's position is symbiotically dependent on the existence of

an internalist standpoint — without it he would have nothing to repudiate — so, too, externalists in the history of science could only proceed when internalists had already marked out some sanctified category of science for them. But as we can now see, historians of science have today largely escaped from that impasse. They have done so by reworking their conceptions of science; in particular, I believe, by growing increasingly critical of Positivism.[8] In Navarro's writings, however, despite his pretensions to overthrowing conventional sociological approaches, no attempt is made to rework the conventional conception of medicine, nor to confront the implications of Positivism to treat scientific and medical knowledge naturalistically. That is to say, he fails to question the assumption that the special position of medical and scientific knowledge derives from a privileged epistemological status, by acknowledging that it can also be understood as the consequence of

a particular kind of social process. Even his fleeting discussion of 'medical ideology', mentioned earlier, is no exception. The proposition that medical knowledge may be ideological does not, of itself, betoken a social definitional standpoint. It is quite compatible with the assumption that ideological pressures are merely distorting the intrinsic disinterestedness and technical instrumentality of medicine.

Examining Navarro's work in the light of the two approaches to the social study of science, which I distinguished at the beginning, there can be no doubt that his approach is close to the distributional pole. The essential feature of his writing, as I have argued at length, is the implicit premise that the category of medical is self-evident, and therefore in no need of social investigation. Whilst it is true that he is not an internalist — unlike many practising a distributional analysis — his position is, as I read it, compatible with the principles of internalism. That is to say, his argument that medicine is social rather than autonomous in no way rules out the possibility that there may be spheres which do have some especially privileged epistemological status. The internalists wish to draw the boundaries of sanctified knowledge in such a way that medicine is included; Navarro, in general, seems to want to exclude it. Neither want to consider the boundaries as social creations.

Elliot Krause's book, *Power and Illness* (*PI*), is in many ways similar in approach to Navarro's work: like Navarro, Krause is concerned with the *distribution* of medical care. Unlike Navarro, however, he presents the scope of his book rather modestly: stating explicitly that it '...is not primarily about the details of health and health service', but is concerned to show '...how an essential resource — health — and an essential service — health care — are intimately involved with the political, economic, and social struggles of the present day' (*PI*, xi).

Despite this self-imposed limitation, Krause does at least touch on some aspects of the social functions of medical knowledge. At one point, for example (*PI*, 95), he refers to 'social definitions of illness', but then aborts a further consideration of the issues raised by writing as if there were a self-evident contrast between these and what he refers to as 'medical definitions' of illness. Later, too, when discussing the ideas of Ivan Illich, he demonstrates that he is sensitive to the power of social control inherent in medical knowledge: he refers to the process of medicalization as being an

aspect of 'cultural hegemony' (*PI*, 258).

In another respect, too, Krause's book is more satisfactory: he devotes some serious attention to Freidson's work, a contribution 114
which one might have thought would have been indispensible to any discussion of medicine and power, yet strangely relegated by Navarro to a single, passing, citation in one only of his two books. Unfortunately, as with Navarro, there is no reference in Krause's book to other important recent work: Foucault is not mentioned; nor is Terry Johnson, Jamous and Peloille, Jewson, or Waddington.[9]

When all is said and done, however, Krause's book is susceptible to the same general criticisms as those of Navarro: it does not subject the commonsense notions of health and medicine that are implicit in conventional sociology to any thorough-going critique; still less does it examine these categories as social constructions. The ways in which it differs from Navarro's work are relatively slight, though worthy of note: it promises a good deal less; and delivers rather more.

The Cultural Critique of Medicine

The recent work of John Ehrenreich, however, does open up quite different territory. In the introduction to *The Cultural Crisis of Modern Medicine* (*CCMM*), a collection of essays which had been written — and earlier published — by various writers, including himself, mostly in the mid-seventies, he contends that radical approaches to the study of medicine may be grouped around two main tendencies which he terms the 'political economic critique', and the 'cultural critique'. The first, which he connects not only with Navarro, but to his own earlier work (with Barbara Ehrenreich),[10] '...concentrates its fire on the inequitable distribution of health services' (*CCMM*, 2), which it sees as stemming from such features of society as the private ownership of the means of production. It does not, however, concern itself greatly, according to Ehrenreich, with the quality of what is offered as medical treatment. What defects there are, are rather seen as

> ...blemishes...problems with the *organization* of medical care, and not as intrinsic to the nature of modern medicine itself. Modern scientific medicine *per se*, from the political economic perspective, is seen as an unalloyed benefit to society...as one of the great technical advances that capitalism will pass on to its socialist successors. (*CCMM*, 3-4)

The cultural critique, in contrast '...disputes the value of the ser- 115
vices themselves' (*CCMM*, 4); it queries whether Western medical care is, as is usually supposed, 'effective, humane and desirable' (*CCMM*, 4). In so doing, it draws upon the recent tradition of writing like that by the Radical Psychiatry movement, or on that which has seen medicine as an important factor in the subjugation of such groups as blacks and women. Medical care under capitalism it argues, should not be conceived as '...just an unambiguously useful commodity', but as a '...technology...(which is based on certain assumptions about the nature of disease processes, the causation and cure of disease, the relations of individuals to their own bodies and to social processes)', and which 'embodies the

social relations created by capitalist society' (*CCMM*, 16-17).

Put in such a way, Ehrenreich's definition of the 'cultural critique' certainly draws attention to the more striking defects of Navarro's approach. Does it, however, offer an alternative comparable with recent work in social studies of science which I have described? Does it, to be more precise, go beyond the Positivist assumptions of so much sociology of health and provide a view of medicine closer to the social definitional position? An important test of the extent to which any approach to medicine has broken with the presuppositions of Positivism is likely to be the way in which the particular position of technical medical knowledge is delineated. Any view which sees medical knowledge as characterized by some privileged access to the workings of the material world, uncoloured in principle by social interest, must be regarded as broadly Positivist.

With this in mind, let us turn to Ehrenreich's argument. At one point, for instance, he states: 'The "scientific" knowledge of doctors is sometimes not knowledge at all, but rather social messages (e.g., about the proper behaviour of women) wrapped up in technical language' (*CCMM*, 15). At another, he comments: '...much of what doctors do is not based on scientifically validated knowledge' (*CCMM*, 29). Taken together, these two quotations strongly suggest that Ehrenreich does feel capable of making a distinction — albeit hesitantly, perhaps — between social messages and the imperfect practice of doctors, on the one hand, and scientifically validated and technical knowledge on the other. While it is possible, of course, that he might want to base his distinction on the particular social characteristics that can be used to discriminate between the two — as Barry Barnes does — it seems highly improbable. In the absence of an explicit account of how these spheres are to be set off from one another, it is only reasonable to conclude that Ehrenreich shares the prevalent assumptions: that he believes that scientific and technical knowledge is distinguished from all other by some intrinsic quality.

That this is indeed the case is borne out by an earlier paper of his (with Barbara Ehrenreich) which he has republished in this collection. Here, when discussing the part played by medicine in social control, they write that one must distinguish the 'biological impact' of medicine — with which they are not concerned — from the 'social impact' — with which they are (*CCMM*, 41). Again, later in the same article is to be found a detailed discussion of the ways in which contacts between doctors and patients may serve as channels for exerting social control. Their analysis of this topic is founded upon the premise that a clear separation exists between ideology and the technical practice of medicine. Thus, they distinguish between three ways in which ideological messages may be conveyed from the doctor to the patient: messages may be added that are completely unrelated to technical requirements; gratuitous messages may be imparted that are related to technical aspects of the encounter; or 'messages [may be] disguised as technical communications' (*CCMM*, 63). To illustrate this last head, they cite the fact that paediatricians often advise mothers not to leave their children in day nurseries because of the great rises of infection in such places.

This, the Ehrenreichs tell us, is ideology masquerading as medicine: such warnings cannot be classified as part of legitimate

technical practice for the simple reason (they assure us) that there is no research to show that the threatened dangers exist. Their argument is most revealing: it betrays that they take for granted the naive assumption that what marks out real, technical, scientific, medicine is that it is founded, in some unproblematic way, on evidence. Ideology, they would presumably want to claim, is merely the articulation of social interests.[11]

The most disturbing implication of their argument is not merely that it ignores all the discussions about the relationship between science and evidence which have exercised philosophers and historians for two decades; not even, that it passes by the sceptical assessments of medical practice to be found in writers like Cochrane and Powles:[12] the really troubling point is that they seem to rule out the possibility that scientific and technical knowledge can be understood as social creations. Scientific medicine, they 117
seem to be saying in this particular article, is what it is because it depends on evidence; the existence of evidence is the touchstone to distinguish it from ideology. From such assumptions it seems necessarily to follow that scientific medicine is, by its very nature, removed from the vulgar play of ideology. If medicine does act as a force for social control — and the Ehrenreichs insist that that is so — it can only be because it has been deformed, encrusted with a deposit of spurious ideological practices. Their implicit model of medicine, in other words, still appears to be firmly rooted in Positivism: somewhere, they appear to be implying, deep within medical practice, is a kernel of true and socially disinterested knowledge. Where they differ from the eulogists of modern medicine is that they place great emphasis on the innumerable layers of class interest, social control, profit motivation, and so on, which enfold the kernel. The difference, however, remains one of degree and not of kind.

It could, of course, be urged that to dwell so on one particular contribution, especially one first published in 1974 (four years before the collection as a whole) is ungenerous, or even a falsification of the broad intentions of the volume. This would only be true, I believe, if the article were unrepresentative; and if its inclusion unchanged could be dismissed as editorial inattention. My reason for concentrating on the piece is not its vulnerability to criticism, but the fact that it is the sole essay where any explicit attempt is made to examine the boundaries of medicine. Elsewhere in the volume, there are numerous general declarations that medical knowledge and social forces are related. The point is made, for example, in Irving Zola's well known discussion of medicine as a form of social control, which is republished here. It is made, too, by Marc Reynaud, who asserts that capitalist relations of production both create specific forms of sickness and 'commodified' solutions to them (*CCMM*, 102). It is made — or implied — repeatedly in the nine contributions devoted to the connections between medicine and the position of women, and medicine and imperialism, which constitute the second and third sections of the book. Nevertheless, in all these essays, there is a fundamental ambiguity: it is never clear exactly how the authors understand the distinction between medicine and other social spheres, between science and ideology, technical and lay. Most contributions are susceptible to an interpretation that sees the boundaries of 118
technical medicine and the structure of its knowledge as social con-

structs. All, too, are capable of being read as no more than variants of the Positivist approach to medicine, as indictments of the distortion and perversion of medical care by class society.

What is certain, is that this book does not establish a new, non-Positivist, approach to the study of medicine. The 'Cultural Critique' which Ehrenreich proposes is certainly more satisfying than the economistic approach of Navarro or Krause, but, judged by its underlying presuppositions, it is not dissimilar.

If these books are taken as representative of the self-consciously radical sociology of medicine which has arisen in recent years in the United States of America — and to do so is hardly unreasonable, given the number and conspicuousness of their authors — the impression conveyed is generally depressing. There is, as yet, still little sign of changes in the sociology of medicine comparable to those which have recently transformed social studies of science. The radicalism of the radical sociology of medicine is one only of programme and partisanship: it stops far short of a radical reappraisal of the conceptual presumptions that have long coloured most work in the field.

● NOTES

1. J. Ben-David, *The Scientist's Role in Society* (Englewood Cliffs, NJ: Prentice-Hall, 1971), 14.

2. B. Barnes and S. Shapin (eds), *Natural Order* (Beverly Hills and London: SAGE, 1979), 10.

3. M. Mulkay, *Science and the Sociology of Knowledge* (London: Allen and Unwin, 1979), 119.

4. R. Wallis (ed.), *On the Margins of Science: The Social Construction of Rejected Knowledge* (Keele, Staffs.: *Sociological Review Monograph* No. 27, 1979), 6.

5. A few characteristic examples of their work are: C. Webster, *The Great Instauration* (London: Duckworth, 1975); B. Barnes, *Interests and the Growth of Knowledge* (London: Routledge and Kegan Paul, 1977); H. M. Collins, 'The Seven Sexes: A Study in the Sociology of a Phenomenon, or the Replication of Experiments in Physics', *Sociology*, Vol. 9 (1975), 205-24; M. C. and J. R. Jacob, 'Millenarianism and Science in the Late Seventeenth Century', *Journal of the History of Ideas*, Vol. 37 (1976), 335-41; D. Bloor, *Knowledge and Social Imagery* (London: Routledge and Kegan Paul, 1976); R. M. Young, 'Science *is* Social Relations', *Radical Science Journal*, No. 5 (1977), 65-129.

6. For example: B. B. Gilbert, *The Evolution of National Insurance in Great Britain: Origins of the Welfare State* (London: Michael Joseph, 1966); B. Semmel, *Imperialism and Social Reform* (London: Allen and Unwin, 1960); G. Stedman Jones, *Outcast London* (London: Oxford University Press, 1971).

7. Such as, for instance: T. Johnson, *Professions and Power* (London: Macmillan, 1972); and Johnson, 'The Professions in the Class Structure', in R. Scase (ed.), *Industrial Society: Class, Cleavage and Change* (London: Allen and Unwin, 1977), 93-110.

8. For a discussion of these developments, see R. MacLeod, 'Changing Perspectives in the Social History of Science', in I. Spiegel-Rösing and D. Price (eds), *Science, Technology and Society* (Beverly Hills and London: SAGE, 1977), 149-95.

9. For instance: M. Foucault (trans. R. Howard), *Madness and Civilisation* (London: Tavistock, 1967; originally published in French in 1961); Foucault (trans. A. S. Smith), *The Birth of the Clinic: An Archeology of Medical Perception* (London: Tavistock, 1973; originally published in French in 1963); H. Jamous and B. Peloille, 'Professions or Self-Perpetuating Systems: Changes in the French University-Hospital System', in J. A. Jackson (ed.), *Professions and Professionalisation* (Cambridge: Cambridge University Press, 1970), 109-52; N. D. Jewson, 'Medical Knowledge and the Patronage System in Eighteenth-Century England', *Sociology*, Vol. 8 (1974), 369-85; I. Waddington, 'The Role of the Hospital in the Development of Modern Medicine: A Sociological Analysis', *Sociology*, Vol. 7 (1973), 211-24. Some of Johnson's work has already been cited in note 7.

10. J. and B. Ehrenreich, *The American Health Empire: Power, Profits and Politics* (New York: Random House, 1970).

11. To avoid misunderstanding, let me clarify the nature of my disagreement with the Ehrenreichs. I do not dissent from their view that the paediatricians' advice is ideological. Of course it is. Of course it serves to restrict women — and children — to certain roles derived from the dominant ideology, and thus acts as a force for social control. But is it *this* characteristic which distinguishes it from real, technical, research-based medicine?

My argument is that, because medicine and science are social products, coloured by the forces at work in the societies where they arise, they are necessarily the bearers of a whole series of ideological values. These values permeate the background assumptions which are employed by scientists — and physicians — for making sense of data. Thus, for instance, as many writers have commented, modern cosmopolitan medicine is dominated by the germ pathogen theory as a model both for explaining illness and restoring health. Although there is no doubt that this theory is supported by evidence and did, indeed, play a major part in advancing medical knowledge at one time, it can still, I would contend, be seen as ideological. The form of its knowledge does lend support to the maintenance of certain social interests.

To return then to the Ehrenreichs' example: the criteria for distinguishing ideology must always, I believe, be social, not epistemological. Ideology is not simply assertion unsupported by research. Would the paediatricians' advice be any the less ideological if based on one piece of research? On ten? On a hundred? Therefore, in distinguishing between science and ideology, we need some more sophisticated procedure than the bald contrasting of social interests with (supposedly) value-free evidence. The recent work of Barry Barnes, op. cit. note 5, Chapter 2, is one interesting example of an attempt to confront some of these difficulties.

12. A. L. Cochrane, *Effectiveness and Efficiency: Random Reflections on the Health Service*, The Rock Carding Lecture (London: Nuffield Provincial Hospitals Trust, 1971); J. Powles, 'On the Limitations of Modern Medicine', *Science, Medicine and Man*, Vol. 1 (1973), 1-30.

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3

DRUGS IN SOCIAL CONTEXT

J.M. Duggan and R.S. Nanra

ANALGESIC ADDICTION OF A NATION

3.1

Introduction

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Nowhere is the long lag-period between the introduction of a new drug and the recognition of its ill-effects better illustrated than in the story, still-unfolding, of the untoward effects of the minor pain killing preparations (analgesics).

The power of an extract of willow bark (Salix) to reduce pain and inflammation has been recognized for centuries, a power we now attribute to the salicylate it contains. Not until the latter part of the last century, however, was a way discovered of avoiding the very frequent gastric side-effects of this rather unpleasant drug. A researcher, working for Bayer Co., whose father had a rheumatic condition and was unable to tolerate salicylates, synthesized the drug acetyl salicylic acid by the simple process of attaching an acetyl radical to the salicylate molecule. This drug we know as aspirin.

Due to the efforts of chemists a number of other anti-inflammatory compounds have been introduced, none of which has succeeded in replacing aspirin. Two of these have achieved popularity throughout the world, often in combination with aspirin. In Northern Europe it was phenazone: in Australia acetoaminophen (phenacetin) became popular and a combination of aspirin with codeine has also been favoured. For reasons which appear to be lost, some decades ago caffeine was introduced into these minor analgesic preparations although it has no pain relieving properties at all.

In Scandinavia, popular brands of analgesics commonly contained phenazone, phenacetin and caffeine and in Australia proprietary compounds containing aspirin, phenacetin and caffeine (APC), became 62
widely used.

Aspirin has now been used for nearly 80 years. It took 40 years for its first significant side-effect to be recognized. The combination of side-effects which followed the prolonged abuse of these preparations is still being elucidated, but it is clear that following prolonged abuse ill-effects on many organs and systems occur in varying combinations. In the last few years this has been named the Analgesic Syndrome or the Syndrome of Analgesic Abuse.

Gastric Side-Effects

The gastric side-effects were first specified in 1938 when research workers in London noted that on examining the gastric mucosa or lining in patients who had taken aspirin shortly before, there were often seen tiny superficial areas of cell destruction, sometimes with haemorrhage. This work has been in general confirmed over the years and it is now universally agreed that the taking of aspirin tablet or an aspirin preparation may be often followed by gastric haemorrhage. This amounts to an insignificant 3

to 5 mls. of blood in 70% of normal people, but in a number, possibly as low as 1 in 100,000 instances, this bleeding may be severe and even life threatening. More recently, an awareness has developed, particularly in Australia, that not only may long continued aspirin abuse produce anaemia from repeated gastric haemorrhage but that chronic gastric ulcers with areas of destruction up to several centimetres in diameter in the stomach lining may be produced. The story of this in itself is a very interesting one.

Some 15 years ago Dr. Brian Billington in Sydney drew attention to an excessive number of young women presenting with gastric ulcer. This minor epidemic had begun during the war years in eastern Australia and the evidence suggested that it was due to an environmental factor[1]. Once established, it persisted throughout the life of the patient. The nature of the factor was unclear but in 1961 Douglas and Johnston, a physician and a radiologist respectively in Townsville, drew attention to the rather frequent occurrence of chronic headaches in the patients whom they had observed with gastric ulcer and they noted that many of these patients were accustomed to taking large amounts of A.P.C. powders[2]. Since then a number of studies have taken place in Sydney, Melbourne, Adelaide and Newcastle. There is now good evidence of an association between the abuse of aspirin-containing preparations and the development of chronic gastric ulcers, perforated gastric ulcers and bleeding gastric ulcer. More recent studies in Boston, in Long Beach, California, and at the Mayo Clinic have confirmed an association between gastric ulcer and abuse of aspirin-containing preparations. In general, outside eastern Australia this
63 fact is not widely recognized.

It might be of interest to review some of the evidence linking aspirin and chronic gastric ulcers. In a study in Sydney of 100 inpatients with gastric ulcer and 100 control patients, Gillies and Skyring[3] found that 22% of control patients took aspirin in some form daily, whereas 50% of males and 75% of females with gastric ulcer did so. They concluded that, compared with controls, more gastric ulcer patients took aspirin, they took larger doses and for a longer time and all these differences were highly significant statistically. Their gastric ulcer patients had taken an average of 6.1 doses of an aspirin-containing preparation daily for an average of 12.1 years. In another study from Newcastle[4] of 295 patients admitted to hospital for treatment of ulcers, 85% of women with gastric ulcer took at least two doses of an aspirin-containing preparation each week. In 80% of these it was in the form of A.P.C. powder and in these patients, 90% took the preparation for chronic headache. None of the patients taking A.P.C. were doing so for a recognized organic disease. The only patient taking an analgesic preparation for a complaint for which analgesics might reasonably be taken was taking aspirin alone.

This aspect deserves some stress. Just as in the Newcastle series, none of the patients taking A.P.C. to excess were doing so for a recognized organic illness, so in the Townsville series, remarkably few of the 57 patients with gastric ulcer who took aspirin-containing preparations did so for legitimate reasons. Of the 34 females, 23 had headache as the reason for taking them and in seven the reason was the stimulant effect produced.

In none of the by now numerous studies exploring the association between aspirin and ulcer has any evidence emerged that the pain of the ulcer was the reason for the patient's dependance on the analgesic.

It is necessary, however, to recognize that the association between aspirin and gastric ulcer is not regarded as a causal one by a large body of opinion especially outside Australia. Whilst there are now three studies from the Mayo Clinic, Boston Mass. and Long Beach, California all demonstrating a significant statistical association between gastric ulcer and prolonged heavy use of aspirin-containing preparations, the issue is far from settled.[5]

Who and Where are the Aspirin Addicts?

Two issues arise from study of this data; firstly the aspirin consumption in control populations and secondly the geographical variations in aspirin usage. A study[6] of 1,400 workers in Sydney showed that 13% of women and 8.3% of men studied took an aspirin preparation at least daily for at least a year before. In about 80% of persons, this was in the form of A.P.C. powder containing aspirin, phenacetin and caffeine or in the form of a tablet containing aspirin, phenacetin and codeine. Among the aspirin takers, the average dose was 3.1 powders or tablets each day and the 64
average duration of the habit was 8.1 years. There were strong social class, age and sex differences. Among women in Congalton's grade 1 and 2, the highest socio-economic status, 5.3% took aspirin as compared with 33% for those in grades 6 and 7, the lowest. Those aged more than 29 years were more likely to take an analgesic preparation than those younger and women were more likely than men to take them.

There is also good evidence of quite marked regional and national differences in analgesic consumption, although our experience has been that such data is difficult to obtain. The Senate Select Committee on Drug Trafficking and Drug Abuse of the Australian Government noted this difficulty also[7]. The only real information the drug industry provided was that the consumption of aspirin in Australia was 980,000 kilograms annually. This is about 270 doses per head per annum. Evidence from the drug industry suggests that there are quite different patterns of analgesic taking in Australia and that the per capita consumption of some analgesics in Queensland and N.S.W. is as much as five times that in Tasmania and Western Australia.

In Britain, unpublished data suggests an annual consumption of 5,000,000,000 doses. This is 90 doses per capita annually or one third of the Australian consumption.

Figures for the U.S. are difficult to obtain but a figure of 14 million kilograms has been suggested. This is 230 doses annually per capita, a figure not far below the Australian one.

Analgesics and Kidney Disease

In 1953, Spuhler and Zollinger in Europe drew attention to what appeared to be a new form of renal disease in which there was a characteristic physiological change — the tips of the nipple-like structures from which urine issued out of the kidney into the collecting system underwent a remarkable change and the tissues died (renal papillary necrosis). A third of their patients had had a considerable intake of phenacetin-containing drugs. Over the next 10 years many reports appeared in the literature associating excessive intake of analgesic compounds and renal failure. In the early publications there was an automatic assumption that phenacetin was the causative factor in the analgesic mixtures and this was solely based on the fact that phenacetin was the common denominator in the analgesic compounds that were abused.

Two characteristic features emerged in these early reports: renal papillary necrosis was common in autopsy findings and the disease was predominantly seen in women.

The early reports from English speaking countries came after 1961. The incidence of the disease appeared to be high in Australia compared to the scanty reports from the U.S.A. and England. 65

Although phenacetin was initially universally accepted as the cause of analgesic induced renal disease or analgesic nephropathy, the realization that the other drugs prescribed with phenacetin were also potentially nephrotoxic brought a wave of scepticism against phenacetin. Prominent authorities like Dr. Priscilla Kincaid-Smith from Melbourne and Dr. L. F. Prescott from Edinburgh proposed that more attention should be directed

to the other potentially nephrotoxic constituents of analgesic mixtures including aspirin and phenazone. Numerous attempts to produce renal papillary necrosis in animals with phenacetin alone have been uniformly unsuccessful. Three workers using massive doses of phenacetin reported minor changes in rat kidneys. On the other hand analgesic nephropathy could be readily induced with aspirin alone or aspirin in combination with phenacetin as in A.P.C. mixtures.

There is now good evidence that in animal experiments, aspirin in the A.P.C. mixture is the major nephrotoxic agent and that phenacetin probably plays a secondary and synergistic role. Unfortunately the issue has become clouded by emotional and commercial interests. It appears that the original inculpation of phenacetin as the agent damaging the kidneys was on the basis that aspirin could not possibly be a toxic drug and that caffeine was bland.

In recent years, paracetamol has been widely publicised as a safe alternative analgesic compound. In a number of instances, phenacetin was removed from proprietary A.P.C. compounds and replaced by paracetamol — the analgesic mixture was then advertised as safe. Clinical and experimental studies, particularly from Australia, however, do not support this. Paracetamol, in fact, is the major immediate metabolite of phenacetin and when phenacetin is consumed it is paracetamol that is concentrated in the kidney.

The Analgesic Syndrome

There has been remarkably little published on the frequency with which a characteristic combination of clinical manifestations may develop in analgesic abusers. Almost simultaneously in 1966 there appeared papers from Iceland and from Melbourne which specifically drew attention to frequent co-existence of other conditions such as psychiatric disturbances, anaemia, hypertension, and a high incidence of gastric surgery for intractable ulcer symptoms. Then in 1968, a research worker in Montreal felt that the spectrum of symptoms and signs were sufficiently distinctive to warrant the status of a syndrome and since then a number of papers have appeared from the United States and Australia describing the analgesic syndrome[8, 9]. Abusers of analgesic preparations can present in a number of ways. That kidney disease may present with episodes of colic, blood stained urine and recurrent urinary tract infection leading to renal failure, dialysis and transplantation in some cases is widely recognized. Gastric side-effects may present in a number of ways. There may be recurrent small haemorrhages from repeated intake of aspirin preparations leading to anaemia or massive bleeding. The gastric ulcer may bleed, perforate, or may cause severe symptoms such that surgery may be required. It now appears that continued abuse of aspirin preparations may lead to recurrent peptic ulceration even after surgery.

In some patients, the early kidney damage may lead to quite severe, chronic elevation of blood pressure which may lead to cardiac failure. Recent studies from Newcastle show that these patients have an undue incidence of coronary artery disease. The typical picture of the analgesic abuser has been well described by Dr. M. H. Gault from Montreal—[8]

> 'One might describe a hypothetical case with features common to many of the patients described. This could be a 45 year old woman who appears 10 years older, pale, sickly, and slow-moving. Her life history reveals a broken home, an early, short-lived marriage, and frequent loss of time from work due to illness. She suffers from insomnia, takes sedatives, and a few years ago took an overdose. She complains, tearfully, of weakness, weight loss, indigestion, and recent vomiting. Most oppressive are her headaches, which she has had for 20 years, but which have become virtually continuous and are driving her to thoughts of suicide. Her medical history is lengthy and includes neurological, psychiatric, gastrointestinal and haematological evaluation. She was hospitalized for depression and 5 years ago had a gastrectomy for a bleeding peptic ulcer. She complains of nocturia and has experienced loin and colicky lower quadrant pain twice during the last year. Complaints referable to several other systems can be elicited.'

The overall morbidity and mortality from analgesic abuse is hard to define. This indeed must be high as community studies done in Australia suggest that approximately 10% of the adult population consume excessive amounts of analgesics. *A third of all patients with renal disease in the Newcastle region have analgesic nephropathy and analgesic induced renal disease is responsible for approximately 20% of the national dialysis and renal transplantation programme.*

Why Analgesic Abuse?

The answer to the question of how to deal with the problem of analgesic abuse is not immediately evident. The short term and simple answer in a number of Scandinavian countries was the banning of phenacetin except on a doctor's prescription but there is no clear evidence that this had led to a lowering of the incidence of kidney disease.

Another answer has been to substitute paracetamol or salicylamide for phenacetin. This does not appear to have altered the pattern of renal disease in Australia over a 10 year period, although both of the major proprietary A.P.C. powders manufactured in Australia have been so altered.

The question may be asked why do some people abuse analgesic powders. Remarkably little basic research has been done on this, but some facts and some speculations are available; and it might be of value to review the state of our knowledge.

The evidence suggests that the consumption of analgesics, principally in the form of proprietary A.P.C. preparations, is very common in Australia, compared to Britain. The habit is most commonly seen in middle aged women in the lower socio-economic strata of whom as many as one in three of those in employment are involved. There is a strong association with neurosis, depression and inadequacy but whilst in most the personality problems precede the habit, some evidence exists that chronic consumption of analgesics may actually cause brain damage and mental deterioration. It appears likely that caffeine, whose presence in A.P.C. preparations has no justification, is a reason for the dependance on these drugs, either because of its capacity to produce headache or on account of its stimulant effect.

Most studies show that headache is the reason given by some 75% of analgesic abusers for their analgesic abuse. Gault in Montreal has made an extensive review of the literature on analgesic abuse and reported 22 patients with associated kidney disease. Taking an average through the nine series he reviewed, headache was the reason given in 76% of cases; in his own series it was 86%. In Australia, the situation is similar and figures of 90% would be representative.

This however, does not explain why these patients have headache. In the earlier Scandinavian literature, migraine was often suggested as the cause. However, the nature of the headache is quite different to classical migraine. As Gault points out, they are oppressive and virtually continuous. A most characteristic feature of the headaches is their presence when the patient awakes in the morning and the rapid but only transient relief with analgesics, so that the patient having taken one or more analgesics on awakening, is committed to further doses during the day to deal with the recurrences. Often the headache is in the form of a dull oppressive feeling in the head, sometimes with a feeling of tightness. In view of inadequacy of migraine to explain the headache, two alternative explanations have arisen. The strong association of analgesic abuse with psychiatric disorder and mental torment has led to the suggestion that these headaches are 'tension headaches' and relate to muscle tension in the head and neck reflecting inner mental tensions. An alternative explanation would give caffeine some significance. More than 30 years

ago, Dreisbach and Pfeiffer, two pharmacologists working in the U.S. reported the results of giving rather large doses of caffeine each day to medical students. When the administration was suddenly stopped, a severe throbbing headache was produced, preceded by lethargy. It was
68 most effectively relieved by caffeine. Sometimes when caffeine was used to relieve the headache a secondary headache occurred next day. It may be significant that in the vast majority of reports of renal disease complicating analgesic abuse, caffeine was a constituent. In fact, many workers, impressed with the vast numbers of A.P.C. powder takers compared with those taking aspirin alone have concluded that aspirin is not a cause of kidney disorders.

Although headache is the overt reason given by most patients for the use of analgesics, we feel that a considerable number do take them for the 'lift' in mood they produce. Many of the patients are unhappy, depressed and frustrated. Whilst the evidence suggests that many women in employment are abusing analgesics, our experience is that by the time disease processes are established, most are housebound, unhappily married women whose children have grown up to leave them with an unsympathetic spouse. The question has been raised as to whether this reflects an aspect of the Australian socio-cultural scene. In the lower social classes, men it is stated, lose interest both socially and sexually in their partners who are becoming middle-aged, and prefer to spend their time drinking beer with a male peer group in an environment from which women are excluded.

What sort of patients are at risk from analgesic abuse? In a recent Australian series of 63 patients with analgesic abuse, peptic ulcer and kidney disease, 'the Analgesic Syndrome',[9] nearly one half of the women and one third of the men had a history of psychiatric treatment at some stage, most often in the form of anxiety or depressive states. In the Canadian series of Gault and his group, immaturity, dependence and emotional instability were prominent. In one of the original reports of the Syndrome from the Royal Melbourne Hospital, Dawborn and his colleagues drew attention to the frequency of dependence on other drugs, including alcohol, sedatives and narcotics. They felt that in their patients, phenacetin could be the drug upon which their patients depended; several of their patients found that the stimulant effect of A.P.C. preparations was missing when a mixture of aspirin and caffeine was substituted. There is in fact some pharmacological evidence to support the suggestion that phenacetin does cause some cerebral stimulation. However, there is no evidence to suggest that since phenacetin was removed from one of the well-known Australian preparations in 1967, patients have found it inferior to phenacetin containing compounds. However, such statements must rest on anecdotal evidence from patients, for no consumption figures relative to the various preparations are available.

Whilst the evidence cited above would suggest that analgesic abuse is generally grafted on to an already unstable or inadequate personality, some recent work from Scotland and Germany raises the possibility that the abuse of these drugs may actually produce brain damage.

69 Workers in Munich found that the average brain size was diminished in a group of 34 patients addicted to hypnotics, tranquillizers and analgesics. Shortly after, workers in Glasgow found clear evidence of premature aging in the brains of those who had taken excessive phenacetin but not in those who took aspirin only. In several cases, dementia, requiring institutional care was found. These same workers found that almost a quarter of patients admitted to a psychiatric hospital had taken analgesics daily for at least six months before admission. The analgesic takers were characteristically women with chronic neurosis, depression and inadequate personality.

There are produced in those taking large quantities of analgesics quite characteristic disease entities. That analgesic mixtures produce kidney damage which may be quite severe is accepted by most authorities although the offending agent is in some doubt. That the aspirin contained in most analgesics can produce chronic gastric ulcer also appears likely. None of the studies on the pathological effects of analgesics suggest that any significant amount of disease is produced by the intermittent use of aspirin itself for legitimate symptoms such as for influenzal illness and brief self-limiting conditions. Any attempt to deal with what has become a major public health problem in some parts of Australia will fail unless the social and cultural aspects of the habituation are recognized.

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Ingrid Waldron

3.2

INCREASED PRESCRIBING OF VALIUM, LIBRIUM AND OTHER DRUGS - An example of the influence of economic and social factors on the practice of medicine

Drug prescriptions per capita in the United States have more than doubled since 1950 without a commensurate improvement in health. Drugs are often prescribed for clinical conditions in which therapeutic benefits do not outweigh the risk of adverse drug reactions. Deaths due to adverse drug reactions are roughly as frequent as deaths due to automobile accidents.

Valium and Librium are the first and fourth most commonly prescribed drugs in the U.S., used by one in ten adults each year. The rapid rise in use of these drugs has occurred during a period of rising social stress, as indicated by increases in alcohol consumption, suicide, and homicide. Valium and Librium are frequently prescribed for patients who go to doctors with social or other nonmedical problems, often in lieu of attempts to resolve these underlying problems.

Overprescribing occurs because the decision to prescribe is influenced not only by consideration of therapeutic benefit, but also by nonmedical factors, for example the widespread expectation by both patient and doctor that the doctor will provide a drug or some other technological treatment. Prescribing decisions are also influenced by the profit-motivated activities of drug companies, including the expenditure of almost one-quarter of every sales dollar on drug promotion. The most widely used source of drug information for doctors is the industry-sponsored *Physicians' Desk Reference,* which overrates the therapeutic value of Valium and Librium as compared to disinterested medical sources. Drug companies also contribute to overprescribing by introducing numerous minor variants of existing drugs. The therapeutic benefits of such new drugs are often overestimated in the early years of use when adverse side effects are not well known and apparent efficacy is enhanced by placebo effects in uncontrolled observations.

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Use of prescription drugs in the United States increased by more than half during the 1960s (1). Prescriptions for psychoactive drugs and anti-infective drugs more than doubled during this period (2), while Valium[1] and Librium prescriptions increased even more rapidly (4). What are the causes and consequences of the rapidly growing use of prescription drugs in the U.S.? Is a doctor's decision to prescribe based solely on a scientific, medical evaluation of the best therapy for the particular condition of the particular patient? If not, what nonmedical factors influence the prescribing of drugs? These questions are explored for Valium and Librium in the first part of this paper, and for prescription drugs in general in the second part.

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VALIUM AND LIBRIUM

This part of the paper demonstrates how the prescribing of Valium and Librium is influenced by factors other than established therapeutic efficacy for a given condition. The first section briefly outlines the extent and frequency of use of Valium and Librium, the medical conditions for which these drugs are prescribed, and the evidence (or lack of evidence) for efficacy in these conditions. This section also demonstrates that Valium and Librium are often prescribed as a substitute for dealing directly with the social and psychological problems which patients bring to doctors. The second section identifies increasing social stress as one cause of the rise in use of Valium and Librium. Prescribing of tranquilizers has been reduced in clinics which emphasize the resolution of the underlying social and psychological problems. This part concludes with an exploration of the impact on prescribing behavior of the profit-motivated activities of the tranquilizer producers, particularly the impact of drug companies on the sources of drug information used by doctors.

[1] The decision to use the brand names, Valium and Librium, rather than the generic names, diazepam and chlordiazepoxide, has been made with considerable reluctance. However, the latter detract from readability, because they are both longer and less familiar to many readers. This appears to be no accident; companies give drugs generic names which average one-third longer than brand names (3, p. 131).

Rising Use of Valium and Librium–
The Medical Context

The increase in use of Valium and Librium in the U.S. has been extremely rapid. Valium was introduced in 1963, and by 1972 was the most frequently prescribed drug, selling 50 million prescriptions annually (4). Librium was introduced in 1960, and by 1972 was the third most frequently prescribed drug, selling 20 million prescriptions annually (4). Three billion tablets of Valium and one billion tablets of Librium were sold in the U.S. in 1974, enough for one week of drug therapy for every person in the U.S. (5). Actually, about one in ten adults in this country use Valium or Librium, typically for periods of a few weeks to a few months (3, p. 42; 6, p. 161; 7-11).[2]

Valium and Librium are termed anti-anxiety agents or minor tranquilizers, and they appear to be prescribed primarily for the relief of anxiety (12). Through 1973 there were approximately twenty published studies which compared the effectiveness of
39 Valium and placebo in anxious patients using a double-blind procedure and a minimum of 12 patients in each treatment group (6, pp. 72-73). Most of these studies used usual clinical doses for about four weeks with about 25 subjects per group, and they most frequently gave their results in terms of global improvement ratings. The results showed considerable variation, as can be seen from the following list of results of eight studies,[3] summarized in terms of percentage of subjects showing "marked" to "moderate" improvement in response to placebo vs. percentage improved on Valium: 65 percent improved on placebo vs. 84 percent improved on Valium (13), 55 vs. 77 percent (14), 46 vs. 54 percent (15), 43 vs. 71 percent (16), 25 vs. 70 percent (17), 21 vs. 55 percent (18), 20 vs. 95 percent (19), and 6 vs. 41 percent (20). Perhaps the most striking result is that, under some circumstances, a large fraction of anxious patients will improve when given a placebo. This observation confirms the importance of having placebo controls and a double-blind procedure when testing drug efficacy. Patients receiving Valium did show more improvement than those receiving placebo, and in many of these studies the difference was statistically significant. A smaller number of results reported for the specific symptoms of tension or anxiety showed a somewhat lower level of effectiveness than the overall improvement rating (13-15, 21). In the two longer studies, differences between Valium and placebo diminished and became nonsignificant at longer time intervals due to continued improvement in the placebo group (14, 17). This reflects the fact that a substantial fraction of persons suffering from anxiety or other psychiatric symptoms improve spontaneously in one to a few months without any treatment (22, 23).

Although the evidence for the efficacy of Valium and Librium has been obtained primarily for patients diagnosed as anxious or psychoneurotic (6, Chs. 4 and 7), only one-quarter of new prescriptions for Valium and Librium are for patients with these diagnoses (Table 1). Much of the prescribing of Valium and Librium is for diagnosed somatic conditions, even though only a very few controlled studies have found that Valium or Librium is effective in relieving anxiety associated with somatic illness (6, Ch. 7). These drugs have not been shown to alleviate hypertension, angina, peptic ulcer, or asthma, although they appear to be effective in acute myocardial infarction (6, Ch. 7; 24-26).

[2] These estimates are based in part on prescription data which show that in 1972 one-half of all prescriptions for psychotherapeutic drugs were for Valium or Librium (4) and national survey data which show that in 1970 one out of every four American adults used prescription psychotherapeutic drugs (7). A study of subscribers of a prescription insurance agency in southern Ontario showed that, among those who obtained a prescription for a minor tranquilizer (primarily Valium or Librium), slightly under one-half got one prescription or approximately one month's supply, one-third got two to four prescriptions, and one-fifth got more than four prescriptions (8). In a large medical center in Los Angeles, about one in fifty of the patients who obtained Valium or Librium got over six months' normal supply in a year (9). Nationally, about two-thirds of the prescriptions for Valium and Librium provided enough tranquilizer for one month or less of normal use; approximately one in ten provided enough for more than two months of normal use (10, 11).

[3] The results reported here exclude crossover experiments because of the difficulties of interpretation associated with this design (6, pp. 65-67), results with psychotics since Valium is not recommended for use with psychotics, several studies I was unable to obtain, and one study which did not give results in terms of percentage improved.

Only 17 percent of prescriptions for psychotherapeutic drugs are written by psychiatrists and neurologists (3, p. 19), and this percentage is probably even lower for Valium and Librium (7). Forty percent of prescriptions for psychotherapeutic drugs are written by general practitioners, 18 percent by internists, and 10 percent by osteopaths.

The usage figures given above do not include combination drugs which contain Valium or Librium as one component and contain another psychotropic drug or drugs for somatic conditions as other components. Combination drugs of the latter type are termed "hidden psychotropics." Among the "hidden psychotropic" drugs

Table 1

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Diagnoses for which Valium and Librium are prescribed

Diagnosis	Valium[a]	Minor Tranquilizers[b]
	%	%
Mental disorders	30	37
Anxiety reaction	–	(18)
Psychoneurotic disorders	–	(4)
Depression	–	(3)
Schizophrenic disorders	–	(1)
All other	–	(11)
Musculoskeletal disorders	17	5
Central nervous system disorders	6	3
Circulatory disorders	16	8
Gastrointestinal disorders	6	5
Genitourinary disorders	3	5
Accidents and poisoning	–	6
Medical/surgical aftercare	7	–
Senility and geriatric care	8	17
Other	7	14
Total	100	100

[a] Source, market research data for about 1972; quoted in reference 4.
[b] These are primarily Valium and Librium. Source, physician prescribing data for 1970; quoted in reference 7.

containing Valium or Librium are ones recommended for treatment of angina, gastrointestinal disorders, asthma, and menopausal symptoms (6, Ch. 7). There appears to be roughly one prescription for a "hidden psychotropic drug" for every two prescriptions for a psychotropic drug (8, 27).

The use of fixed combination drugs containing Valium and Librium appears to be particularly difficult to justify medically, since in many cases one or the other component can be shown to produce equal therapeutic benefit with less danger of adverse side effects (6). Additional evidence that combination drugs are probably often prescribed irrationally is provided by a surprising finding from a small survey, namely, that many doctors could not even name the active ingredients of the combination drugs they prescribe (28). In the case of two combination drugs containing Librium, 55 and 44 percent of the physicians could not accurately identify the active ingredients.

In many cases the prescribing of Valium and Librium appears to be motivated by the exigencies of medical practice as much as by considerations of established therapeutic effectiveness. General practitioners and other physicians commonly see patients with psychological problems manifested sometimes as anxiety or depression, sometimes as vague physical complaints such as fatigue or sleeplessness, and sometimes as psychosomatic illness (8, 29, 30). Even frankly social problems such as loneliness or marital discord are not uncommonly brought to general practitioners (8, 31, 32). Valium and Librium have been widely advertised as therapy for just this range of problems. For example, Valium has been promoted for "psychic support for the

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tense insomniac" or the "always weary," for "somatic symptoms of psychic tension," and for the housewife "with too little time to pursue a vocation for which she has spent many years in training" (33 and quoted in 34, p. 78). Librium has been advertised for use "when anxiety and tension create major discord in parent-child relationships" (quoted in 35) and for relief of anxiety in the new college student whose new friends and experiences "may force her to reevaluate herself and her goals" and whose "newly stimulated intellectual curiosity may make her more sensitive to and apprehensive about unstable national and world conditions" (quoted in 36).

The type of use which these advertisements suggest for Valium and Librium appears to offer a resolution for a common and difficult dilemma for doctors, namely, how to respond to a patient who is distressed by psychological and social problems, given that both doctor and patient expect the doctor to do something to relieve the patient's distress in an appointment that averages less than twenty minutes (37). That doctors accept such uses for Valium and Librium is indicated by a survey in which 80 percent of the doctors who responded agreed that "certain medications are often very helpful in handling the social demands and stresses of everyday living" (38). One-third of the doctors accepted daily use of Librium for a middle-aged housewife having marital troubles as very legitimate; 20 percent accepted occasional use of Librium by a college student when stress and demands become too great as very legitimate, and 17 percent accepted occasional use by a physician when stress and demands of his practice become too great as very legitimate. An additional 40-50 percent accepted each of these uses as somewhat legitimate. These attitudes influence actual prescribing behavior; those doctors who accept the use of psychotropic drugs for social problems and everyday stress prescribe more psychotropic drugs (27).

Patients who visit doctors to discuss social problems and obtain psychological support apparently are the most likely to receive these drugs. Specifically, patients whose visits to doctors are motivated in part by social isolation and a frustrating, unfulfilled life situation more often receive a prescription for a tranquilizer or other psychotropic drug (31). Persons who live alone more often receive minor tranquilizers and other psychotropic drugs than persons who live with others (39). Patients who come in for frequent consultations for the same condition also more often receive a prescription for a psychotropic drug (3, p. 87) and, indeed, Valium has been advertised in a doctor's magazine as an aid in producing "a less demanding and complaining patient" (quoted in 40, p. 234).

Doctors apparently experience substantial pressure to respond to a patient's problems with the prescription of a drug; doctors even tend to change diagnostic habits to match the diagnoses for which new drugs are available (4, 41). Patients also appear to be more likely to bring to a doctor those problems for which drug therapy is available (42). Thus the prescribing of Valium and Librium for psychological and social problems appears to satisfy substantial needs of both doctor and patient. On the other hand, doctors may be somewhat uneasy about this type of use. Sixty-four percent of doctors surveyed felt that *other* doctors prescribe too many tranquilizers and only 5 percent felt that other doctors prescribe too few tranquilizers (4, p. 107).

Rising Use of Valium and Librium– The Social Context

Previous analyses of the causes of the increased use of psychotropic drugs like Valium and Librium have focused attention primarily on their relatively recent introduction, growing popular interest in pharmacological alleviation of psychic distress, and advertising pressure to increase the range of indications for which doctors prescribe these drugs to include the types of social problems which were mentioned above (43). While accepting the importance of these factors, I wish to focus attention on another factor not previously considered: the rise of social stress during the period of rapid growth in use of minor tranquilizers.

As shown in Figure 1, the growth in prescribing of Valium and Librium has coincided with a period of rising alcohol consumption, suicide, and homicide. During

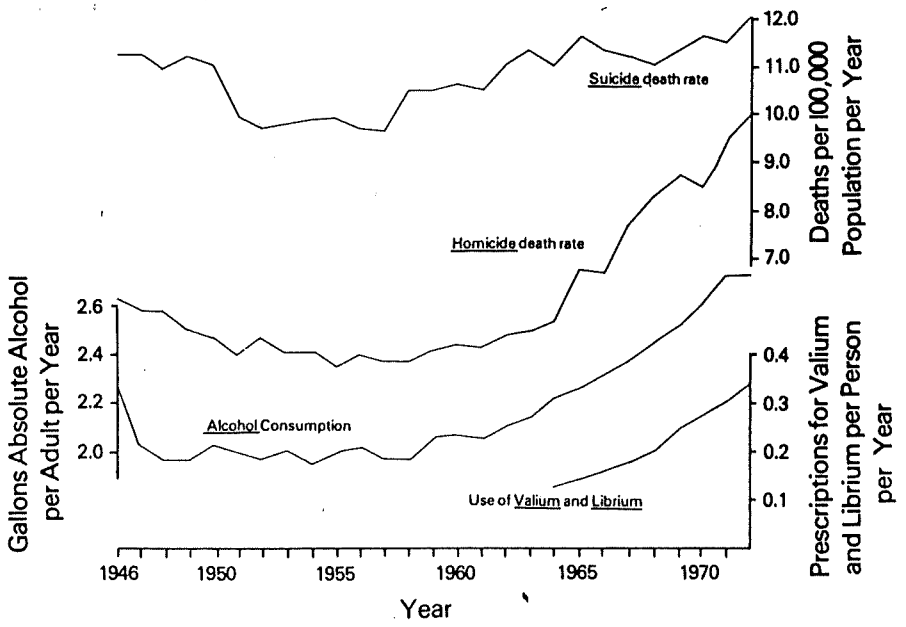

Figure 1. Rapid increase in use of Valium and Librium during a period of rising social stress, as indicated by increases in suicide, homicide, and alcohol consumption. Sources, references 3; 73; National Center for Health Statistics, Suicide in the United States, 1950-64, *Vital and Health Statistics*, Series 20, No. 5, 1967; National Center for Health Statistics, Homicide in the United States, 1950-64. *Vital and Health Statistics*, Series 20, No. 6, 1967; Department of Health, Education, and Welfare, *Alcohol and Health*, Charles Scribner and Sons, New York, 1972.

this period there was a decrease in people's happiness (as reported in a series of national surveys) and an increase in distrust of virtually all the major institutions of our society (44). All of these trends indicate increasing social stress in the U.S. In a previous paper (44) a colleague and I have shown that, for teenagers and young adults, the sources of increasing stress include increased social isolation (due, for example, to increased parental divorce) and increased competition for desirable jobs and careers as the number of young adults has grown more rapidly than career opportunities have expanded.

Thus, use of Valium and Librium increased rapidly during a period of increasing social problems. As argued above, doctors apparently prescribe these drugs for patients who are upset due to difficulties in coping with social problems. It seems reasonable to conclude that the increasing use of Valium and Librium reflects in part increasing social stresses. This particular method of responding to increasing social problems would appear to have significant social consequences. Perhaps most significantly, it focuses attention on individual malfunction and the alleviation of symptoms of distress, rather than on seeking to understand and deal with the problems and their causes. As a consequence, social and economic problems are dealt with in the framework of a medical model of the relief of individual distress rather than in a social and political context of cooperative efforts for societal change. It is tempting to speculate that the "medicalization" of these problems reduces pressures for societal change and that this outcome is advantageous from the point of view of those who profit from the existing economic and political order.

One consequence of the failure to attack the root, causative problems is that these problems continue to produce new victims who keep the doctor constantly busy with a stream of distressed patients. How is the doctor to deal with these patients? Even within the restricted context of medical practice, there appear to be alternative approaches to the prescribing of minor tranquilizers which have substantial advantages for at least some patients. In one clinic, an effort was made to "spend the time needed to explore the causes of emotional difficulties with patients" and to reduce tranquilizer use (45). Where discussion with the physician was not adequate, the help of a psychiatrist, social worker, or public health nurse was sought. The result was the

alleviation of many of the underlying problems and a reduction in the amount of Valium and Librium prescribed by about two-fifths, barbiturates by about two-thirds, and meprobamate by over 90 percent (45, 46). Similarly, very low tranquilizer use has been reported for a family health care program featuring a readily available family doctor trained to care for emotional problems by psychotherapeutic techniques and appropriate referrals (47). Another alternative to the prescribing of tranquilizers would be to encourage alternative methods of coping with stress, such as talking with friends, prayer, or recreation for relaxation and diversion. In this connection, it is of interest that tranquilizer users are more likely than nonusers to consult a physician when nervous or upset and are less likely to consult a close friend, take a nap, or go to church (48). These latter methods of coping may have advantages over reliance on the doctor, for example, increased integration in a supportive social network.

One advantage of these alternative methods of dealing with social and psychological problems as compared to the use of tranquilizers is that they avoid the adverse side effects associated with even relatively safe drugs like Valium and Librium. The

common side effects of Valium and Librium include drowsiness, confusion, and muscular incoordination (25). These drugs potentiate the effects of alcohol and thus may increase the risk of auto accidents (49, 50). Librium decreases performance on intelligence tests (51). Valium and Librium increase aggressiveness in substantial fractions of anxious adult outpatients, prisoners, and children who have had these drugs prescribed and also in experimental subjects in a variety of situations (6, pp. 83-86; 52; 53). One study has found a fourfold increase in congenital malformations in pregnancies in which Librium was used in the first 16 weeks (54), although another study has failed to confirm this (55) and the question of possible causation of birth defects remains unresolved. The list of additional adverse effects which have been observed in some patients is very long indeed and includes addiction, depression, insomnia, hyperexcited states, dizziness, hypotension, jaundice, and twenty others listed on the package labels (56).

In summary, use of Valium and Librium has increased rapidly during a period of increasing social stress. To respond to these societal problems by the use of tranquilizers in a medical context may alleviate the distress of individual victims and at the same time distract attention from finding solutions to underlying problems, either on the societal or individual level. Even when one's goal is limited to the relief of tension, alternative nonpharmacological approaches may be superior, for example, because they do not introduce the risk of adverse side effects.

Varying Evaluations of the Therapeutic Value of Valium and Librium

Among the factors which most directly influence doctors' prescribing behavior are the sources of drug information they use. In this section evidence is presented that doctors frequently use industry-controlled sources of drug information and an analysis is made of the differences in evaluations of Valium and Librium between two major industry-controlled sources (advertisements and the *Physicians' Desk Reference*) and two major independent sources (journal articles and the *Medical Letter*).

Over half of doctors feel that their prescribing is "markedly" influenced by information from drug industry sources, a conclusion which is supported by numerous studies (1, p. 75; 40, p. 143; 57). For example, a study of the adoption of a new drug found that detail men (drug company sales representatives) were the first source of information for about half of doctors, and drug house mail and periodicals for about a quarter (57). The final source of information before adoption was drug house mail and periodicals for a third of doctors, colleagues for a quarter, and professional journals for a fifth.

A recent comprehensive study found that virtually all physicians use the *Physicians' Desk Reference* or *PDR* for drug information, two-thirds using it four or more times a week (40, pp. 1548-1859). The *PDR* contains listings, paid for by the manufacturers, which are essentially the package inserts which are written by manufacturers subject to

approval by the Food and Drug Administration (FDA) (1, p. 75). About half of physicians use journal ads as sources of drug information, an average of once a week (40, pp. 1548-1859). Among the most widely read medical journals are the *Journal of the American Medical Association*, read regularly by slightly more than a third of physicians, and the *New England Journal of Medicine*, read regularly by slightly less than a third. About a third of physicians regularly read the *Medical Letter*, an independent nonprofit publication which evaluates drugs and is supported entirely by subscription fees. Three-fifths of doctors use detail men as sources of drug information and three-quarters use colleagues, both about twice a week on the average.

As might be expected, these sources provide rather different evaluations of the value of a drug. Table 2 summarizes evaluations given in two independent sources, namely the *Medical Letter* and articles in the *New England Journal of Medicine*, and in two industry sources, namely advertisements in the same journal and the *PDR*. Evaluations for Valium and Librium are summarized together because the evaluations are generally similar, and indeed are frequently given simultaneously, as would be expected since there appear to be only a few clinical differences between the two drugs.

Table 2 shows that the two industry-sponsored sources (the advertisements and the *PDR*) recommend these drugs for substantially more uses than the two independent sources (the *Medical Letter* and the articles in the *New England Journal of Medicine*). Aside from the obvious factor of motivation to sell, this reflects the difference between reliance on uncontrolled studies, in which apparent efficacy is inflated by placebo effects and spontaneous recovery, as compared to reliance on controlled studies. The discrepancy between drug industry sources and independent medical sources is greater in the earlier years when a higher proportion of the available studies were not properly controlled studies. An additional misleading aspect of advertising information for these products is the citation of 177 references in one ad of which over 160 had nothing to do with the use recommended in the ad (35)!

All four sources give rather similar lists of adverse side effects, except in the earliest years when several important adverse effects were omitted in the advertisements and the *PDR*. The sources do differ markedly in the way they present adverse effects (Table 2, part 2). The advertisements and the *PDR*, although required by the FDA to mention the adverse effects, downplay their significance by emphasizing that they can be eliminated by adjusting dosage in most cases and/or are uncommon. In contrast, both the *Medical Letter* and the journal articles attribute greater significance to the adverse effects and suggest that these drugs may currently be overprescribed. Another example of efforts by the manufacturer of Valium and Librium to downplay adverse effects is a bulletin to its detail men instructing them not to mention new evidence on an adverse effect when talking to doctors (40, pp. 1134-1135). The purpose of the detail man is to promote the product, not to inform the doctor of the need to take precautions.

These data indicate why heavy reliance on the *Physicians' Desk Reference*, advertisements, and other information provided by drug manufacturers tends to contribute to overprescription of the drugs, relative to the use which would be justified on scientific-medical grounds. Evidence that overprescribing probably does occur has been presented above.

Two other related issues of substantial importance are treated very differently in the four sources studied, namely the cost of the drugs and their evaluation relative to barbiturates. The *Medical Letter* emphasizes that the only substantial advantage of Valium and Librium in comparison to barbiturates is their greater safety in overdose and points to their tenfold higher cost. The *New England Journal of Medicine* articles generally indicate lesser adverse effects for Valium and Librium than for barbiturates, and the major review article argues that this justifies the extra cost of these drugs. The advertisements and the *PDR* emphasize the "wide margin of safety," while not explicitly referring to any competing drug, and give no information at all on cost.

Industry sources tended to evaluate these drugs more favorably when they were newer. For example, in the earlier periods industry sources recommended use for chronic alcoholism and some types of psychoses, uses which are now generally

Table 2

Varying evaluations of Valium and Librium in different sources in different periods[a]

Therapeutic Effect in Treatment of:	1960-1964				1965-1969				1970-1975			
	Medical Letter	*NEJM* Articles	*NEJM* Ads	*PDR*	*Medical Letter*	*NEJM* Articles	*NEJM* Ads	*PDR*	*Medical Letter*	*NEJM* Articles	*NEJM* Ads	*PDR*
Anxiety	(E)	–	R	R	E	–	R	R	E	R[1]	R	R
Insomnia	(E)	–	R	–	–	–	R	–	E	(E)	R	–
Muscle spasms	(E)	–	–	R	E	–	R[2]	R[2]	E[3]	E	R[2]	R[2]
Prolonged, recurrent seizures	–	–	–	–	R[2]	R[2]	R[2]	–	R[2]	R[2]	R[2]	R[2]
Alcohol withdrawal	(E)	–	–	R	R	–	R	R	(E)	R	R	R
Chronic alcoholism	NE	–	–	R	–	–	–	R	–	NE	–	–
Angina or hypertension with anxiety	–	–	R	R	–	–	R	R	NE	–	R	R
Irritable colon or peptic ulcer with anxiety	–	–	R	R	–	–	R	R	NE	–	R	R

Table Code

R = recommended
E = effective
(E) = effective, but no proven advantage relative to other drugs
NE = not effective
– = no information

[1] for brief periods only; [2] Valium recommended; [3] intravenous only

OVERALL EVALUATION

Medical Letter

1960-1964 – No clear evidence of superiority to bartiburates which are cheaper and better known.
1965-1975 – Useful for specific functions, but overused; need more caution in use.

New England Journal of Medicine (NEJM) Articles

1960-1964 – No information.
1965-1969 – Evaluated for one specific function only.
1970-1975 – Major review article recommends their use for a variety of purposes, but other articles emphasize adverse effects and suggest greater caution and reduced use.

New England Journal of Medicine Advertisements

1970-1975 – Very effective and recommended for anxiety in a great variety of situations; side effects occur but rarely serious and usually controllable by adjusting dosage.

Physicians' Desk Reference (PDR)

1960-1975 – Same as *New England Journal of Medicine* ads.

[a] Sources: All the relevant articles in the journals indicated were reviewed. Advertisements used were those available, which were limited in numbers since ads are generally not bound with journals. For 1960-1964, four ads were obtained; for 1965-1969, eleven; and for 1970-1975, eight. *Physicians' Desk Reference* issues used were for the years 1962, 1967, and 1974.

accepted as not recommended. Some additional new uses are given by all sources in later years, but these tend to be rather narrowly limited uses such as therapy for opiate withdrawal in infants. Before the FDA began stricter regulation of drug advertising in the mid-sixties (1), the journal ads did not give any information on adverse effects. Some adverse effects, for example, jaundice and congenital malformations, were not mentioned in the earliest years by any source. Finally, the most striking time trend in these sources of drug information is that before 1970 virtually all the information available on Valium and Librium in the *New England Journal of Medicine* was in the form of advertisements rather than articles (Table 2). It would be interesting to explore whether this phenomenon is common to other journals and drugs in their early years of use, presumably a crucial period for physicians' decisions whether or not to adopt a new drug.

Profit Motives–Their Role in Increasing Use of Valium and Librium

Hoffmann-LaRoche, the manufacturer of Valium and Librium, has derived enormous profits from the widespread use of these drugs. In turn, a substantial portion of these profits have been used to promote increased use of these drugs and thus ensure continued high profits.

Roche's annual profits from worldwide sales of Valium and Librium are roughly $100 million (58, 59). (Profit estimates are approximate since Roche, a Swiss-based company, provides very little public financial information.) In the U.S. Roche revenues from sales of these drugs were about $300 million in 1972 (40, p. 203).

The price of the drugs is very high relative to the cost of manufacture. In Canada, the retail cost of Valium was 25 times the total production cost (34, p. 81; 60, p. 34). Prices in the U.S. are about one-third higher than in Canada (1, p. 336).

Roche has taken advantage of patent protection to keep prices high. The active ingredients for Valium and Librium were sold in England for 40 to 50 times as high a price as in Italy, a country which lacks effective patent protection (61). The British Monopolies Commission found that Roche enjoyed a profit margin of 40-60 percent on sales of Librium and Valium in Great Britain and profits of 60-70 percent on capital. In the U.S. prices were three times higher than in Britain (1, p. 336). Roche argued that the high profits were necessary to pay for research costs and overhead, but the British Monopolies Commission found Roche's estimates inflated and their arguments unconvincing and ordered the price of Valium reduced by 75 percent and Librium by 60 percent (61) and a refund of $30 million for past overcharges (62).

Heavy investment in advertising has promoted widespread use in spite of high prices. Roche spends roughly a fifth of its sales revenues for sales promotion (58). Most of the advertising, including the activities of 750 detail men in the U.S., is aimed at doctors, but Roche has also used mass media to promote consumer (i.e. patient) demand for its drugs (34, pp. 74-75).

In addition, Roche has invested considerable resources in its fight against federal regulation of the prescribing of these drugs (34). Roche has estimated that such regulation, by increasing physicians' awareness of risks associated with the use of Valium and Librium, would reduce sales by 5 percent. This potential sales loss provided the incentive for Roche's investment in lobbyists and lawyers who fought regulation in the Congress, in administrative regulatory agencies, and finally in the courts. After successfully delaying regulation for ten years, Roche recently dropped its fight against government regulation and in 1975 the Drug Enforcement Administration issued regulations which limited prescriptions to five refills and six months' duration and imposed record-keeping requirements (5). It is perhaps no coincidence that the patents for Valium and Librium will expire soon (in 1980 and 1976) (40, p. 203) so price competition from other manufacturers is to be expected in the near future. Nevertheless, the well-established brand names, Valium and Librium, will probably continue to command a major share of the market for Roche.

Meanwhile, new patented benzodiazepines (drugs in the same chemical class as Valium and Librium) have been introduced at a rapid rate by Roche and other manufacturers. At least four additional benzodiazepines have been approved for use in the U.S., and at least a dozen others are in use in other countries or in various stages of clinical testing (6, pp. 6-12; 63; 64). Although specific clinical uses are claimed for many of these new drugs, there is little evidence to support this in most cases. For example, Dalmane is marketed in the U.S. as a hypnotic, or sleeping pill, but it has not been shown to be any more effective in promoting sleep than Valium and Librium in equivalent doses (65). (All benzodiazepines induce sleep at high doses, although these effects of Valium and Librium are often played down in advertisements which promote their use to reduce anxiety without inducing drowsiness). The large number of new drugs substantially increases the problem of testing for safety and detecting adverse effects.

The available evidence thus suggests that there is little therapeutic or medical advantage to the introduction of this plethora of new drugs. There are, however,

substantial profit motives. For companies other than Roche, a new "me-too" benzodiazepine opens the possibility of a piece of the very profitable Valium-Librium market. For both Roche and other manufacturers, a new patented drug provides the potential for increased profits both because of patent protection of higher prices and because a new drug tends to be more attractive, with enhanced placebo effect and less familiar adverse effects. Finally, the flood of new drugs makes it very difficult for doctors to keep accurately informed and thus may contribute to their susceptibility to drug company advertising.

In conclusion, the prescribing of Valium and Librium is not based on purely
50 medical considerations, but rather is influenced by social, political, and economic factors. Use of these drugs has increased rapidly during a period of growing social stress as might be expected, since these drugs are frequently prescribed as a palliative for the victims of social problems, often in lieu of attempts to resolve the underlying problems. The high profits earned by these drugs provide both the motivation and the means for extensive promotional activities and legal fights against government regulation, which in turn have contributed to increased prescribing and higher profits. Parallel arguments for prescription drugs as a group are developed in the following sections, which show how economic and social influences have contributed to high and excessive drug prescribing by many doctors.

INCREASED DRUG PRESCRIBING

In this part it is shown that the rapid increase in drug prescriptions during the past two decades has not led to a parallel improvement in health, and that doctors often prescribe drugs in circumstances where potential adverse effects outweigh potential benefits. The nonmedical factors which contribute to overprescribing include the structure of medical practice and misinformation due to reliance on uncontrolled observations and on industry-sponsored sources of drug information. One profit-motivated activity of drug companies which contributes to overprescribing is the introduction of numerous new variants of existing drugs whose differences and benefits are magnified in promotional campaigns while side effects and limitations are as yet unfamiliar.

Increasing Use of Prescription Drugs

The use of drugs, particularly prescription drugs, has increased rapidly in the U.S. during recent decades. In 1950, an average of 2.4 prescriptions per person were filled in community pharmacies, in 1960 an average of 3.5, and in 1972 an average of 5.5 (1, p. 18). An equal number of prescriptions were filled by other sources: about one per person by chain store pharmacies, one per person by hospital pharmacies for outpatient use, and three and a half per person by hospital pharmacies for inpatient use in 1972 (1, pp. 16-18). The total purchase cost of prescription drugs was about $10 billion; an additional $4 billion was spent on purchase of nonprescription drugs (1, p. 17).

The increase in prescriptions has occurred for a broad variety of drug categories. From 1961 to 1972 there was an increase of 100 percent or greater in manufacturers' sales of most major categories of drugs, including the three largest categories: central nervous system drugs (primarily psychoactive), anti-infectives, and "neoplasms, endocrines, and metabolics" (which includes oral contraceptives) (2).

One major cause of the rapid growth in prescribing is that drugs are now used for a wide variety of conditions not previously treated pharmacologically. For example, the growth in use of psychoactive drugs reflects the expansion of the medical domain to include many problems previously considered social problems, disciplinary problems, or criminal problems (32, 66). One example is the use of Ritalin and
51 amphetamines to treat 200,000 "hyperkinetic" schoolchildren who are said to be suffering from "minimal brain damage" despite the lack of clinical evidence of brain damage in most cases, and despite the nonspecificity of the diagnostic symptoms (41, 67, 68). This diagnosis provides the justification for long-term treatment with Ritalin and amphetamines despite the lack of evidence for either long-term efficacy or safety.

Hyperactive children are often identified initially by teachers as disruptive in the classroom. Before the application of the medical model these children were probably most often treated with discipline; recent work has shown that many can learn effectively and channel their energies in constructive directions if classroom routines are suitably restructured (67, 69). Many analogous examples of the expansion of the medical model and the use of drugs in dealing with social and family problems could be cited; among them are the use of tricyclic antidepressants for bed-wetting in children (70, 71), and the use of psychosurgery on juvenile delinquents and on lonely old people who have become depressed (66, 72).

The rapid growth in the use of prescription drugs has not been associated with any striking improvement in overall health. While the number of prescriptions per capita increased by 130 percent from 1950 to 1972, life expectancy increased by only 4 percent (73). While manufacturers' sales of cardiovascular drugs rose 170 percent, from $125 million in 1962 to $340 million in 1971 (2), deaths due to cardiovascular diseases fell only 13 percent (age-adjusted death rates calculated from reference 73). During the same period cancer death rates actually increased.

This type of finding—that high and growing expenditures on medical care are not correlated with any substantial improvement in people's health—applies to many other aspects of medical care in the U.S. (74, 75). In large part this reflects the emphasis in modern medical practice on high-technology, curative medicine rather than on preventive medicine. For example, a great deal of money has been spent on chemotherapy, radiotherapy, and surgery for cancer without a substantial impact on survival of cancer patients (76). In contrast, there has been much less medical interest and little money for prevention, despite the evidence that three-quarters of cancers are induced by environmental carcinogens and thus could be prevented by elimination of these environmental factors (74, 77). For coronary heart disease we find vast expenditures on intensive care units, surgery, and drugs, which increase survival to some extent, but which have not substantially reduced mortality due to coronary heart disease since they are brought into play only after the victim's coronary arteries have suffered extensive and largely irreversible damage (74). In contrast, expenditures to prevent coronary heart disease by reducing well-identified risk factors are pitifully small. Less is spent on the prevention of smoking than on advertising for cigarettes (74). Virtually no attention has been devoted to reducing the competitive pressures which contribute to the hard-driving Coronary Prone Behavior Pattern, which is associated with a twofold increase in the risk of coronary heart disease (78, 79). One reason for the lack of interest in prevention seems to be the profound economic implications which many effective preventive measures would have. For example, elimination of industrial pollutants or reduction of smoking would cut into the profits of industries, and threatened industries have mobilized their considerable economic and political resources to prevent or at least limit such developments (77, 80, 81).

Excessive and Irrational Prescribing of Drugs

Much of the prescribing of drugs by doctors cannot be medically justified, particularly when the possible benefits are weighed against the risk of adverse effects (not to mention the financial costs to the patient). For example, diethylstilbestrol continued to be widely prescribed in the 1950s and 1960s to avert threatened abortion despite the fact that the drug had been shown to be ineffective for this purpose in two controlled studies in 1953 (1, p. 108). As the children of these pregnancies have matured, many of the daughters have been found to have a previously rare form of vaginal cancer, and one-third of the sons have been found to be sterile (82).

As early as 1952, the *Journal of the American Medical Association* warned that the antibiotic chloramphenicol could cause fatal aplastic anemia and should be used only in cases of typhoid or a few other uncommon and serious infections for which no alternative therapy was available (1, pp. 284-288; 40, p. 2635). Despite this and other warnings, doctors continued to prescribe chloramphenicol for a wide variety of common and relatively trivial infections, prescribing roughly 60 million doses a year, which caused approximately 1000 deaths annually. Such high rates of unwarranted and dangerous use of chloramphenicol continued until 1968, when publicity from the Nelson Senate Committee Hearings apparently triggered a decline in prescribing of chloramphenicol, although some unjustifiable use continued into the seventies.

A variety of evidence indicates that antibiotics as a group are overprescribed (1, pp. 288-292; 40, pp. 623-632; 83, 84). Antibiotics are commonly prescribed in hospitals to prevent infections in situations where the risk of infection is low and there is no evidence for prophylactic efficacy (83). Approximately one-quarter of all prescriptions for antimicrobials in hospitals have been found to be unnecessary and unwarranted (84, 85). Antibiotics are also commonly prescribed to office patients who have a viral infection such as the common cold or flu in order to prevent secondary bacterial infections. (Antibiotics are not effective against the viral infection itself.) In many cases the reduced risk of bacterial infection does not outweigh the risk of adverse effects due to the antibiotic, including the risk that the patient will develop a serious and even fatal allergic response, the risk of infection consequent on disruption of the patient's natural bacterial population, and the risk of increasing development of antibiotic-resistant strains of bacteria (83). About three-fifths of the treatments of upper respiratory infections by private physicians are judged to be medically irrational due to such common practices as prescribing antibiotics without determining what is causing the infection (and even without examining the patient), and prescribing an antibiotic for a viral infection (1, pp. 299-300; 83; 86).

Not only do doctors commonly prescribe antibiotics where their use is not medically justified, they also commonly prescribe the wrong antibiotic or wrong dose. One-third of hospital prescriptions for antimicrobials fall into this category (84, 85). In one study, 14 percent of patients treated with antimicrobials experienced adverse reactions and 90 percent of these adverse reactions were associated with unnecessary or inappropriate therapy (85).

These examples illustrate how frequently drugs are prescribed where no drug is called for or where another drug would be safer or more efficacious. Such irrational
53 prescribing contributes to the growing problem of adverse drug reactions (1, pp. 677-680; 87) which have become a significant cause of illness and even death. Between 100 and 200 Americans a day are believed to have died as a result of adverse reactions to prescribed drugs in 1971 (1, pp. 189, 653, 1543-1546). Thus, adverse drug reactions cause about as many deaths as motor vehicle accidents (140 deaths a day in 1971). Two to four percent of hospital patients in medical wards have been admitted because of an adverse reaction to a drug, and roughly one in a hundred patients in medical wards dies as a result of an adverse drug reaction (87-91). In Great Britain, one in every sixty visits to a general practitioner is due to an adverse reaction to a prescribed drug (92).

While the significance of adverse drug reactions is often underestimated, the efficacy of drugs is often overestimated. The National Academy of Sciences, in its exhaustive report evaluating prescription drugs introduced between 1938 and 1962 and still on the market in the mid-sixties, found that for 7 percent of these prescription drugs there was no evidence to support any of the claimed therapeutic uses (1, pp. 123-124). Of the total of therapeutic effects claimed by drug companies, only one-third were found to be substantiated by available evidence.

Some Causes of Medically Unjustified Prescribing

What are the conditions that can result in such extensive irrational and excessive prescribing by doctors? In part, the pressure to prescribe derives from the dissatisfaction felt by both patient and doctor if the doctor does nothing concrete to reduce the patient's discomfort in contrast to the satisfaction felt by both if the doctor can offer apparently effective help. In a brief office visit the satisfaction of offering evident help is most readily achieved by the prescription of a drug (37). The expectation that the doctor will provide a drug is both reflected in and reinforced by the fact that three-quarters of office visits to general practitioners, family practitioners, or internists involve the use of at least one drug (93).

Another pressure contributing to overprescribing is the extensive influence on doctors of drug company advertising (described above). There is a direct relationship between the use of drug industry information sources and high rates of prescribing. Among physicians who wrote over 50 prescriptions a week, 80 percent reported industry as their most important source of information about new drugs; among those

writing 31-50 prescriptions a week, half relied primarily on industry sources of information and half on professional sources; and among physicians writing 30 or fewer prescriptions a week, only 40 percent relied primarily on industry sources of information (94, p. 74). Doctors who rely on industry sources of information have also been found to prescribe less appropriately, as judged relative to the best medical information available (95).

Finally, an excessive reliance on "clinical judgment" seems to contribute to doctors' overestimation of the benefits and underestimation of the risks of drug use. Many patients improve in response to placebo; for example, severe pain due to wounds or operations or pain due to angina are satisfactorily relieved by placebo in a third of patients, as are the symptoms of a common cold (96). In addition, a substantial fraction of the conditions seen by doctors are self-healing (86). Therefore, any drug prescribed is likely to be associated with improvement of the patient, whether or not it has any specific pharmacological effectiveness. Conversely, side effects often go unnoticed by physicians because they are relatively common complaints which can easily be attributed to other causes, or, in the case of serious side effects, may be sufficiently rare that no single physician will see a large number (97). In addition, doctors have been found to be understandably reluctant to attribute adverse effects to drugs they have prescribed rather than to the patient's disease (98). Given these problems, it is not surprising that doctors' clinical judgments can be so at variance with facts established by careful, controlled studies analyzed with reliable statistical procedures.

The Newer the Drug the Better It Looks

The problems of inadequate information and misinformation about drugs have been more serious for newer drugs that have often been introduced without data from extensive, double-blind controlled studies which could establish efficacy beyond the placebo effect and could lead to the detection of less obvious adverse effects. For example, chlorpromazine was introduced in 1954 and promoted as a highly effective and safe drug for psychiatric patients on the basis of a few small and uncontrolled studies (99, Ch. 5). Within a year, chlorpromazine had been administered to two million patients in the United States alone. Subsequent controlled, double-blind studies have shown that the doses normally used are only slightly more effective than placebo, although higher doses do definitely make psychiatric patients less active and more manageable in a hospital setting (99). It has been widely claimed that the effectiveness of chlorpromazine and other phenothiazines was a major cause of the dramatic reduction in the number of mental hospital patients which began during the mid-fifties. However, the increased release rates and consequent decline in patient populations have been equally great for categories of patients who received little or no drug therapy (99). The sum of historical evidence suggests that other factors, such as the desire to reduce state expenditures on mental hospitals, were the major causes of the trends and that phenothiazines played at most a facilitating role (99, Ch. 8; 100).

At the same time as evidence has accumulated that phenothiazines are not nearly as effective as was originally claimed, increasing evidence of serious adverse effects has become available. For example, "tardive dyskinesia," an uncontrollable twitching of the face and limbs, develops in approximately 15 percent of mental hospital patients receiving phenothiazines for more than a year (101, 102). Tardive dyskinesia persists for months or years after use of the drug is stopped and in many cases appears to be irreversible (102). Although this serious adverse effect was first identified in the late fifties and was extensively documented over the subsequent decade, the syndrome was not clearly described by any drug company in its package insert or *PDR* listings before 1971 (103).

A pattern emerges of early claims of high efficacy and great safety based on uncontrolled studies, followed by widespread use not rationally based on scientific evidence, and finally an accumulation of evidence of serious adverse effects together

55 with the demonstration of much lesser effectiveness in controlled studies. The same pattern has been documented for amphetamines (68), for meprobamate (104), and for glutethimide (105). In all three cases, one of the early claims later shown to be false was the claim that the drug was nonaddicting. Even heroin and morphine were initially believed to be nonaddicting (1, pp. 81-82)! This sequence from early enthusiasm to increasing evidence of low effectiveness and unexpected risks has occurred for many other drugs. For example, a large controlled study of four drugs used to prevent the recurrence of heart attacks demonstrated that none were beneficial and two were actually harmful (106). Various surgical operations in common use have also been subsequently shown to have no therapeutic benefit or much less than was initially supposed (107, 108). Indeed, the phenomenon of excessive early enthusiasm based on uncontrolled studies may be the norm for most kinds of therapy. One consequence of this pattern is that the average time from the introduction of a drug to its withdrawal from the market is only five years in the U.S. (109).

The problems described have been somewhat alleviated in the U.S. in recent years because the FDA now requires evidence from controlled studies of efficacy and safety before permitting marketing of a new drug (1). Despite these improved procedures, many drugs continue to be marketed and used for purposes where efficacy is not clearly established and adverse effects continue to be discovered only after years of widespread use. In the last few years, for example, it has been shown that oral contraceptives contribute to an increased risk of heart attacks (110, 111), and possibly also to birth defects in children conceived during or after their use (112, 113). Three types of oral contraceptives were removed from the market this year, after it was demonstrated that their use is associated with increased risk of uterine cancer (114).

Profit Motives–Their Contribution to Excessive Prescribing

Medically unjustified and excessive prescribing of drugs is directly linked to the profits and economic power of the drug industry. High sales, particularly of new, patented, high-priced drugs, contribute to profit rates which average 18 percent per year on investment for the drug industry, nearly twice as high as the average for all major industries in the U.S. (1, p. 30). In turn, the economic power derived by the drug industry from the high sales of high-profit commodities has been used to maintain and increase sales in several important ways.

First, drug manufacturers spend an average of 20 to 25 cents of each sales dollar, or about $1 billion a year, on advertising (1, pp. 29, 54; 2; 94, p. 6). Put in other terms, the average doctor, who writes about $25,000 worth of prescriptions a year, is the target of about $5,000 worth of advertising and promotion (60, pp. 27-28). About two-thirds of this expenditure is for "detail men" who urge doctors to use their company's products with incentives which range from free drug samples and preprinted prescriptions to steaks, color television sets, and lavish trips (43, p. 58; 115). Detail men themselves are often under heavy pressure to sell, even by unethical tactics, or lose substantial financial incentive payments or even their jobs (1, pp. 60-62; 40, pp. 141-144). As shown in the first part of this paper, claims of therapeutic
56 benefit are exaggerated in drug advertisements and in the industry-sponsored *PDR*, the most widely used source of drug information for physicians. Equally important are the omissions from the *PDR*, such as the omission of price information and of listings for many cheaper generic drugs which it is generally not profitable to promote in the *PDR* (1, p. 75; 40, pp. 2728-2737). During the sixties prescription drug advertising came under stricter regulations, but misleading advertising has by no means been eliminated (1, pp. 58-67, 74-75). Also, drug ads provide the major source of revenue for many medical journals, such as the *Journal of the American Medical Association*, and this gives drug manufacturers the economic power which, for example, allowed them to force termination of the American Medical Association's independent drug evaluation program and appears also to affect the journal's editorial policy (1, pp. 68-72; 68, pp. 263-264).

Drug companies spend about 6 to 9 cents of each sales dollar on drug research and

development–less than half their expenditures on advertising and promotion (1, p. 29; 2; 94, p. 6). About three-quarters of this expenditure is for research to develop combination drug products, which in many cases are therapeutically irrational, and "me-too" drugs (1, pp. 125-128). The "me-too" drugs are minor chemical variants of existing successful drugs which often have little therapeutic value, but which allow a company to capture a part of the market and also to market a new drug with all the advantages (for the drug company) of apparent greater therapeutic benefits and fewer adverse effects and of patent protection of higher prices and thus higher profits.

Drug company efforts to produce and promote the more profitable, patent-protected new drugs have been highly effective. For example, three-quarters of women diagnosed as having nausea and vomiting during pregnancy were given the widely promoted combination drug Bendectin in 1973 even though none of its components were of proven efficacy and the AMA Drug Council recommended an older generic drug as being safer and having established efficacy at one-quarter the cost (40, pp. 650-651). Of the 200 most frequently prescribed drugs, three-quarters are less than 17 years old and thus still under patent protection (1, p. 18).

As a result of the profit-motivated research activities, the total number of drugs on the market is overwhelming–20,000 prescription drugs based on 700 different active compounds (40, pp. 155, 237) and 100,000-200,000 nonprescription drug products based on about 250 active ingredients (1, p. 208). It is hardly a wonder that doctors frequently cannot even name the constituents of the combination drugs they prescribe (28), and that, in their attempt to keep up with the plethora of products, they are often influenced by readily available advertising information.

The economic power of the drug industry is also used to fight regulation by Congress and the Food and Drug Administration (1; 34; 40, pp. 2823-2900; 94, pp. 75-83), and even to buy influence by offering handsome fees or future jobs to FDA personnel (1, p. 113; 34, p. 69; 40, pp. 2840-2841; 94, p. 80).

The financial motives of some doctors may also contribute to overprescribing, though this seems not to have been studied. It is possible that the doctor who prescribes more readily may, all other things being equal, be able to see more patients and thus collect more fees in an hour, and may be able to attract more patients by his apparently greater activity to alleviate patients' problems.

CONCLUSIONS

This paper has presented evidence that drugs are frequently prescribed when their use is not medically justified. This results in increased rates of illness and death due to adverse effects of prescribed drugs as well as inflated costs to the patient. Excessive and irrational prescribing is due in part to the profit-motivated activities of drug companies, including extensive promotional activities and research efforts devoted to the development of combination drug products and "me-too" drugs.

Other pressures toward excessive prescribing come from the nature of the doctor-patient interaction–a brief interaction in which the patient frequently presents psychosomatic complaints reflecting serious underlying social problems and in which both parties expect the doctor to "do something" to help the patient feel better. In these cirumstances a prescription can leave both parties satisfied, especially in the context of a society where consumption of commodities is very generally promoted as a source of happiness and accepted as a substitute for social and psychological satisfactions in work, family, and social contexts (116). When a person perceives and deals with his distress in this way–accepting the medical model of individual defects corrected by drugs and other curative technology rather than a social model of societal problems causing individual psychic and somatic distress–this probably contributes to the stability of the society as it is. Thus, overprescribing profits not only the drug manufacturers but also the whole class which has a vested interest in maintaining society as it is rather than making the changes which could begin to resolve widespread problems and dissatisfactions.

In sum, this analysis of prescribing practices has sketched one way in which the practice of health care in our society is distorted by economic and political pressures. Similar pressures contribute to excessive surgery (117-119). Variation in the treatment

of a medical condition, depending on the socioeconomic class of the patient, also results from economic and social pressures (120). Finally, the current emphasis on curative rather than preventive medicine, with the increased emphasis on high-technology, hospital-based medical care, is also due in large part to economic, political, and social factors (121, 122). Thus, the practice of medicine is profoundly influenced by social forces outside the domain of scientific medicine. It follows that improvements in health care will depend to a large extent on understanding and dealing with the societal forces which currently distort the practice of medicine.

Specific solutions have been proposed for the problems of medically unjustified prescribing—for example, stricter government regulation of the drug industry, improved doctor and patient education, and increased referral of patients to paramedical personnel or social services agencies for attention to social problems underlying medical complaints (1, 123). To some extent, these reforms have been implemented and have contributed to more rational prescribing and improved health care. Given the extent to which the problems related to drug prescribing are embedded in the structure of our medical system and our society, it seems probable that fundamental solutions will depend on more far-reaching restructuring of social and economic relations.

58 *Acknowledgments*—It is a pleasure to thank Amy Brodkey and Joseph Eyer for much help in finding data and developing the arguments, and Martha McClintock and Peter Sterling for helpful comments on an earlier draft.

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3.3

THE EPIDEMIOLOGY OF DRUG PROMOTION

A survey was conducted on the promotion of 28 prescription drugs in the form of 40 different products marketed in the United States and Latin America by 23 multinational pharmaceutical companies. Striking differences were found in the manner in which the identical drug, marketed by the identical company or its foreign affiliate, was described to physicians in the United States and to physicians in Latin America. In the United States, the listed indications were usually few in number, while the contraindications, warnings, and potential adverse reactions were given in extensive detail. In Latin America, the listed indications were far more numerous, while the hazards were usually minimized, glossed over, or totally ignored.

The differences were not simply between the United States on the one hand and all the Latin American countries on the other. There were substantial differences *within* Latin America, with the same global company telling one story in Mexico, another in Central America, a third in Ecuador and Colombia, and yet another in Brazil. The companies have sought to defend these practices by contending that they are not breaking any Latin American laws. In some countries, however, such promotion is in clear violation of the law. The corporate ethics and social responsibilities concerned here call for examination and action.

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It would seem safe to assume that most physicians, in whatever country they work, do not prescribe drugs with any intention of needlessly harming a patient. If a drug is irrationally prescribed—the wrong drug for the wrong patient, in the wrong amount, or at the wrong time, or if a drug is prescribed when no drug is needed—then the physician is presumably uninformed or misinformed. The necessary information may not be easily available; it may be available but ignored or misunderstood; it may be inaccurate, incomplete, or biased; or the physician may be swayed by patient pressure, peer pressure, or the intensive promotional campaigns of the drug industry.

In the United States, at least since the implementation of the Kefauver-Harris Amendments of 1962, it may also be assumed that information disseminated to physicians on prescription drugs is generally available, complete, accurate, and—probably with some exceptions—unbiased. Indications, or claims of efficacy, must be limited to those that can be supported by what the Food and Drug Administration (FDA) considers to be substantial scientific evidence. Contraindications and warnings must be given in detail. Potential adverse reactions, ranging from mild to lethal, must be fully disclosed.

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United States physicians are now accustomed to finding the necessary information in the so-called package insert or, in many cases, in the *Physicians' Desk Reference (PDR)*. It has long been suspected, however, that the policies followed in the United States have not been adopted universally.

In order to evaluate these suspected differences, a survey was conducted on the manner in which 28 prescription drugs, in the form of 40 different products, have been promoted to the medical profession in the United States and Latin America by 23 multinational pharmaceutical companies. Most of these global firms are based in the United States, but others are based in Switzerland, France, and West Germany.

The products—each marketed by the identical company or its subsidiary or affiliate in this country and one or more Latin American countries—were selected from seven

The material presented in this article is taken primarily from *The Drugging of the Americas* by Milton Silverman, University of California Press, Berkeley, 1976. Complete documentation and bibliographical references are contained in that publication. The research was supported in part by grants from the Janss Foundation and the Ford Foundation.

major categories: antibiotics, oral contraceptives, nonsteroid antiarthritics, steroid hormones, antipsychotic tranquilizers, antidepressants, and anticonvulsants.

In general, each product selected for study met certain criteria: (a) it is a valuable and, in most instances, a widely used drug; (b) it has well-established clinical usefulness and known hazards; and (c) it is described in the reference volumes noted below. (It is necessary to note that no drug company is required to include its products in any of these volumes.)

The reference volumes—each distributed at no cost to every practicing physician in the country—were the following:

- For the United States: *Physicians' Desk Reference.*
- For Mexico: *Diccionario de Especialidades Farmacéuticas, Edición Mexicana.*
- For the Central American countries (Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama) and also the Dominican Republic: *Diccionario de Especialidades Farmacéuticas, Edición C.A.D.*
- For Ecuador and Colombia: *Diccionario de Especialidades Farmacéuticas, Edición E. Co.*
- For Brazil: *Index Terapêutico Moderno.*

Other drug reference books are available to Latin American physicians, but these are generally far less comprehensive and do not include many products marketed by multinational companies.

PDR was used as a standard of reference, not because the statements it contains—which reflect the attitudes of FDA and its expert consultants—are necessarily scientifically valid, endorsed by each drug manufacturer, or accepted by all physicans. Instead, *PDR* was selected as a basis for comparison because the drug descriptions it contains are based on material that has been formally approved by an official governmental agency, they are at least tolerable to the drug manufacturers, and the volume is widely distributed to physicians and frequently consulted by them.

In sharp contrast, the material in the Latin American books has not been approved by any governmental agency. The claims made for each product are those that the manufacturer wants to make, and the hazards disclosed are those that the manufacturer wishes to disclose.

SURVEY FINDINGS

In nearly all of the products investigated in this study, the differences in the promotional or labeling material were striking. In the United States, the listed indications for each product were usually few in number, while the contraindications, warnings, and potential adverse reactions were given in extensive detail. In Latin America, the listed indications were far more numerous, while the hazards were minimized, glossed over, or totally ignored. In some cases, only trivial side effects were described, but potentially lethal hazards were not mentioned. A few such examples are cited below.

Chloramphenicol

Regardless of the manufacturer, chloramphenicol is promoted in the United States only for such serious infections as typhoid fever, Rocky Mountain spotted fever, *Hemophilus influenzae* meningitis, and a few other life-threatening but relatively infrequent infections in which the causative organism is susceptible to the drug. Physicians are advised in large type not to use it in trivial infections, or when other effective but less dangerous drugs are available.

In Mexico, Ecuador, and Colombia, the Parke-Davis brand marketed as Chloromycetin is promoted for use not only for life-threatening conditions, but also for tonsillitis, pharyngitis, bronchitis, urinary tract infections, ulcerative colitis, pneumonia, staphylococcus infections, streptococcus infections, eye infections, yaws, and gonorrhea. In Central America, a competitive brand marketed by McKesson is recommended for whooping cough.

In the United States, physicians are warned that use of chloramphenicol may result in serious or fatal aplastic anemia and other blood dyscrasias. Physicians in Mexico are given a similar warning in the promotional material for Parke-Davis' Chloromycetin, but no warnings are listed for the same product in Central America. Similarly, no potential adverse reactions are given to physicians in Central America for Winthrop's Wintetil. For McKesson's Chloramfenicol MK, warnings are given in Central America, but no warnings or adverse reactions are listed in Ecuador and Colombia.

Oral Contraceptives

For all such products marketed in the United States, the only accepted use is for the prevention of pregnancy (except for a high-dosage form approved for the control of endometriosis and hypermenorrhea). Physicians are warned of the risk of serious and potentially fatal thromboembolic changes.

A different situation holds in Latin America for a number of products examined in this study, including Searle's Ovulen, Parke-Davis' Norlestrin or Prolestrin, Ortho's Ortho Novum and Johnson & Johnson's Novulon, Syntex's Norinyl, and Wyeth's Ovral or Anfertil. These are recommended not only for contraception, but also for the control of premenstrual tension, dysmenorrhea, problems of the menopause, and a host of other conditions. Latin American physicians are given few if any warnings of serious adverse reactions. No reactions of any kind are given for the Searle and Wyeth products in Ecuador, Colombia, or Brazil, or for the Parke-Davis product in Central America.

Antiarthritics

For Ciba-Geigy's phenylbutazone (Butazolidin) and oxyphenbutazone (Tandearil or Tanderil), only a few indications for use are approved in the United States, but many are given in Mexico, Central America, Ecuador, and Colombia. In contrast, the warnings are numerous in this country, but few in Latin America. No adverse reactions of any kind are disclosed for McKesson's competitive brands—Fenilbutazona MK and Oxifenbutazona MK—in Central America, Ecuador, or Colombia.

United States physicians are cautioned against the use of such drugs for prolonged periods, since the result may be serious or fatal blood dyscrasias. A somewhat similar warning is given in Mexico, but the matter is not mentioned in the other countries.

Corticosteroids

Four widely used corticosteroid hormones were included in the study: Schering's Meticorten and Celestone, Lederle's Aristocort or Ledercort, and Upjohn's Medrol. All of these, especially if used for excessive periods, may cause unpleasant or deadly side effects, including a flare-up of latent tuberculosis, osteoporosis, vertebral compression fractures, peptic ulcer with perforation and hemorrhage, psychic changes, and many others. However, few of these hazards are disclosed for Meticorten in Latin America, and none for Celestone in Central America, Ecuador, Colombia, or Brazil. For both Aristocort and Medrol, the major hazards are glossed over or given in nonspecific terms.

DISCUSSION

Even from the few cases cited above, it should be clear that there are glaring differences in the ways in which the same multinational pharmaceutical companies describe essentially the same drug products to physicians in the United States and to their medical colleagues in Latin America.

It is important to stress that the differences are not simply between the United States on the one hand and all the Latin American countries on the other. There are substantial differences *within* Latin America. The same global company marketing the same drug may describe it in one way in Mexico, tell a different story in Guatemala, use still a different approach in Ecuador and Colombia, and yet another

in Brazil. It may list certain indications for the product in one country but different indications in another. It may make reasonably full disclosure of serious side effects in
161 one nation but ignore some or all of them in another. It may disclose only trivial side effects but omit mention of those that may be fatal. In some instances, the identical drug marketed by two competing companies in the same country is described differently in that country. If there are corporate or national patterns or policies to explain these variations, they are not readily discernible.

It must also be emphasized that Latin America has not been singled out for such treatment by multinational companies. At least in the case of chloramphenicol, similar differences are also apparent in such non-Third World nations as France, Italy, Spain, Australia, and New Zealand.

The problem has been further complicated by still another factor. In most of Latin America, a physician's prescription may be legally required for so-called prescription or legend drugs, but many patients commonly and openly obtain the products directly from a pharmacist—or an untrained pharmacist's assistant—without a prescription of any kind. Sometimes, the patient may ask for a specific drug by name. At other times, he may merely describe his symptoms, and the pharmacist will then diagnose, prescribe, and dispense.

The discrepancies in drug promotion and labeling can scarcely be denied. Instead, drug company spokesmen have sought to defend them by a variety of arguments. One is that full disclosure of hazards is unnecessary because all physicians are already aware of them and need no further warnings, a defense that has been bitterly assailed by Latin American medical experts and medical educators.

Another defense is that physicians in the Latin American countries use the reference works only as brief reminders or summaries of what may or may not be included in a package insert accompanying each shipment of drugs. But these package inserts may or may not be biased. They may not be read or even seen by a physician, and they are not readily filed for immediate reference.

Still another argument is that the most important disclosure of hazards is the one made by the company detail man or *visitador.* But in Latin America, as in the United States, it is commonly said that "you don't expect a salesman to knock his own product."

One of the most widely used defenses is that the differences in promotion actually represent what are termed "honest differences in opinion." Thus, a company spokesman may say, "We have in our files plenty of scientific evidence to show that our product is safe and effective for the conditions we claim. Unfortunately, our evidence is not convincing to FDA. What we have here, therefore, is a dispute between honest scientists."

"This argument would be more palatable," says a Colombian health official, "if the company would tell one story in the United States, where there are strict FDA rules, and another throughout Latin America, where perhaps the rules are less formidable. But when we find the company tells one story here in Bogotá, another in Quito, another in Brasilia, and still another in Mexico City, that is difficult to comprehend."

Finally, especially during the past decade or so, the companies have defended the all-too-obvious discrepancies by saying that they are not breaking any laws. Their foreign subsidiaries, they say, are usually directed by nationals of the country who know the laws and regulations and abide by them.

162 This legalistic defense was apparently effective for many years at U.S. Senate hearings and meetings of company stockholders. Copies of Latin American drug laws are not readily available in this country. In 1974, however, it became possible to conduct on-site investigations in most of the Latin American countries concerned in this study. An examination of the regulations and consultation with Latin American health officials and attorneys showed:

- In some countries, the drug company statements were apparently true. No laws or regulations were being violated, because no laws covering drug promotion were in existence.
- In other countries, the situation was different. It was evident that governmental health agencies had been given legal authority to require full disclosure of

hazards to all physicians but, for whatever the reason, had not elected to apply their authority.

- In still other countries—notably Honduras, Panama, El Salvador, and Colombia—company assertions of innocence were apparently not true. The medical promotion was in violation of laws requiring the disclosure of hazards.

In any country, the marketing, promotion, use, and misuse of drug products may be significantly influenced not only by laws, but also by social or moral standards, religious attitudes, educational levels, individual or national purchasing power, the extent of poverty, the accessibility of physicians and the fees they charge, and the prevalence of certain diseases. Economic factors may determine whether a Latin American patient will seek a prescription from a physician or go directly to a pharmacist, or even obtain medicine from a village *brujo* or witch doctor. Economic factors may likewise influence the societal or political decision to approve a drug that is widely applicable and less expensive but far more dangerous than another. In some cultures, the rights and needs of the individual are generally considered to be paramount; in others, the rights and needs of society carry more weight.

Another cultural aspect becomes involved if a physician in Latin America makes an unscientific decision, prescribes irrationally, and seriously harms the patient as a result. In such a situation, it would be virtually unthinkable for anyone to sue a physician for malpractice. Most physicians in Latin America do not carry malpractice insurance. Further, if a company markets a product that injures or kills people, it is seldom if ever sued for damages.

Yet one more curious aspect deserves mention—the role of detail men and the numbers of them employed. In the United States, in 1974 and 1975, it was estimated that there were about 24,000 detail men who periodically called on some 250,000 practicing physicans, giving a ratio of one detail man to about ten doctors. In Ecuador, there were 440 detail men for 3,500 physicians, or a ratio of one to about eight. In Colombia, there were 2,200 detail men for 11,500 physicians, a ratio of one to five. There were roughly 650 detail men for 2,000 physicians in Guatemala; 9,000 detail men for 32,000 physicians in Mexico; and 14,100 detail men for 45,000 practicing physicians in Brazil—a ratio in these countries of approximately one to three.

In these Latin American countries, it is estimated that the average detail man makes a bigger income, part salary and part commission, than does the average physician. What has aroused the ire of medical men is not merely that most *visitadores* are better paid, but that most of them know little about their products and are trained primarily to make a smooth, persuasive sales presentation. Many, and probably most of them, have completed only a secondary education. While some physicians refuse to take their advice, most doctors take advice only from them. According to one distinguished medical educator in Colombia, "The situation here is very bad. Communication with our medical people is inadequate. We cannot reach them. It is the company representative, the *visitador,* who tells them how to prescribe. It is shocking to realize that the salesman has, in fact, become the prescriber."

The fact that some global pharmaceutical companies are bending or breaking drug promotion laws in Latin America is one aspect of irrational drug use. The fact that many physicians and pharmacists are seemingly uninformed or misinformed is another. Most important is the resulting impact on Latin American patients.

In this connection, chloramphenicol has attracted particular attention. The widespread use of this antibiotic as "a daily self-medication for all ills and aches" in a Latin American country like Colombia has long been apparent. One physician declared that such use without a report of any significant occurrence of aplastic anemia was an indication that the natives of the country are protected, perhaps by some genetic factor, against this blood dyscrasia. But another Colombian physician retorted that the occurrence of aplastic anemia following chloramphenicol therapy is neither nonexistent nor rare. "Diseases supposedly 'rare' in South America, but common in other countries," he wrote, "usually make their appearance as soon as somebody starts looking for them." Another physician stated, "Indeed, it is agreed by all Colombian hematologists that as soon as chloramphenicol became freely available in this country,

the expected occurred–that is, aplastic anemia became a dreadfully common disease."

"When a child is given chloramphenicol for typhoid fever, and it dies from aplastic anemia," said the late Dr. Rubén Mayorga, former Dean of the School of Microbiology in Guatemala City, "this is a tragedy but perhaps an unavoidable tragedy. But where it happens when the drug is used to treat a case of virus pneumonia, or an undiagnosed upper respiratory infection, or a sore throat, this is unconscionable."

Chloramphenicol is by no means the only drug implicated in these serious or fatal drug reactions. Medical experts cite life-threatening blood dyscrasias caused by the irrational use of phenylbutazone and similar antiarthritic products, lethal reactions following use of dangerous antibiotics like amphotericin B without adequate supervision and sometimes without even a definite diagnosis, and the explosive flare-ups of tuberculosis, candidiasis, and other infections after prolonged use of steroids.

Concerning Corporate Ethics and Social Responsibilities

One of the traditional and most cherished defenses of drug company promotion has been based on the concept that few if any such corporations would engage in unethical activities–like exaggerating claims for their products or failing to make full disclosure of hazards–because such reprehensible actions would cost them the trust and confidence of physicians.

This view is not supported by the record. In the United States, the situation may be demonstrated, for example, by the remarkable case of MER/29, a drug promoted on the basis of what was later shown to be criminally fraudulent evidence of safety. The manufacturing company and three of its officials were found guilty in federal courts. Injured victims sued and collected tens of millions of dollars in damages. Certainly no "honest difference of opinion" was involved. Yet, although the entire story was widely reported, the company continued to maintain the confidence of physicians, and its sales and profits continued to rise. Other companies found to be engaged in playing down the hazards of their products were similarly spared any significant loss of confidence, even when they were obliged to retract their claims in "Dear Doctor" letters sent to every practicing physician in the nation.

Pharmaceutical industry leaders have denied that their Latin American promotion is unethical in any way. As to their decision not to make full disclosure of all hazards, they insist they are not lying, that what they say is truthful and accurate.

But, says Dr. José Felix Patiño, an internationally recognized medical educator and one-time Minister of Health of Colombia, "Where drug companies are concerned, where life may be at stake, not telling lies is not enough. Not telling *all* the truth is not enough." In addition, he says, "U.S. manufacturers would be put to shame if the U.S. public knew how they were promoting their products in Latin America."

It is appropriate to refer to a number of noteworthy exceptions, such as the relatively substantial disclosure of hazards published in some countries for Merck's Indocid, the substantial identity between the descriptions published in the United States and Mexico for Lilly's Aventyl, and the comparable descriptions published in the United States and Mexico for Syntex's Norinyl. According to Merck officials, "This may harm us competitively during a short term, but in the long run, we will benefit." Likewise, a high-ranking research officer of Eli Lilly insists that "Every pharmaceutical company doing international business must tell the truth, all the truth, in every country. We can't settle for less." And a top official of Syntex says, "This way, we sleep better at night."

If only for humanitarian reasons, the world cannot condone deceit or truth-twisting in science, especially where health is at stake. It cannot tolerate the dissemination of biased, incomplete, or inaccurate information when the cost may be needless injury or death.

At the same time, neither the United States nor any other nation has a mandate or moral right to export its health policies to other countries or to induce, by whatever means, any other country to adopt its own decisions, practices, customs, techniques, or standards. The health policy decisions in each of the Latin American countries must

be made by those countries. Any attempt by a foreign nation to play the role of Big Brother in Latin American policies would be unrealistic, impractical, and impertinent.

The role of the United States government in attempting to influence or control international activities of U.S.-based corporations is not clear. Although Congress has the constitutional power to control foreign and domestic commerce, there appears to be no simple technique for controlling the labeling of drugs manufactured or marketed abroad by a foreign subsidiary of a U.S. corporation. But the Congress of the United States does not have the right, which it has utilized effectively before, to investigate and report its findings to the entire nation.

Where "corporate responsibility" is concerned, answers are needed to several fundamental questions. Where does this "corporate responsibility" lie? Is it the responsibility to the company's officers, or its stockholders, or its customers—including those in foreign countries—or to the entire community, both national and international?

If only for enlightened self-interest, it would seem inescapable that corporate officials and their stockholders have the responsibility to assure that each multinational corporation bears its appropriate social responsibilities in every nation in which it operates. It would seem equally inescapable that stockholders can no longer accept such excuses as "we're not breaking any laws," and "we're not telling any lies," or "we're not required to make full disclosure of hazards."

It is indisputable that the drugs involved are—or can be—invaluable agents to speed recovery from disease and prevent needless deaths. Where they are used properly, they have been a boon to mankind. The issue is not the benefits of their rational use, but rather the drug labeling and promotion implicated in their dangerously irrational use.

The record is all too clear that the judgment of what is or is not appropriate drug promotion cannot be left entirely to the global companies themselves, or necessarily to the U.S. Food and Drug Administration or any other single agency in any country. Here, it appears, action by a different group is warranted.

It is my strong belief that the international medical-scientific community has the unavoidable responsibility to assure—and not merely recommend—that full and objective information on drug products is made available to all nations in which they are marketed, and to all health professionals—obviously including both physicians and pharmacists—who may prescribe or dispense them.

It is the responsibility of the world's medical-scientific community to determine which controversies over drug labeling and promotion represent "honest differences of opinion," and which represent unacceptable exaggerations of claims or minimizing of hazards.

It should be the responsibility of the world's medical-scientific community, along with the professional organizations of medical men and pharmacists in each country, to see that education in drug use—especially continuing postgraduate education—is constantly updated.

In these and other activities, physicians and scientists in the United States have a right and an obligation to participate, not as spokesmen for the United States, but as members of the medical-scientific community.

Finally, it is, and probably should remain, the right of the individual physician in each country to determine with his patient how he will make use of the information that may be readily available to him. Only when the physician does have ready access to full and unbiased information can he treat his patients with the fewest possible risks and the greatest possible benefits.

EPILOGUE

The Drugging of the Americas was published in late May of 1976. At the same time, Dr. Silverman was invited to testify on his report before the U.S. Senate Subcommittee on Monopoly, long under the chairmanship of Senator Gaylord Nelson. Also testifying were Dr. Philip R. Lee of the University of California, San Francisco, and former Assistant Secretary for Health; Dr. Myron Wegman, former Dean of the School of Public Health of the University of Michigan; George Squibb; and Robert

Ledogar, then at the United Nations.

It had been hoped—perhaps overly optimistically—that the publication of the book and the testimony before the Senate committee might have some results that would become visible in four or five years.

Within three weeks, the reports received enormous coverage, not only in the Latin American press, but also in Canada, Europe, and the United States. Representatives of Latin American embassies in Washington requested additional information. Some U.S.-based global corporations informally advised that they would move unilaterally to standardize their foreign drug promotion, with full disclosure of major hazards.

In November, the council of the International Federation of Pharmaceutical Manufacturers Associations approved a U.S.-submitted resolution calling for prescription product labeling to be consistent with "the body of scientific and medical evidence pertaining to that product." Moreover, "particular care should be taken that essential information as to medical products' safety, contraindications and side effects is appropriately communicated."

In addition, it was already apparent that some global companies were changing their promotion. In the latest edition of the reference volume for Central America, the labeling of some products had been drastically revised to limit claims and disclose hazards.

The long-term impact is, of course, yet to be seen.

Milton Silverman, 'The epidemiology of drug promotion', *International journal of health services*, vol. 7, no. 2, 1977, pp. 157–166.

Yale Brozen

3.4

FOREWORD TO 'DRUG REGULATION AND INNOVATION'

The U.S. comparative advantage in international trade lies in its research intensive industries. Their products have played an increasing role in the growth of exports and have contributed to the strength of the dollar. One leader in this group has been the pharmaceutical industry. Exports of medicinal and pharmaceutical products nearly tripled their share of U.S. merchandise exports from the prewar period to the 1950s with the earnings from foreign operations of U.S. pharmaceutical companies showing even more dramatic growth. But Professor Grabowski finds that changes now under way show slipping U.S. leadership in pharmaceutical research and production. Continuation of the new trend will further erode the role of the dollar as an international currency and as a pillar of U.S. prestige.

An indication of the change is the decline in discovery and development of new chemical entities by U.S. firms—an initial decline from more than one-third of worldwide introductions in the year before the 1962 amendments to the Food, Drug, and Cosmetic Act to less than one-quarter of the total in 1963 (see Table 5), and unfortunately, as Professor Grabowski shows, a continued erosion of U.S. leadership thereafter. We have reached the point where innovations based on discoveries by U.S. firms and institutions constitute less than one-sixth of worldwide introductions of new chemical entities (see Table 5), and exports of pharmaceuticals as a share of U.S. exports have declined by one-third since the 1950s.

While declining U.S. leadership in pharmaceutical innovation may erode our international economic position, it would not necessarily cause a loss of benefit to the sick in the United States if drugs developed abroad were made available here. Many are, but a growing proportion is not. While worldwide introductions of new chemical entities declined by 28 percent from 1961 to 1973 (see Table 5), those allowed on the U.S. market declined by 53 percent (see Table 1). Some have been drugs of choice in other countries, while they were not available on the U.S. market. Anomalous situations develop where U.S. doctors send patients abroad for treatment in order to use a drug not available here.

One of the bitter ironies of this situation is that the 1962 amendments were spurred by an alarm over the *safety* of new drugs—by the fears created by the thalidomide incident. The irony lies in the fact that the 1962 amendments are keeping off the market new drugs that are safer than the drugs they would replace. Professor William Wardell's study of the lags in the introduction of new drugs in the United States cites, as one example, the five-year delay in the appearance on the U.S. market

of a benzodiazepine hypnotic. If it had been available in the United States as it was in Great Britain during those five years, Professor Wardell estimates that 1,200 lives would have been saved.

3 An additional source of irony is the fact that a major reason for the delays and the decline in the rate of introduction of new drugs is that the FDA is required by the 1962 amendments to pass on the effectiveness of new drugs. It already had the duty prior to 1962 to pass on the safety of new drugs before they could be marketed, a requirement that was not changed by the 1962 amendments. The 1962 congressional response to the thalidomide incident was largely a *non sequitur*.

The 1962 amendments to the Food, Drug, and Cosmetic Act have caused more than a "drug lag" in the United States. There has also been a decline in drug innovation. The FDA and others have argued that the U.S. decline is simply the result of a depletion of research opportunities. But the fact that the drop in the U.S. innovation rate has been much sharper than the drop in the innovation rate in the rest of the world—especially in the face of increasingly strict regulation abroad—contradicts the FDA position. Before 1962 the rate of new chemical introductions in the United States was a little less than one-half the worldwide rate. In the decade following, the U.S. rate dropped to little more than one-fifth the worldwide rate (see Tables 1 and 5). If it could be shown that the drop was the result of unimportant, ineffective, or dangerous drugs being kept off the U.S. market, we could rest content. But Professor Grabowski's comparison of U.S. and British experience contradicts this hypothesis.

The U.S. decline from one-half to one-fifth the worldwide rate of innovation is a decrease in a proportion of decreased innovation. Professor Grabowski points out that the decreasing worldwide rate of innovation is likewise (at least to some extent, if not entirely) a consequence of the 1962 amendments. Requirements for permission to market in the United States affect foreign as well as U.S. firms. Since the U.S. market is a major portion of the worldwide market, a doubling of the cost of obtaining clear-

4 ance for U.S. marketing reduces the return to investment in research and development, to foreign as well as domestic firms, and therefore reduces the number of projects undertaken and innovations produced in spite of an increase in the resources devoted to research and development. All the additional resources and more have been diverted to meeting the new requirements.

To reduce the drug lag and raise the rate of innovation, a number of regulatory reforms have been suggested. Several bills have been introduced in Congress with this objective. Professor Grabowski examines some of the proposed reforms, particularly those designed to reduce the asymmetry in incentives motivating FDA personnel. Any actual or possible harm resulting from permitting new drugs to be marketed produces strong censure of FDA personnel but little reward or praise is given for quickly clearing those drugs with large benefits for the sick. Iatrogenic effects are emblazoned in headlines while the life that is not saved by the drug that has not been invented—or, if invented, remains uncleared—is little noted.

Surprisingly, Professor Grabowski favors a diffusion of responsibility for the clearance of a drug—I say "surprisingly" because one of the usual hallmarks of an effective administrative 5
structure is the focusing of responsibility. In the case of FDA review officers, however, the risk from releasing any drug is large and the benefit small even though the risks to patients may be small and the benefits large. It is to meet the problems created by the perverse relationship of the risk-benefit ratio for FDA officers to the risk-benefit ratio for patients that moves Professor Grabowski to this unusual position.

One method of diffusing responsibility suggested by Professor Grabowski is the use of a committee of "professional advisers whose careers and reputation are firmly established outside the regulatory process." This suggestion is drawn from the experience of the British regulatory system, which seems to have suffered fewer and shorter delays in allowing drugs to come to market than those caused by dilatory, supercautious FDA reviewing officers.

The FDA, under the leadership of Commissioner Alexander Schmidt and Bureau of Drugs Director Richard Crout, has moved, in the last few years, toward the approach suggested here by Professor Grabowski. It has increasingly used committees of well-known experts to appraise pharmacological data, and it has moved responsibility for questioning sponsors of new drugs and for approving or disapproving the marketing of new drugs from reviewing officers as individuals to supervisors acting for the agency. The result in at least some instances has been a quickening of the decision process and a decrease in the number of roadblocks created by idiosyncratic behavior.

Another suggestion from Professor Grabowski, which he believes "offers a number of potential advantages over the current system," is "a system of gradual monitored release of new drugs." He is much more sanguine than I am about this approach. If it takes the form of the "Phase D" activity proposed in the Kennedy-Javits Bill, it will simply become another "cop-out" for FDA reviewers, by which they can further delay the release 6
of drugs for general use, further reduce the incentives for the research and development investment required to produce pharmaceutical innovations, and further erode U.S. leadership in pharmaceutical innovation and production. Perhaps some of these potential effects can be ameliorated by putting an absolute one-year time limit on Phase D, but this new roadblock is likely to be as counterproductive as those added by the 1962 amendments.

Perhaps the perversity of FDA reviewing officers stems fundamentally from the role in which they have been cast. Legislation has cast those who would market the medicines we need in the role of malefactors intent on robbing the public by selling ineffective drugs—malefactors quite as willing as burglars with guns to damage those from whom they seek to extract funds. Reviewing officers, then, think of themselves as policemen stopping burglars from plying their trade. They cast themselves in the role of stopping new drugs from reaching the market where they would defraud and damage unsuspecting customers.

What neither Congress nor FDA officers recognize is that the drugs that are most profitable for manufacturers are those that are

the safest and most effective. Drugs that are found to be too toxic and that must be recalled are extremely costly (in damage payments, for example) to marketers, who therefore have strong incentives to keep them off the market. A bad batch of polio vaccine, for example, cost Cutter Laboratories $3 million in settling damage claims, and they were not even found criminally negligent, while A. H. Robins Co. has already paid out $3 million in damage settlements on the Dalkon Shield intrauterine device, with many more claims pending. All drugs that reach the market today must meet FDA proof of efficacy, but those without real advantages over existing ones are also costly. They do not sell well and fail to return the investment in their development and promotion. It is simply not profitable to invest in developing and marketing unsafe or ineffective pharmaceuticals (or even "me too" products with no greater efficacy than those currently available) since it is safe effective drugs that are the most profitable. It is not Marshal Petains that are needed at the FDA. We would be better served by officers who are cast in the role of county agricultural agents than by those who cry, "They shall not pass." Pharmaceutical firms are not burglars taking from the public: they are much more like farmers making their profits by feeding the public.

The reforms needed in drug legislation and at the FDA are, therefore, those that will change the role of the FDA reviewing officer from that of a policeman, stopping drugs from reaching the market, to that of a county agricultural agent, assisting firms to bring safe, effective aids to good health to the market as quickly as possible. A small step in this direction would be to eliminate the FDA's power to require substantial evidence of effectiveness. This, at least, has the virtue of partially removing one of the roadblocks that now delay the availability of drugs that would widen the array of choice for the treatment of illness. Furthermore, it has been demonstrated that the incidence of ineffectiveness among new drugs was not lessened by the requirement imposed in 1962. The requirement was redundant. As Professor Peltzman has shown, "The penalties imposed by the marketplace on sellers of ineffective drugs before 1962 seem to have been sufficient to have left little room for improvement by a regulatory agency."

We have received little benefit from the 1962 amendment, and we are paying large penalties. The sick are being deprived of effective treatment for some of their ailments. Drugs, some of which are drugs of choice, are available abroad but not here. The rate of pharmaceutical innovation has been depressed, further depriving those in need of effective treatment. The international position of the U.S. pharmaceutical industry has suffered a setback that is apparently growing more severe. Our share of innovations is declining and pharmaceutical research is shifting to overseas locations. This is having undesirable effects on the value of the dollar and on U.S. prestige, and a secondary impact (which has not yet been measured) is likely to be shown in depressed support for academic pharmacology and less rapid advance in basic knowledge. These are all "benefits" of the 1962 amendments which I, for one, am quite willing to do without.

Henry G. Grabowski, *Drug regulation and innovation*, American Institute for Public Policy Research, Washington, 1976, pp. 1-8.

Nicholas Wade

3.5

DRUG REGULATION: FDA REPLIES TO CHARGES BY ECONOMISTS AND INDUSTRY

775 Milton Friedman, the Chicago economist whose conservative philosophy dominated much of President Nixon's first term, stepped out last month to deliver a swingeing attack on the Food and Drug Administration (FDA). In terms of human suffering, he stated in an article in *Newsweek*, the public forfeit caused by the agency's delay in approving beneficial new drugs more than offsets the gain of being protected from dangerous drugs. The legal basis on which the FDA requires drugs to be proved both safe and effective, the Kefauver amendments of 1962, should be abolished, Friedman said, and maybe the FDA along with them.

The risk-benefit question raised by Friedman touches a crucial factor in the regulation of drugs. The FDA often ignores its many critics, but this was one it could not let pass. Hearings held this month before Senator Gaylord Nelson's (D–Wis.) monopoly subcommittee provided an arena in which the FDA came out fighting from its corner. In a 133-page statement, the director of the FDA's Bureau of Drugs, Henry E. Simmons, produced a detailed and sometimes eloquent defense of the FDA's performance.

Friedman's critique cited a "brilliant paper" by Sam Peltzman, an economist at UCLA, on the effects of the 1962 amendments. Peltzman assigned dollar values to the benefit from suppressing harmful drugs and to the harm from delaying the introduction of successful ones. He estimated the cost of a delay at 10 to 100 times the value of avoiding a thalidomide type mistake. For instance, to have postponed by 2 years introduction of the drugs that cure tuberculosis would have caused about 45,000 additional deaths and 90,000 extra cases of the disease. According to the Peltzman thesis, the 1962 laws requiring drugs to be safe and effective have cost consumers of drugs, over and above any benefits, $250 to $500 million per year at the very least, equivalent to a 5 to 10 percent tax on drug sales. The 1962 laws, Friedman concluded, "should be repealed. They are doing vastly more harm than good. To comply with them, FDA officials must condemn innocent people to death."

The FDA does not see its role this way. If anyone has massacred the innocent, it is the drug companies, Simmons' testimony suggested. After the 1962 laws were passed, the FDA had the National Academy of Sciences review the effectiveness of the 4300 drugs put on the market in the previous 24 years. For only two drugs out of every five could substantial evidence of effectiveness be found. Of 16,000 therapeutic claims made by manufacturers, there was evidence to support only one in five. To waive the requirement for proven effectiveness, as some critics want, would be to return to the errors of the past. And the eliminations of ineffective drugs is perhaps as important an advance in medical therapy as the 776 discovery of new drugs, Simmons said.

In response to the criticism that the FDA worries too much about the safety of drugs, Simmons offered these considerations:

► The overprescription of drugs by doctors has created a major health hazard. Every year up to one and a half million people—between 3 and 5 percent of all hospital admissions—are admitted primarily because of drug reactions. Once in hospital, between 18 and 30 percent of all patients have a drug reaction. The length of their stay is about doubled as a result, with staggering economic consequences.

► The greater the public's use of drugs, the safer drugs need to be. Present exposure already amounts to more than 2 billion prescriptions and tens of billions of doses per year.

► The marketing of unsafe drugs offers an open-ended opportunity for tragedy. Thalidomide, marketed abroad but not in the United States, was associated with birth defects in more than 10,000 children. A less well-known case is a surge of asthma deaths that "may well be one of the greatest recorded therapeutic disasters in modern medical history." Use of an aerosol nebulizer containing a high concentration of isoproterenol seems to have caused some 3500 excess deaths of young children in England and Wales over a 7-year period. The drug was not submitted for approval here, but careful testing in humans and animals would have been required if it had been.

► An epidemic of pulmonary hypertension, a rare and often fatal condition, occurred in Switzerland, Austria, and Germany in the late 1950's. The condition seems to be associated with an appetite-suppressing drug, Aminorex. The FDA has been considering the drug since 1962 but has never allowed widespread human trials because of doubts about its safety. Even limited testing in humans was halted in 1968, "thus preventing a needless tragedy in this country which might have occurred with widespread, long-term use."

► Other examples of drugs which are marketed in other countries but which the FDA considers unsafe are a hypotensive agent from which more than a quarter of the patients developed abnormal liver function; a tranquilizer associated with suppression of blood formation in dogs, cleft palate in rodents, and disturbance of liver function in humans; and a number of beta-blockers in which there is an as yet unresolved problem with carcinogenic effects in animals.

The FDA is often blamed for the declining number of new drugs introduced into the country each year. But the decline in new drugs is a worldwide phenomenon that started 6 years before the effectiveness requirements came into being, Simmons contended. Most of these are recombinations or reformulations of existing new drugs. The number of genuinely new drugs marketed in the United States has remained stable for the past 22 years, numbering about 5 to 7 per year. As to the criticism by Friedman and others, that American citizens are deprived of useful drugs by the FDA's dilatory procedures, Simmons produced comparative figures showing that, out of hundreds of drugs introduced between 1966 and 1970 into France, England, or Germany (but not the United States), only four were marketed in all three nations. Of the four, rifampicin was admitted by the United States in 1971; flufenamic acid, found to be toxic in animals, was withdrawn from trials by the sponsor; alcuronium chloride has not been submitted for approval by the sponsor; and glyburide is still under study, but four alternative drugs are already available.

There may be short-term delays in the admission of new drugs because the United States has stricter standards than all other countries except Canada and Sweden. Simmons submitted a list of 26 drugs currently marketed overseas but disapproved here because of problems the FDA had discovered with their safety or effectiveness.

A final criticism is that the FDA's regulatory system raises the cost of pharmaceutical research, causing it to shift to more favorable climates abroad, thereby jeopardizing the future of drug development in the United States.

It is true that the cost of research has gone up, but that has not driven drug companies out of business. According to Simmons, the American pharmaceutical industry now invests $680 million a year on research and development, 50 percent more than was spent 5 years ago. To exploit the lower costs and the expertise of scientists in other countries, American drug firms have been stepping up their investment abroad, although this amounts to only 9 percent of their total R & D expenditures. The pharmaceutical industry, Simmons averred, "remains one of the healthiest and most profitable industries of the nation."

Other witnesses at the Senate hearing generally supported the FDA, the consensus being that the agency's execution of the 1962 amendments had done far more good than harm. Even Joseph Stetler, president of the Pharmaceutical Manufacturers Association (PMA), said he was not calling for repeal of the 1962 laws. Stetler did point out that, of 70 new drugs discovered by American companies between 1967 and 1971, 47 were first marketed abroad, to be accepted in this country only after delays

of months or years and that "even if everything we do here is necessary and correct, it is agonizingly and unnecessarily slow."

Another witness, Daniel L. Azarnoff, professor of medicine at the University of Kansas Medical Center, said that the United States approves new drug applications significantly later than does England, and the American public is obviously deprived of these agents for varying periods of time. But the physical harm done to the public, Azarnoff said, is "probably minimal, although the monetary cost I suspect is significant."

In a recent spat in the letters columns of *Newsweek*, Friedman accused FDA Commissioner Edwards of answering his article with a "bureaucratic conditioned reflex." The FDA is more used to being attacked, in public anyway, from the consumer rather than the industry side. Peltzman's "brilliant" analysis has not yet been published, which saved the FDA from having to answer on possibly embarrassing points of detail. But as for answering the general thesis at least, its reflexes seem to have been quite effective.—NICHOLAS WADE

Nicholas Wade, 'Drug regulation: FDA replies to charges by economists and industry', *Science*, vol. 179, 1973, pp. 775–777.

4

ABORIGINAL MEDICINE

Janice Reid

4.1

INTRODUCTION TO 'SORCERERS AND HEALING SPIRITS'

. . . When I came to write a book and could look back over seven years, I felt I knew quite a bit about Yolngu views of health, illness and death. xvii

But what, in reality, did I know? This was a question I asked myself often as I analysed my data. How was I to reconcile the contradictions in what I had been told? The puzzles were many. If a sister, for instance, told me one of our brothers died because a sorcerer from another town attacked him in error, a man from another clan said the same brother brought his death on himself when he failed to fulfil ritual obligations, a woman from yet another clan that his wife was having an affair and her lover worked sorcery on him, and a young cousin that he died of a heart attack, what was I to believe? The answer was crucial to my analysis for Yolngu place great emphasis on knowing the 'true story' about any important event. Further, if other non-Aborigines were to read my findings they would want to situate them in the Western domains of fact and interpretation.

When I witnessed a series of events myself I could rely on my own observations. But when people explained, taught, gossiped, speculated, told yarns and accused, it became clear that there were as many truths as there were people to tell them (cf. Jay [1969] who designates his own observations during fieldwork in Java 'actuality' and his informants' statements 'conception'). The reasons for this are twofold and have to do with the social context of explanation, and what it means 'to know' in Yolngu society. xviii

First, what a person told me about an illness or death depended on the speaker's relationship to me, the event itself and the people involved. I was perceived as a member of a particular family and clan for some purposes, and as a non-Aborigine and outsider for others. The information a person volunteered was moulded not only by how he (or she) perceived me in relation to the event, but whether he was making an accusation, dispassionately relating the facts as he knew them, embellishing a story for the entertainment of others, or seeking to enhance his own reputation or diminish that of another person.

Second, what I was told depended on what I had a right to know and what the speaker had a right to say. As Stephen Harris (1977) found in his study of learning at Milingimbi, for Yolngu, knowledge is more subjective and related to status than that of Western society; it is not an objective, secular entity which is available to anyone. What one knows and can say depends on one's family and clan membership, birth order, marital status, child-bearing status, sex, authority and age. For instance, mature men are entitled to know and reveal the secret religious lore of their society to young men during sacred ceremonies. When men say women do not know about a ceremony they mean they have no right to pass on knowledge about it. Most mature women know a great deal and are consulted by men on the conduct of their clans' ceremonies. But

because they have not observed the ceremony or performed it they do not know it in the Yolngu sense. Conversely, both men and women go to great lengths to preserve the fiction that men do not and may not know about 'women's business'. In reality married men are well acquainted with the facts about pregnancy, childbirth and menstruation.

Once I came to be regarded as a familiar and reliable person, I gained the right to know whatever I saw, whatever I was invited to take part in, or whatever most women in their late twenties would be told. That I was mature but single was a troublesome anomaly in a society in which women marry very young. For most purposes, though, I was afforded a status similar to that of my older sister, who had two adolescent children and was a woman of standing in political and ceremonial matters.

Because sorcery and healing are part of the public domain of knowledge, the only relevant matters I could not, in principle, know about were the ritual offences and conflicts which lay behind some sorcery accusations. In these situations men or women either said that this was a secret matter, or took me aside and told me the details on the understanding that I would keep them to myself and write about them only in the most general terms. In all, what I came to know after several years depended on my own observations, my structural position, my status in the eyes of others, and on their motivations for telling me about community affairs. From conversations, formal interviews, camp-fire stories and my records of actual illnesses or deaths I slowly gained a sense of the Yolngu view of death and suffering.

Interpretation

One major area of Yolngu concern emerged from this data on sickness and death: sorcery. An attack by a sorcerer was almost always cited as the cause of a life-threatening illness or death. The precipitating factors—such as a fight, a breach of the law or adultery —varied, but the means were, in most cases, the same. Because of its prominence as a cultural motif in medical crises sorcery became a major focus of the study.

(Before outlining this approach I should, for those who are unfamiliar with such studies, interpose an anthropological comment on sorcery.)

Several people have asked me whether sorcery works and whether I believe in it. The short answer is that anthropologists approach belief systems of all societies, including, ideally, their own, objectively. Only very rarely do they subscribe to the ideas they are investigating. An axiom of the ethnographic enterprise is that sorcery is not 'real' in any empirical sense, or, if it is performed (and it is usually very difficult to find out whether it is), it does not actually harm the intended victim. This raises a few problems. What about people who confess to sorcery and witchcraft accusations? Anthropologists would say that any claim that they have successfully worked sorcery is a social strategy or a kind of culturally conditioned wishful thinking. And what of the person who thinks he has been attacked by sorcery and, for no apparent medical reason, dies? — such deaths have sometimes been interpreted as a physiologically mediated response to stress (Cannon 1942).

Intellectually, I uphold the axiom of the discipline. A Yolngu would reasonably say this is my belief, for in the social laboratory I

cannot easily prove that sorcery is not used to the desired effect. I did, however, learn to think in the idiom and to predict, much to the xx
satisfaction of my teachers, the likely explanations of a death or serious illness. I also came to be able to appreciate the implications of a bare narrative or obliquely phrased opinion about a death.

Ultimately belief is the heritage of one's cultural tradition. I was brought up with one set of assumptions about the nature of reality, the Yolngu with another. Nevertheless, several years of steeping myself in Yolngu ideas and reflecting on the social and intellectual content of sorcery stories have left their mark. It was instructive to catch myself at low points in fieldwork, when I felt vulnerable, fleetingly entertaining the question, 'What if . . .?', and walking faster when alone on a dark path at night. My short answer to the question, 'Do you believe in sorcery?' is usually [with apologies to Evans-Pritchard], 'Not when I'm in Sydney'.

As fieldwork progressed it became clear that Yolngu beliefs about causality in illness are not illogical superstitions. By no means. Sickness, sorcery and social events are linked in a logical structure which is comparable to that of a Western scientific theory. Seeing Yolngu medical concepts in this way makes it possible to understand how people cope with disruptive changes and accommodate the results of these changes within the traditional explanatory framework.

Commonly sorcery and witchcraft beliefs have been viewed as mechanisms for ensuring social equilibrium and control; what Douglas (1970:xxv) calls a 'homeostatic control system'. Witchcraft and sorcery, it has been argued, function to maintain social order (for instance, Nadel 1952; Epstein 1967) or, when social tensions become insupportable, to facilitate fission (Macfarlane 1970; Marwick 1964, 1965; and Middleton 1960). This, the structural-functional approach, based predominantly on studies of African societies, has greatly enriched our understanding of the social contexts and structural correlates of witchcraft accusations and beliefs, but, as I have suggested elsewhere (Reid 1978), is of limited use in analysing adaptation and change in belief (see also Douglas 1970 and Packard 1980).[1]

For instance, some writers have taken the position that, as societies 'modernise' and people move to large towns, sorcery and witchcraft beliefs will proliferate as symptoms of the ensuing stress and social collapse (see for instance, Hughes and Hunter 1970:478; Swantz in Feierman 1979). Others (such as Frankenberg and Leeson 1976; Hammond-Tooke 1970, and Mitchell 1965) have found an apparent decrease in witchcraft accusations in urban settings. They xxi
suggest that in towns, where relations are impersonal and hostility can be openly expressed, witchcraft beliefs become redundant.

While changes in the nature of social relations do undoubtedly influence belief systems, the structural-functional studies do not adequately explain how. Why do witchcraft beliefs apparently increase in some places and decline in others? Why do some migrants continue to blame their misfortunes on witches or sorcerers and others to prefer ancestors or spirits? Without some understanding of the meaning of social changes for the people involved and of the processes by which they revise or discard traditional beliefs the influence of social change on epistemology cannot be satisfactorily explained. This requires that beliefs are treated as subjects of study in

1. It is also difficult to apply the findings of these studies in the Australian context because they mostly derive from the settled, agricultural societies of Africa where witchcraft, not sorcery (Evans-Pritchard 1937; but see also Turner 1964) is the major idiom of adversity, and accusations generally occur within groups, not between them as in Australia.

their own right and their logic and meaning for believers examined.

The notion that beliefs about witchcraft, sorcery or religion are internally logical and plausible is a position taken and elaborated by Robin Horton (1962, 1964, 1968, 1970) and others (such as the contributors to Wilson 1970, and to Horton and Finnegan 1973; Skorupski 1973; Cooper 1975 and Hallpike 1976). It is a theoretical stance variously called intellectualist, neo-Tylorian or literalist. Though the elements of this position are to be found in the writings of such early scholars as Frazer (1922) and Lévy-Bruhl (1922), intellectualists generally look to the British anthropologist Sir Edward Evans-Pritchard as the founding ancestor of their clan.

In his rich ethnography, *Witchcraft, Oracles and Magic Among the Azande* (1937), Evans-Pritchard analysed the beliefs which the Azande of Africa hold about the causes of misfortune and the ways in which they explain specific troubles. The Azande attribute many (though by no means all) accidents and illnesses to witchcraft. To find out who has caused a given misfortune they consult an oracle. Poison is administered to a chicken and the names of suspects are put. If the chicken dies the diviner and inquirer have their answer and can take the prescribed actions. For Evans-Pritchard witchcraft is a system of knowledge with its own internal coherence and plausibility. When a Zande consults an oracle he is, within the terms of his own understanding, behaving rationally. If a poison oracle appears to contradict itself this in no way disturbs a Zande's faith in its efficacy, for many situational explanations can be invoked for its failure. Evans-Pritchard called these secondary elaborations of belief. Among the Azande, he wrote, there is no incentive to agnosticism. Beliefs about the witchdoctor, witchcraft and the oracle all hang together because,

> In this web of belief every strand depends upon every other strand, and a Zande cannot get out of its meshes because this is the only world he knows. The web is not an external structure in which he is enclosed. It is the texture of his thought and he cannot think that his thought is wrong. (1937:194-5).

Drawing on his own study of the Kalabari people of the Niger Delta and other studies of African thought, Horton (1970) takes the idea of the contextual rationality of African beliefs further and compares them with Western science. Both systems, he says, have an intellectual function and share a large number of characteristics. Both the African villager and the scientist, whatever the idiom which they use, are engaged in a quest for explanatory theory. This quest, for both

> is basically the quest for unity underlying diversity; for simplicity underlying apparent complexity; for order underlying apparent disorder; for regularity underlying apparent anomaly (1970:132).

The key difference between the two is not in their purposes or even the structure of their ideas, but that

> in traditional cultures there is no developed awareness of alternatives to the established body of theoretical tenets; whereas in scientifically oriented cultures, such an awareness is highly developed. It is this difference we refer to when we say that traditional cultures are 'closed' and scientifically oriented cultures 'open' (1970:153).

Others disagree. There is ample evidence in Thomas Kuhn's (1970) study of the structure of scientific revolutions that scientists are not the dispassionate seekers after truth, unencumbered by intellectual prejudices, which they are popularly imagined to be. Their thinking is invariably shaped by the dominant paradigms, and such paradigms are yielded only reluctantly long after contrary evidence has become available. The characterisation of Western science as open and unhampered by presupposition is also disputed by Barnes (1969, 1973), Gellner (1974:149-67); Marwick (1974) and Polanyi (in the chapter of his book entitled 'The Stability of Scientific Theories Against Experience', 1958). Scientific theories, these writers maintain, are protected against falsification in much the same way as Azande beliefs. Authority, trust and commitment play a significant part in the transmission of scientific beliefs, just as they do in the transmission of witchcraft beliefs. Barnes suggests that it is the social context of thinking. and particularly the greater differentiation of roles and institutions within Western society (including the scientific community), rather than how people think, that distinguishes scientists and villagers.

With all of these arguments, though, as persuasive as they may be, there is an apples and pears problem: the comparison of the scientist, a specialist in his community, with the ordinary villager. If one looks at the ordinary person in both societies the similarities in thought become even more striking. Both subscribe to their society's beliefs, not because they understand their rationale, but because they are a cultural inheritance, handed down by the 'accredited agents of tradition'. All people, in short, think in patterns of thought provided for them by the societies in which they live. Marwick (1973) says:

> I have often . . . thought how much more dramatic and, in a way, much more emotionally satisfying Cêwa [who are horticulturalists of West Central Africa] theories of disease causation must be compared with our germ theory, according to which disorders are attributed to invisible organisms, which, for all most of us laymen really know from personal experience or observation, may merely be spots in the eyes of the pathologist or, even worse, unseen believed entities conjured up in the imagination of some physician wielding an antibiotic of wide spectrum, who may not even establish their existence, let alone their identity, before he takes steps to destroy them . . . In many respects, therefore, our attitudes towards these authorities are essentially similar to those of non-literate tribesmen towards their tribal magicians, and we have little to be smug about (1973:67).

On the face of it, the intellectualist view of belief as theory, with its emphases on secondary elaboration, closed thought and internal rationality, is no more amenable to a study of change than the structural-functional approach. If we accept the notion of uncritical loyalty to beliefs, writes the philosopher Ernest Gellner,

> it means that within it there can be no syncretism, no doctrinal pluralism, no deep treason, no dramatic conversion or doctrinal oscillation, no holding of alternative belief-systems up one's sleeve, ready for the opportune moment of betrayal. Frankly, I do not believe this (1974:156).

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The Yolngu, I found, in keeping with Gellner's position, are not the unreflective prisoners of their beliefs which the open/closed dichotomy suggests. Neither, in all likelihood are the Azande. As Evans-Pritchard himself says:

> [Azande] beliefs are not absolutely set but are variable and fluctuating to allow for different situations and to permit empirical observation and even doubts (1937:195).

In this study I have taken a qualified intellectualist position: that Yolngu medical beliefs do indeed have many of the attributes of a theory, but that Yolngu are willing and able to objectify their theory and reflect on it. There is considerable evidence in the literature on traditional societies that people hold a variety of attitudes towards the received truths of their culture – from pious conviction, to scepticism and even outright disbelief (Buxton 1973:327; Feierman 1981; Gluckman 1968; Radin 1927). Variability exists because beliefs are held by individuals and individuals think. And it is precisely this propensity of individuals – some more than others – to reflect upon their situation and to consider old understandings in the light of new events, that holds the key for explaining how beliefs (or rather believers) respond to innovation and change (cf. Ardener 1970; Bauer and Hinnant 1980; Packard 1980).

Belief, like action, is socially situated, socially reproduced and socially revised. The continuing value of beliefs for believers lies in their capacity to give meaning to social and natural phenomena. When social, political and economic relations change and when customary modes of social action no longer produce the desired ends, believers, like scientists, must either live with the anomalies or abandon or revise their models of reality. Thus, change in belief cannot be understood independently of the social transformations which precipitate doubt and dissonance.

This study is an attempt to situate Yolngu ideas about sickness and death in their social context and to explain shifts in these ideas in terms of the explanatory and strategic functions they serve. It also provides a perspective on Yolngu views of the changes in their society as refracted through their medical beliefs and explanations. In the first chapter, I outline the historical circumstances, political conflicts and social upheavals which have shaped life as it is at Yirrkala today. Against this background various aspects of Yolngu medical theory are described: its assumptions, its structure, its content, its role in the management of illness, its use and its modification in the contemporary setting.

Yolngu, it will be seen, are not closed to new conceptions of reality. Indeed they use and modify their ideas to cope with unfamiliar and often threatening changes. At the same time, though, the core of their medical belief system endures, for it is confirmed in

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Yolngu minds by the events which are parading across the contemporary social stage. To query the existence of the central idea of sorcery and all that it represents would be to query the myriad links between human behaviour, social order, ritual practice and spiritual well-being — the complex of relationships on which, in Yolngu eyes, the continuity of their society depends.

Janice Reid, *Sorcerers and healing spirits*, ANU Press, Canberra, 1983, pp. xvii–xxv.

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4.2

THE TRADITIONAL MEDICAL SYSTEM

The Yolngu see a harmony between man and the endless cycle of 165
nature, within which there is no clear distinction between the natural and the supernatural. This notwithstanding, ethnographers and anthropologists appear to have overemphasized the supernatural aspect in the Aboriginal understanding and explanation of well-being, illness and death. Conversely, the recognition of natural
causes for illness and injury probably has been understated. Cer- 166
tainly recent investigations (by N. W.) at Donydji show that there is an acknowledgement of the relationship between physical cause and biological consequence in the area of health and well-being. For instance, diet and weather are both seen to be ultimately related to health. Examples of this naturalistic view of illness include: "wet" sores (*djeli'*), said to be caused by excessive sweating (*wulburr*), especially when sleeping in a hot place without a breeze; sores (*djidji, mapay*), caused by wounds from grass etc. or burns; coughs and lung complaints, attributed to being "slack inside" as a consequence of a diet deficient in meat; diarrhoea (*birlbirlgu*), which, it is said, can be caused by dietary factors such as vegetable food that is "too dry" (*barndany*), cycad bread (*munbuwa*) made from old nuts, and *Dioscorea transversa* (*ganguri*) eaten at the wrong time of the year; and headaches (*rathala*) resulting from "dry" food or excessive exposure to the sun. Ritharrngu say that if you "want to feel good" (*djaalngamadhirri*), you should eat a mixed diet (*miilmarnabarn*), a diet of meat and vegetable food. In fact, these two words often are used interchangeably.

Such observations, together with a quite detailed lexicon of anatomical terms, are inconsistent with the view that Aboriginal medicine focused only on the supernatural, denying the purely natural origins of disease. It cannot be denied, however, that sorcery and supernatural agents form an important, possibly *the* most important, component of the Yolngu view of illness and death. For example, Ritharrngu male informants have attributed the symptoms of yaws and leprosy to sorcery, and corneal opacity (*miilbaruna*) to the breaking of food taboos. Diarrhoea in some cases was treated magically: by prodding the excrement with bark or sharp sticks. Similarly, string made from *Brachychiton paradoxum* (Ritharrngu: *barlgurr*), when placed on a spear wound for instance, makes a man "wake up and walk". (A detailed description of Yolngu beliefs about the non-natural causes of illness, particularly sorcery and spirits, is contained in Reid, 1978b.)

THE USE OF "BUSH MEDICINES" IN THE SOCIAL CONTEXT

The healing role in Yolngu society, and indeed in Aboriginal society as a whole, has been discussed in greatest detail by anthropologists in reference to the "medicine men" or Aboriginal doctors (Gumatj: *marrnggitj*; Ritharrngu: *girlipa*; *garlang*). The powers and abilities of Yolngu doctors have been amply documented (Eastwell, 1973; Reid, 1978a; Thomson, 1961; Warner, 1958; T. Webb, 1936). Research in

167 north-eastern Arnhem Land suggests, however, that the emphasis placed on the healing powers of Aboriginal doctors in the literature may belie the frequency with which they were and are actually consulted.

The spiritual healer does not use herbal treatments in his practice; he is a specialist who operates primarily at the spiritual and social levels. As in other areas of Australia (Cawte, 1974; Elkin, 1977), his ability to cure comes from the possession of spiritual powers or of powerful objects given to him by spirit-beings. Whereas any person may learn to identify, prepare and use "bush medicines", the Aboriginal doctor is a specialist who has exceptional knowledge and powers. As such, he is only called upon to treat serious or chronic illness that does not respond to the usual medications, which any person can administer. No more than one or two people in a community would be recognized as *marrnggitj*. By contrast, every adult and many older children would know of at least a few "bush medicines". The older women especially collected and prepared herbal remedies. This is not to deny that men have, or use, this knowledge. It suggests that the women are as important, if not more so, in providing the link between the Western medical system and the traditional system — at least on the practical side in the distribution and application of medicines.

The significance of "bush medicines" in the treatment of illness in the period before European contact can be appreciated by studying present-day choices for treatment offered to sick people and their families. In contemporary Yirrkala, people have several choices when they fall ill. They may, as often happens, simply bear the pain and discomfort, in the hope that the condition will be self-terminating. However, when it becomes clear that an illness is lingering or is causing sufficient discomfort to warrant treatment, action is taken.

First, the sick person may self-medicate or may be give medicine by a family member, usually a mother or wife. These days "cough medicines", "aspro" and "rubbing medicine" are popular and are available from the community store at Yirrkala or from the pharmacy in the nearby mining-town of Nhulunbuy. Occasionally women will produce from storage old bottles of pills or eye and ear drops and administer these.

If home treatment, or simply waiting for an illness to pass, does not seem to be working, the sick person usually will seek treatment from the staff of the community health centre. At Yirrkala, the centre is staffed by Aboriginal health workers. Each week-day morning, adults and children attend the clinic, seeking treatment for injuries, upper respiratory tract infections, gastro-enteritis, eye and ear infec-
168 tions, skin conditions, headaches, urogenital infections and other common illnesses. If the staff, patient or family consider that the illness is sufficiently serious to warrant further medical examination and treatment, the patient will be taken to Nhulunbuy Hospital or visited by the doctor on his weekly rounds. In rare cases, patients are flown to Darwin or to southern hospitals for treatment not available in the region (such as certain surgical procedures or radiotherapy). If family members consider that the illness is intractable, serious or life-threatening, they may also request the services of the *marrnggitj*. He (or she) is normally consulted during the latter stages of an illness, when it has become clear to the patient and his family that other options have failed and when they begin to suspect an underlying cause, such as sorcery or the actions of spirits.

On outstations, the sequence of events is similar, but the final recourse to the nearest health centre or hospital is taken with greater reluctance, since it involves evacuation by road or air, separation from one's family and the possibility of dying away from one's