

Limits to Medicine

produce money or what money can buy restricts the range of self-chosen "life." Not only production but also consumption stresses the scarcity of time, space, and choice.⁸⁰ Therefore the prestige of medical staples must sap the cultivation of health, which, within a given environment, to a large extent depends on innate and inbred mettle.⁸¹ The more time, toil, and sacrifice spent by a population in producing medicine as a commodity, the larger will be the by-product, namely, the fallacy that society has a supply of health locked away which can be mined and marketed.⁸² The negative function of money is that of an indicator of the devaluation of goods and services that cannot be bought.⁸³ The higher the price tag at which well-being is commandeered, the greater will be the political prestige of an expropriation of personal health.

⁸⁰ Beyond a certain point of intensity, consumption produces a scarcity of time: Staffan B. Linder, *Harried Leisure Class* (New York: Columbia Univ. Press, 1970); acceleration produces a penury of space: Jean Robert, "Essai sur l'accélération des dons," *L'Arc* (Aix-en-Provence), fall 1975; and planning destroys the possibilities for choice: Herbert Marcuse, *Eros and Civilization* (Boston: Beacon Press, 1955).

⁸¹ René Dubos, *Man and His Environment: Biomedical Knowledge and Social Action*, Pan-American Health Organization, Scientific Publication no. 131 (Washington, D.C., March 1966). "The kind of health that men desire most is . . . the condition best suited to reach goals that each individual formulates for himself." See also Heinz von Foerster, *Molecular Ethology: An Immodest Proposal* (New York: Plenum Press, 1970), for a demonstration from theoretical biology that nontrivial "life" can be extinguished by overprogramming.

⁸² Victor Fuchs, "Some Economic Aspects of Mortality in Developed Countries," paper presented at the Conference on the Economy of Health and Medical Care, Tokyo, 1973, mimeographed. Fuchs assumes that "life is primarily produced by nonmarket activities, and that the female tends to specialize in such activities." The attempt to replace rather than to complement these "nonmarket activities" with commodities is literally unhealthy. See Alan Berg, *The Nutrition Factor: Its Role in National Development* (Washington, D.C.: Brookings Institution, 1973), app. C, p. 229, on the sickening effects of the substitution of various formulas for breast milk.

⁸³ The medicalization of the budget is a measure of the professional *disseizin* of health and of the acquiescence of people in their own disendowment by therapeutic caretakers. *Disseizin*: "the wrongful putting out of him from that which is actually seized as a freehold": P. G. Osborn, *Concise Law Dictionary* (London: Sweet & Maxwell, 1964).

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- medicalization of drugs not necessarily due to doctors - stems from viewing body as machine
- today technology has created huge over-consumption of drugs
- drug & drug company complicit in this - huge \$ - but it's a sad

The Medicalization of Life of 1, R/S, IF

The Pharmaceutical Invasion

Doctors are not needed to *medicalize* a society's drugs.⁸⁴ Even without too many hospitals and medical schools a culture can become the prey of a pharmaceutical invasion. Each culture has its poisons, its remedies, its placebos, and its ritual settings for their administration.⁸⁵ Most of these are destined for the healthy rather than for the sick.⁸⁶ Powerful medical drugs easily destroy the historically rooted pattern that fits each culture to its poisons; they usually cause more damage than profit to health, and ultimately establish a new attitude in which the body is perceived as a machine run by mechanical and manipulating switches.⁸⁷

⁸⁴ For a first orientation: Alfred M. Ajami, Jr., *Drugs: An Annotated Bibliography and Guide to the Literature* (Boston: Hall, 1973). Ajami selects and annotates more than 500 references on psychopharmacology for an interdisciplinary course on the U.S. "scene" of the late sixties. U.S. National Clearing House for Mental Health, *Bibliography of Drug Dependence and Abuse 1928-1966* (Chevy Chase, Md., 1969). Indispensable for historical research. Alice L. Brunn, *How to Find Out in Pharmacy: A Guide to Sources of Pharmaceutical Information*. (Oxford: Pergamon Press, 1969). A simple reference guide. R. H. Blum et al., *Society and Drugs*, 2 vols. (Berkeley, Calif.: Jossey-Bass, 1970). A portable library on society and drugs.

⁸⁵ G. E. Vaillant, "The Natural History of Narcotic Drug Addiction," in *Seminars in Psychiatry* 2 (November 1970): 486-98. Drugs depend both for their desirability and their effect on the milieu in which they are taken. The choice of the drug is a function of the culture, but the abuse of the drug is a function of the man. The ritualization of drug-taking creates its subculture: thus the history of drug addiction as that of society must be rewritten every few years. Samuel Proger, ed., *The Medicated Society* (New York: Macmillan, 1968), provides documents showing the kind of drug culture that prevailed in the U.S. long before LSD.

The extent to which addicts are forced into a ghetto of their own depends upon the community that rejects them. For instance, Puerto Ricans in New York do not reject their addicts in the way middle-class Americans do: J. P. Fitzpatrick, "Puerto Rican Addicts and Nonaddicts: A Comparison," unpublished report, Institute for Social Research, Fordham University, 1975.

⁸⁶ Hans Wiswe, *Kulturgeschichte der Kochkunst: Kochbücher und Rezepte aus zwei Jahrtausenden* (Munich: Moos, 1970). Most societies cannot distinguish clearly between their pharmacopeia and their diet. This survey of cookbooks shows that many were written by physicians, with a frequent insistence that the best medicine comes from the kitchen and not from the pharmacy. Most contain "recipes" for the care of the sick.

⁸⁷ For the present information available on drug action, see Louis S. Goodman and Alfred Gilman, *The Pharmacological Basis of Therapeutics*, 4th ed. (New York:

- 1969 - need felt by lay-people for more uses & drugs
- many drugs ineffective, very few are needed
- "drug use" is not inevitable - a result of a desire to produce control over ourselves: "industrialized man"

In the 1940s few of the prescriptions written in Houston or Madrid could have been filled in Mexico, except in the *zona rosa* of Mexico City, where international pharmacies flourish alongside boutiques and hotels. Today Mexican village drugstores offer three times as many items as drugstores in the United States. In Thailand⁸⁸ and Brazil, many items that are elsewhere outdated, or illegal surplus and duds, are dumped into pharmacies by manufacturers who sail under many flags of convenience. In the past decade, while a few rich countries began to control the damage, waste, and exploitation caused by the *licit* drug-pushing of their doctors, physicians in Mexico, Venezuela, and even Paris had more difficulty than ever before in getting information on the side-effects of the drugs they prescribed.⁸⁹ Only ten years ago, when drugs were relatively scarce in Mexico, people were poor, and most sick persons were attended by grandmother or the herbalist, pharmaceuticals came packaged with a descriptive leaflet. Today drugs are more plentiful, more powerful, and more dangerous; they are sold by television and radio; people who have attended school feel ashamed of their lingering

Macmillan, 1970). On prescribing patterns, see Karen Dunnell and Ann Cartwright, *Medicine Takers, Prescribers and Hoarders* (London: Routledge, 1972). Who takes which sort of medicines for what types of conditions and symptoms? How do doctors encourage or discourage this pattern? What kinds of medicines are kept in the home and for how long? Detailed information about England. Also see John P. Morgan and Michael Weintraub, "A Course on the Social Functions of Prescription Drugs: Seminar Syllabus and Bibliography," *Annals of Internal Medicine* 77 (August 1972): 217-22; Paul Stolley and Louis Lasagna, "Prescribing Patterns of Physicians," *Journal of Chronic Diseases* 22 (December 1969): 395-405.

⁸⁸ *Business in Thailand*, special issue on the pharmaceutical industry, August 1974.

⁸⁹ The American physician can easily gain access to this information from such sources as *Medical Letter on Drugs and Therapeutics*, Medical Library Association, 919 N. Michigan Avenue, Chicago, Ill. This is an unbiased source of drug information mailed fortnightly. Nothing comparable is available in French, German, or Spanish. Also see Richard Burack, *The New Handbook of Prescription Drugs: Official Names, Prices, and Sources for Patient and Doctor*, rev. ed. (New York: Pantheon, 1970). (See below, note 99, p. 67, for description of this book.)

trust in the Aztec curer; and the leaflet has been replaced by one standard note which says "on prescription." The fiction which is meant to exorcise the drug by medicalizing it in fact only confounds the buyer. The warning to consult a doctor makes the buyer believe he is incompetent to beware. In most countries of the world, doctors are simply not well enough spread out to prescribe double-edged medicine each time it is indicated, and most of the time they themselves are not prepared, or are too ignorant, to prescribe with due prudence. As a consequence the physician's function, especially in poor countries, has become trivial: he has been turned into a routine prescription machine that is constantly ridiculed, and most people now take the same drugs, just as haphazardly, but without his approval.⁹⁰

Chloramphenicol is a good example of the way reliance on prescription can be useless for the protection of patients and can even promote abuse. During the 1960s this drug was packaged as Chloromycetin by Parke, Davis and brought in about one-third of the company's over-all profits. By then it had been known for several years that people who take this drug stand a certain chance of dying of aplastic anemia, an incurable disease of the blood. Typhoid is almost the only disease that, with serious qualifications, does justify the taking of this substance. Through the late fifties and early sixties, Parke, Davis, notwithstanding strong clinical contraindications, spent large sums to promote their winner. Doctors in the United States prescribed chloramphenicol to almost four million people per year to treat them for acne, sore throat, the common cold, and even such trifles as infected hangnail. Since typhoid is rare in the United States, no more than

⁹⁰ Arturo Aldama, "Establecimiento de un laboratorio farmacéutico nacional," *Higiene: Órgano oficial de la Sociedad Mexicana de Higiene* 11 (January-February 1959). This sounded the alarm.

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one in 400 of those given the drug "needed" the treatment. Unlike thalidomide, which disfigures, chloramphenicol kills: it puts its victims out of sight, and hundreds of them in the United States died undiagnosed.⁹¹

Self-control by the profession on such matters has never worked,⁹² and medical memories have proved particularly short.⁹³ The best one can say is that in Holland or Norway or Denmark, self-regulation has at certain moments been less ineffective than in Germany or France⁹⁴ or Italy,⁹⁵ and

⁹¹ The information on Cloromycetin is taken from U.S. Senate, Select Committee on Small Business, Subcommittee on Monopoly, *Competitive Problems in the Drug Industry*, 90th Congress, 1st and 2nd Sessions, 1967-68, pt. 2, p. 565.

⁹² On the mechanisms that turn self-regulation into license for performance of the maximum publicly tolerated abuse, see Eliot Freidson and Buford Rhea, "Process of Control in a Company of Equals," *Social Problems* 9 (1963): 119-131. They show that, though much abuse goes unobserved, even if observed it is not communicated to colleagues, and even if communicated it is treated by "talking to the offender" and remains uncontrolled. Self-regulation principally protects the profession by eliminating the incompetent butcher and the brazen moral leper. William J. Goode, "The Protection of the Inept," *American Sociological Review* 32 (February 1967): 5-19. Goode describes how self-regulation consists to a large degree in the protection of the inept within the group and the protection of the group's self-interest from the excesses of the inept. Modernization consists in the more efficient utilization of the inept in the self-interest of the group. Eliot Freidson and Buford Rhea, "Knowledge and Judgment in Professional Evaluations," *Administrative Science Quarterly* 10 (June 1965): 107-24.

⁹³ Memory is no guide to which drugs have been prescribed or consumed in the past. A search in the national registry of prescriptions in England and Wales shows that 8 out of 10 women who had borne a defective child after taking thalidomide on prescription denied that they had taken the drug, and that their physicians denied having ordered it. See A. L. Speirs, "Thalidomide and Congenital Abnormalities," *Lancet*, 1962, 1:303.

⁹⁴ Henri Pradal, *Guide des médicaments les plus courants* (Paris: Seuil, 1974). In November 1973 my French publisher, Seuil, brought out a paperback original of this book by a physician with many years' experience as a toxicologist. It is a list of the 100 best-selling pharmaceuticals, including prescription drugs, explaining what each one is, what it is indicated for, how it tends to be used or prescribed, and with what consequences. On publication day 57 drug firms started separate legal actions to have the book withdrawn and sued for reimbursement for probable damages.

⁹⁵ A. del Favero and G. Loiacono, *Farmaci, salute e profitti in Italia* (Milan: Feltrinelli, 1974), describe the dependence and servility of the Italian physician in his relations with the drug industry, and the exploitative integration of the Italian drug firms among transnational companies. Full of documentation and detail.

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that American doctors have a particular facility for admitting past mistakes and jumping on new bandwagons.⁹⁶ In the United States in the fifties, control over drugs by regulatory agencies was at a low ebb and self-control was nominal.⁹⁷ Then, during the sixties, concerned newspapermen,⁹⁸ medical men,⁹⁹ and politicians¹⁰⁰ launched a campaign that exposed the subservience of physicians and government officials to pharmaceutical firms and described some of the prevalent patterns of white-collar crimes in medicine.¹⁰¹ Within two months after the

⁹⁶ James H. Young, *Medical Messiahs: A Social History of Health Quackery in Twentieth-Century America* (Princeton, N.J.: Princeton Univ. Press, 1967). Historical background for the cavalier confidence of U.S. organized medicine based on its protection of the public against free-lance healers and self-medication. For the earlier history see James H. Young, *The Toadstool Millionaires: A Social History of Patent Medicines in America Before Federal Regulation* (Princeton, N.J.: Princeton Univ. Press, 1961).

⁹⁷ Robert S. McCleery, *One Life—One Physician: An Inquiry into the Medical Profession's Performance in Self-Regulation*, A Report to the Center for the Study of Responsive Law (Washington, D.C.: Public Affairs Press, 1971). This report to a study group initiated by Ralph Nader concludes that there is a total lack of internal quality control within the medical profession.

⁹⁸ Morton Mintz, *By Prescription Only: A Report on the Roles of the United States Food and Drug Administration, the American Medical Association, Pharmaceutical Manufacturers, and Others in Connection with the Irrational and Massive Use of Prescription Drugs That May Be Worthless, Injurious, or Even Lethal*, 2nd ed. (Boston: Beacon Press, 1967). Originally published as *The Therapeutic Nightmare* (Boston: Houghton Mifflin, 1965), this masterpiece of investigative journalism by a staff reporter of the *Washington Post* has done more than any other book to change the focus of the U.S. discussion of medicine. For ten years a benevolent minority had worried about the damage done by capitalist medicine to the poor. Now the pill-swallowing majority became aware of what it was doing to them.

⁹⁹ Richard Burack, M.D., *The New Handbook of Prescription Drugs: Official Names, Prices and Sources for Patient and Doctor* (New York: Pantheon, 1970). Published at a time when judicial evidence for the undue bias of regulatory commissions, conspiracy for the dissemination of misleading information on poisonous drugs, and the venality of not a few professors of medicine was still difficult to obtain this book provides information and evaluation of the efficiency, usefulness, side-effects, and application of the 200 most prescribed drugs, comments on their prices in comparison with generic equivalents (for which suppliers are listed with addresses), and adds spicy anecdotes on many of the trademarked nostrums.

¹⁰⁰ James L. Goddard, "The Drug Establishment," *Esquire*, March 1969. A readable and well-researched report.

¹⁰¹ Edwin Sutherland, *White-Collar Crime* (New York: Holt, 1961), uses this term to designate a wide variety of serious offenses involving recognized social

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exposure at a congressional hearing, the use of chloramphenicol in the United States dwindled. Parke, Davis was forced to insert strict warnings of hazards and cautionary statements about the use of this drug into every package. But these warnings did not extend to exports.¹⁰² The drug continued to be used indiscriminately in Mexico, not only in self-medication but on prescription, thereby breeding a drug-resistant strain of typhoid bacilli which is now spreading from Central America to the rest of the world.

One doctor in Latin America who was also a statesman did try to stem the pharmaceutical invasion rather than just enlist physicians to make it look more respectable. During his short tenure as president of Chile, Dr. Salvador Allende¹⁰³ quite successfully mobilized the poor to identify their own health needs and much less successfully compelled the medical profession to serve basic rather than profitable needs. He proposed to ban drugs unless they

harm that either are not prosecuted or are confined to civil courts. The medical variety has epidemic consequences and might be called "white-coat crime."

¹⁰² Herbert Schreier and Lawrence Berger, "On Medical Imperialism: A Letter," *Lancet*, 1974, 1:1161: "Under pressure from the US Food and Drug Administration, Parke-Davis inserted strict warnings of hazards and cautionary statements about indications for the use of the drug in the USA. The warning did not extend to the same drug abroad." Also see John F. Helligers, "Chloramphenicol in Japan: Let It Bleed," *Bulletin of Concerned Asia Scholars* 5 (July 1973): 37-45. The expansion of federal controls over the export of drugs would only partially remedy this form of imperialism. Federal authority, which now does cover the \$6 billion pharmaceutical drug industry, does not yet extend over the \$3 billion medical device industry. It cannot, for example, stop the A. H. Robins company from supplying foreign companies with a model of a contraceptive shield which has been withdrawn from the U.S. market because of its high infection rate; see *Hastings Center Studies* 5, no. 3 (1975): 2.

¹⁰³ On medicine in Chile under Allende consult Howard Waitzkin and Hilary Modell, "Medicine, Socialism, and Totalitarianism: Lesson from Chile," *New England Journal of Medicine* 291 (1974): 171-7; Vicente Navarro, "What Does Chile Mean? An Analysis of Events in the Health Sector Before, During, and After Allende's Administration," *Milbank Memorial Fund Quarterly* 52 (spring 1974): 93-130. This article is based on a paper presented at the International Health Seminar at Harvard University, February 1974. For an eyewitness report, see Ursula Bernauer and Elisabeth Freitag, *Poder popular in Chile am Beispiel Gesundheit: Dokumente aus Elendsvierteln* (Stein/Nuremberg: Laetere/Imba, 1974).

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had been tried on paying clients in North America or Europe for as long as the patent protection would run. He revived a program aimed at reducing the national pharmacopeia to a few dozen items, more or less the same as those carried by the Chinese barefoot doctor in his black wicker box. Notably, within one week after the Chilean military junta took power on September 11, 1973, many of the most outspoken proponents of a Chilean medicine based on community action rather than on drug imports and drug consumption had been murdered.¹⁰⁴

✓ The overconsumption of medical drugs is, of course, not restricted to areas where doctors are scarce or people are poor. In the United States, the volume of the drug business has grown by a factor of 100 during the current century.¹⁰⁵ 20,000 tons of aspirin are consumed per year, almost 225 tablets per person.¹⁰⁶ In England, every tenth night of sleep is induced by a hypnotic drug and 19 percent of women and 9 percent of men take a prescribed tranquilizer during any one year.¹⁰⁷ In the United States, central-nervous-system agents are the fastest-growing sector of the pharmaceutical market, now making up 31 percent of total sales.¹⁰⁸ Dependence on prescribed tranquilizers has

¹⁰⁴ Albert Jonsen et al., "Doctors in Politics: A Lesson from Chile," *New England Journal of Medicine* 291 (1974): 471-2. Describes the particular violence with which physicians were persecuted by the junta.

¹⁰⁵ John M. Firestone, *Trends in Prescription Drug Prices* (Washington, D.C.: Enterprise Institute for Public Policy Research, 1970). Drug expenditures account for only about 10% of health expenditures. The moderate rise in the cost of each prescription during the last years is due mainly to an increase in the size of the average prescription.

¹⁰⁶ Edward M. Brecher and Consumer Reports Editors, *Licit and Illicit Drugs: The Consumers Union Report on Narcotics, Stimulants, Depressants, Inhalants, Hallucinogens and Marijuana—Including Caffeine, Nicotine and Alcohol* (Boston: Little, Brown, 1973).

¹⁰⁷ D. M. Dunlop, "The Use and Abuse of Psychotropic Drugs," in *Proceedings of the Royal Society of Medicine* 63 (1970): 1279. G. L. Klerman, "Social Values and the Consumption of Psychotropic Medicine," in *Proceedings of the First World Congress on Environmental Medicine and Biology* (Haarlem: North-Holland, 1974). For a particularly pernicious form of medically prescribed drug addiction see Dorothy Nelkin, *Methadone Maintenance: A Technological Fix* (New York: Braziller, 1973).

¹⁰⁸ James L. Goddard, "The Medical Business," *Scientific American* 229 (September 1973): 161-6. Contains graphs and charts showing U.S. sales of

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risen by 290 percent since 1962, a period during which the per capita consumption of liquor rose by only 23 percent and the estimated consumption of illegal opiates by about 50 percent.¹⁰⁹ A significant quantity of "uppers" and "downers" is obtained in all countries by circumventing the doctor.¹¹⁰ Medicalized addiction¹¹¹ in 1975 has outgrown all self-chosen or more festive forms of creating well-being.¹¹²

It has become fashionable to blame multinational pharmaceutical firms for the increase in medically pre-

scription and nonprescription drugs by category, 1962-71; breakdown by sales dollar estimated in 1968 for 17 leading pharmaceutical houses; introduction of new drugs, combinations, and dosage forms, 1958-72. Also identifies 8 classes of prescription drugs. Within the category "nervous system drugs" alone, sales aggregate more than \$1 billion per year. This compares with three other categories each aggregating about \$500 million, and the rest, each less than \$350 million. For a breakdown by age, sex, and type of 762 million medicines worth \$2.5 million prescribed to nonhospitalized patients in the course of one year in the U.S., see B. S. H. Harris and J. B. Hallan, "The Number and Cost of Prescribed Medicines: Selected Diseases," *Inquiry* 7 (1970): 38-50.

¹⁰⁹ *Drug Use in America: Problem in Perspective*, Second Report of the National Commission on Marihuana and Drug Abuse, 1972, 1973, 1974, 4 vols. (Washington, D.C.: Government Printing Office; stock no. 5266-0003). National Commission for the Study of Nursing and Nursing Education, *An Abstract for Action* (New York: McGraw-Hill, 1970).

¹¹⁰ Mitchell Balter et al., "Cross-national Study of the Extent of Anti-Anxiety/Sedative Drug Use," *New England Journal of Medicine* 290 (1974): 769-74.

¹¹¹ Michael Balint, *Treatment or Diagnosis: A Study of Repeat Prescriptions in General Practice*, Mind and Medicine Monographs (Philadelphia: Lippincott, 1970). Prescription provides luster and seeming rationality to the belief that progress consists in buying one's way out of everything, including reality itself. Balint points out that in two-thirds of cases in which drugs were repeatedly prescribed without any technical justification, the physician himself took the initiative to offer the drug. Harry Dowling, "How Do Practicing Physicians Use New Drugs?" *Journal of the American Medical Association* 185 (1963): 233-36. Out of fear of "doing nothing" the practitioner is led to prescribe more than is indicated by instructions on the package. On the pattern according to which prescription abuses spread, see Leighton E. Cluff et al., "Studies in the Epidemiology of Adverse Drug Reactions," *Journal of the American Medical Association* 188 (1964): 976-83.

¹¹² Philippe de Félice, *Poisons sacrés: Ivresses divines; Essai sur quelques formes inférieures de la mystique* (Paris: Albin, 1936; reprinted 1970). The traditional, usually religious setting and goal for drug consumption are contrasted with present-day laicized use of mind-altering substances.

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scribed drug abuse; their profits are high and their control over the market is unique. For fifteen years, drug industry profits (as a percentage of sales and company net worth) have outranked those of all other manufacturing industries listed on the Stock Exchange. Drug prices are controlled and manipulated: the same bottle that sells for two dollars in Chicago or Geneva where it is produced, but where it faces competition, sells for twelve dollars in a poor country where it does not.¹¹³ The markup, moreover, is phenomenal: forty dollars' worth of diazepam, once stamped into pills and packaged as Valium, sells for 140 times as much, and for 70 times more than phenobarbital, which, in the opinion of most pharmacologists, has the same indications, effects, and dangers.¹¹⁴ As commodities, prescription drugs behave differently from most other items: they are products that the ultimate consumer rarely selects for himself.¹¹⁵ The producer's sales efforts are directed at the "instrumental consumer," the doctor who prescribes but does not pay for the product. To promote Valium,

¹¹³ Charles Levinson, *Valium zum Beispiel: Die multinationalen Konzerne der pharmazeutischen Industrie* (Hamburg: Rowohlt, 1974). The prices charged in India by Glaxo, Pfizer, Hoechst, CIBA-Geigy, and Hoffmann-LaRoche are on the average 357% higher than those listed in the Western countries where these firms have their home offices.

¹¹⁴ The data are taken from Burack, *New Handbook of Prescription Drugs*.

¹¹⁵ In most countries, most information on drugs for the physician comes from industry-sponsored manuals such as *Physicians' Desk Reference to Pharmaceutical Specialties and Biologicals*, published since 1946 by Medical Economics, Rutherford, N.J. This annual publication, known as *PDR*, is supported by the pharmaceutical industry. The drug descriptions are written by the companies themselves, which pay \$115 per column-inch for the space; see John Pekkanen, *The American Connection: Profiteering and Politicking in the "Ethical" Drug Industry* (Chicago: Follett, 1973), p. 106. The French *Vidal* contains descriptions which suppress the warnings that are obligatory in the leaflet that comes with the drug. In contrast to these, the U.S. has two semiofficial pharmacological compendia, the *Pharmacopeia of the United States of America (USP)* and the *National Formulary (NF)*. The USP has consistently given consideration to therapeutic worth and toxicity. These compendia are not written for the guidance of physicians, but to provide drug manufacturers with technical standards that preparations must meet to be marketed legally in interstate commerce in the U.S.

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Hoffmann-LaRoche spent \$200 million in ten years and commissioned some two hundred doctors a year to produce scientific articles about its properties.¹¹⁶ In 1973, the entire drug industry spent an average of \$4,500 on each practicing physician for advertising and promotion, about the equivalent of the cost of a year in medical school; in the same year, the industry contributed less than 3 percent to the budget of American medical schools.¹¹⁷

Surprisingly, however, the per capita use of medically prescribed drugs around the world seems to have little to do with commercial promotion; it correlates mostly with the number of doctors, even in socialist countries where the education of physicians is not influenced by drug industry publicity and where corporate drug-pushing is limited.¹¹⁸ Over-all drug consumption in industrial societies is not fundamentally affected by the proportion of items sold by prescription, over the counter, or illegally, and it is not affected by whether the purchase is paid for out of pocket, through prepaid insurance, or through welfare funds.¹¹⁹ In all countries, doctors work increasingly

¹¹⁶ For an idea of the number of physicians at the service of a single manufacturer in the decision to promote just one product consult *Librium: Worldwide Bibliography*, published yearly since 1959 by Roche Laboratories. The first four years contain 832 entries. See also *Science* 180 (1973): 1038, for a report of a study conducted by the Federal Drug Administration on the ethics of physicians who conduct field research with new drugs. One-fifth of those investigated had invented the data they sent to the drug companies, and pocketed the fees.

¹¹⁷ Selig Greenberg, *The Quality of Mercy: A Report on the Critical Condition of Hospital and Medical Care in America* (New York: Atheneum, 1971). One year of drug advertising costs more than it would cost to send every doctor in the U.S. to medical school for a year.

¹¹⁸ H. Friebe, "Arzneimittelverbrauchs-Studien," in H. J. Dengler and W. Wirth, eds., *Seminar für Klinische Pharmakologie auf Schloss Reisenberg bei Günzburg/Donau, vom 25.-29. Oktober, 1971*, Überreicht von der Medizinisch-Pharmazeutischen Studiengesellschaft E.V., Frankfurt am Main, pp. 228-40. Short, valuable statement on the lack of useful measurements, which makes such a broad statement the best that can be responsibly offered. The author is a director of the Drug Efficacy and Safety Division of the World Health Organization.

¹¹⁹ World Health Organization, Regional Office for Europe, *Consumption of Drugs: Report on a Symposium, Oslo, November 3-7, 1969*. Limited edition, available

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with two groups of addicts: those for whom they prescribe drugs, and those who suffer from their consequences. The richer the community, the larger the percentage of patients who belong to both.¹²⁰

To blame the drug industry for prescribed-drug addiction is therefore as irrelevant as blaming the Mafia¹²¹ for the use of illicit drugs. The current pattern of overconsumption of drugs—be they effective remedy or anodyne; prescription item or part of everyday diet; free, for sale, or stolen—can be explained only as the result of a belief that so far has developed in every culture where the market for consumer goods has reached a critical volume. This pattern is consistent with the ideology of any society oriented towards open-ended enrichment, regardless whether its industrial product is meant for distribution by the presumption of planners or by the forces of the market. In such a society, people come to believe that in health care, as in all other fields of endeavor, technology can be used to change the human condition according to almost any design. Penicillin and DDT, consequently, are viewed as the hors d'oeuvres preceding an era of free lunches. The sickness resulting from each successive course of miracle foods is dealt with by serving still another course of drugs. Thus overconsumption reflects a socially sanctioned, sentimental hankering for yesterday's progress.

only to persons with official professional standing through the WHO regional office in Copenhagen. This study is the first of its kind. It compares 22 countries, noting significant differences in drug-consumption patterns but enormous difficulties in establishing precise comparisons. Therapeutic categories, cost evaluations, and measurements for pharmacological units differ. From the information it is legitimate to deduce that total consumption of medicine is largely independent of cost or of the kind of practice that is prevalent, i.e., private or socialized. The consumption in a given country of those drugs that require a prescription is positively related to the density of prescribing physicians.

¹²⁰ Alfred M. Freedman, "Drugs and Society: An Ecological Approach," *Comprehensive Psychiatry* 13 (September-October 1972): 411-20.

¹²¹ Alvin Moscow, *Merchants of Heroin* (New York: Dial Press, 1968). This can serve as an introduction to one branch of underworld business.

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✓ ^{11. as (placebo)} The age of new drugs began with aspirin in 1899. Before that time, the doctor himself was without dispute the most important therapeutic agent.¹²² Besides opium, the only substances of wide application which would have passed tests for safety and effectiveness were smallpox vaccine, quinine for malaria, and ipecac for dysentery. After 1899 the flood of new drugs continued to rise for half a century. Few of these turned out to be safer, more effective, and cheaper than well-known and long-tested therapeutic standbys, whose numbers grew at a much slower rate. In 1962, when the United States Food and Drug Administration began to examine the 4,300 prescription drugs that had appeared since World War II, only 2 out of 5 were found effective. Many of the new drugs were dangerous, and among those that met FDA standards, few were demonstrably better than those they were meant to replace.¹²³ Fewer than 98 percent of these chemical substances constitute valuable contributions to the pharmacopeia used in primary care. They include some new kinds of remedies such as antibiotics, but also old remedies which, in the course of the drug age, came to be understood well enough to be used effectively: digitalis, reserpine, and belladonna are examples. ~~Opinions vary~~ about the actual number of useful drugs: some experienced clinicians believe that less than two dozen basic drugs are all that will ever be desirable for 99 percent of

¹²² For the history of the conscious use of the placebo effect, see Arthur K. Shapiro, "A Contribution to a History of the Placebo Effect," *Behavioral Science* 5 (April 1960): 109-35; Gerhard Kienle, *Arzneimittelsicherheit und Gesellschaft: Eine kritische Untersuchung* (Stuttgart: Schattauer, 1974). The ability of the placebo to provoke symptoms of a specific kind, even when given in a double-blind situation, is discussed by Kienle in chap. 7. A mine of international literature on drug safety.

¹²³ See the statements by Henry Simmons, director of the Food and Drug Administration's Bureau of Drugs, in Nicholas Wade, "Drug Regulation: Food and Drug Administration Replies to Charges by Economists and Industry," *Science* 179 (1973): 775-7.

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* the total population; others, that up to four dozen items are optimal for 98 percent. → *

The age of great discoveries in pharmacology lies behind us. According to the present director of FDA, the drug age began to decline in 1956. Genuinely new drugs have appeared in decreasing numbers, and many which temporarily glittered in Germany, England, or France, where standards are less stringent than in the United States, Sweden, and Canada, were soon forgotten or are remembered with embarrassment.¹²⁴ There is not much territory left to explore. Novelties are either "package deals"—fixed-dose combinations—or medical "me-too's"¹²⁵ that are prescribed by physicians because they have been well promoted.¹²⁶ The seventeen-year protection that the patent law gives to significant newcomers has run out for most. Now anyone can make them, so long as he does not use the original brand names, which are indefinitely protected by trademark laws. Considerable research has so far produced no reason to suspect that drugs marketed under their generic names in the United States are less effective than their brand-named counterparts, which cost from 3 to 15 times more.¹²⁷

¹²⁴ *Ibid.*

¹²⁵ Fuchs, *Who Shall Live?*

¹²⁶ William M. Wardell, "British Usage and American Awareness of Some New Therapeutic Drugs," *Clinical Pharmacology and Therapeutics* 14 (November-December 1973): 1022-34. Studies new drugs which became available in England and were widely discussed in the literature to which U.S. doctors subscribe. Wardell finds that the American specialist is not aware of the existence of these drugs unless they are marketed in the U.S. and that he is therefore subject to enlightenment by detail men.

¹²⁷ Medizinisch-Pharmazeutischen Studiengesellschaft E.V., *Bioverfügbarkeit von Arzneistoffen*, Schriftenreihe der Medizinisch-Pharmazeutischen Studiengesellschaft E.V., vol. 6 (Frankfurt: Umschau, 1974). Joint public-relations campaigns conducted by otherwise competing firms deserve special attention. At present, they focus on extolling the superiority of trademarked products over generic equivalents—e.g., of Bayer Aspirin over the generic drug aspirin—on the grounds of "bio-availability," a higher and more controlled biological availability of the drug once it is incorporated into the organism. For any unprejudiced

The fallacy that society is caught forever in the drug age is one of the dogmas with which medical policy-making has been encumbered: it fits industrialized man.¹²⁸ He has learned to try to purchase whatever he fancies. He gets nowhere without transportation or education; his environment has made it impossible for him to walk, to learn, and to feel in control of his body. To take a drug, no matter which and for what reason—is a last chance to assert control over himself, to interfere on his own with his body rather than let others interfere. The pharmaceutical invasion leads him to medication, by himself or by others, that reduces his ability to cope with a body for which he can still care.

(→97)

Diagnostic Imperialism

In a medicalized society the influence of physicians extends not only to the purse and the medicine chest but also to the categories to which people are assigned. Medical bureaucrats subdivide people into those who may drive a car, those who may stay away from work, those

mind, ten years' research has proved that with the one exception of a generic preparation of chloramphenicol (see Burack, *A New Handbook of Prescription Drugs*, p. 85), generic drugs are in no way inferior to those produced under trade names. This conclusion has been incorporated into U.S. federal policy-making. Nevertheless, for the last 5 years the drug companies have sponsored several hundred "research papers" per year on differences in "bio-availability," spending on the author of each paper an average of \$6,000 in honoraria, expenses, and costs of attending professional conferences. Many of these authors are department heads of major universities. The conclusions of most papers show no medically significant difference. But the total impact of this phantom research is the mystification of the prescribing general practitioner, who will often recommend the drug advertised for its high "bio-availability," irrespective of its cost.

¹²⁸ J. P. Dupuy and A. Letourmy, *Déterminants et coûts sociaux de l'innovation en matière de santé*, report by the OCDE, 1974. The authors support this thesis. The refinement of those criteria by which a specialist measures the effectiveness of his specialized intervention, after a certain threshold, will ensure the appearance of generically predictable unwanted side-effects. If, in their turn, the specific diagnosis and treatment of these side-effects were attempted, this further medical intervention would only reinforce iatrogenesis.

who must be locked up, those who may become soldiers, those who may cross borders, cook, or practice prostitution,¹²⁹ those who may not run for the vice-presidency of the United States, those who are dead,¹³⁰ those who are competent to commit a crime, and those who are liable to commit one. On November 5, 1766, the Empress Maria Theresa issued an edict requesting the court physician to certify fitness to undergo torture so as to ensure healthy, i.e. "accurate," testimony; it was one of the first laws to establish mandatory medical certification. Ever since, filling out forms and signing statements has taken up increasingly more medical time.¹³¹ Each kind of certificate provides the holder with a special status based on medical rather than civic opinion.¹³² Used outside the therapeutic process, this medicalized status does two obvious things: (1) it exempts the holder from work, prison, military service, or the marriage bond, and (2) it gives others the right to encroach upon the holder's freedom by putting him into an institution or denying him work. In addition, the proliferation of medical certifications can invest school, employment, and politics with opportunities for new therapeutic functions. In a society in which most people are certified as deviants, the milieu for such deviant

¹²⁹ On the certification of prostitutes, see William W. Sanger, *The History of Prostitution* (New York: American Medical Press, 1858).

¹³⁰ For history of medical death certificates, see U.S. National Office of Vital Statistics, *First Things and Last: The Story of Birth and Death Certificates*, U.S. Public Health Service Publication no. 724 (Washington, D.C., 1960).

¹³¹ Office of Health Economics, *Off Sick*, January 1971, p. 17. It is estimated that between 15 and 30% of all visits to the doctor have no other purpose than obtaining a certificate. In 58% of the cases, the final day of incapacity noted on certificates justifying sick leave is Saturday.

¹³² The encroachment of expertise on the rule against hearsay is of course not limited to medicine. It is a common feature of secularization and of the rise of the professions. Inside and outside the courtroom, it whittles away confidence in what the common man sees and hears, and thus undermines both the judicial and the political process. On the author's view of professional expropriation of language, science, and legal procedures, see Ivan Illich, *Tools for Conviviality* (London: Calder & Boyars, 1973), pp. 85-99.

body as machine
("clockworks" p.160)

* The campaign against pain as a personal matter to be understood and suffered got under way only when body and soul were divorced by Descartes. He constructed an image of the body in terms of geometry, mechanics, or watchmaking, a machine that could be repaired by an engineer. The body became an apparatus owned and managed by the soul, but from an almost infinite distance. The living body experience which the French refer to as "la chair" and the Germans as "der Leib" was reduced to a mechanism that the soul could inspect.⁵¹

For Descartes pain became a signal with which the body reacts in self-defense to protect its mechanical integrity. These reactions to danger are transmitted to the soul, which recognizes them as painful. Pain was reduced to a useful learning device: it now taught the soul how to avoid further damage to the body. Leibnitz sums up this new perspective when he quotes with approval a sentence by Regis, who was in turn a pupil of Descartes: "The great engineer of the universe has made man as perfectly as he could make him, and he could not have invented a better device for his maintenance than to provide him with a sense of pain."⁵² Leibnitz's comment on this sentence is instructive. He says first that in principle it would have been even better if God had used positive rather than negative reinforcement, inspiring pleasure each time a man turned away from the fire that could destroy him. However, he concludes that God could have succeeded with this strategy only by working miracles, and since, as a matter of principle, God avoids miracles, "pain is a necessary and brilliant device to ensure man's functioning." Within two generations of Descartes's attempt at a scientific anthropology, pain has become useful. From being the experience of the precariousness of existence,⁵³

⁵¹ Herbert Plügge, *Der Mensch und sein Leib* (Tübingen: Niemeyer, 1947).

⁵² Gottfried Wilhelm Leibnitz, *Essais de Théodicée sur la bonté de Dieu, la liberté de l'homme et l'origine du mal* (Paris: Garnier-Flammarion, 1969), no. 342.

⁵³ Pain came to be considered mysterious and unmanageable without technical aids. For orientation on the romantic attitude towards pain and the use

it had turned into an indicator of specific breakdown. ✓

By the end of the last century, pain had become a regulator of body functions, subject to the laws of nature; it needed no more metaphysical explanation.⁵⁴ It had ceased to deserve any mystical respect and could be subjected to empirical study in order to do away with it. By 1853, barely a century and a half after pain was recognized as a mere physiological safeguard, a medicine labeled as a "pain-killer" was marketed in La Crosse, Wisconsin.⁵⁵ A new sensibility had developed which was dissatisfied with the world, not because it was dreary or sinful or lacking in enlightenment or threatened by barbarians, but because it was full of suffering and pain.⁵⁶ Progress in civilization became synonymous with the reduction of the sum total of suffering. From then on, politics was taken to be an activity not so much for maximizing happiness as for minimizing pain. The result is a tendency to see pain as essentially a passive happening inflicted on helpless victims because the toolbox of the medical corporation is not being used in their favor.

of narcotics, see Alethea Hayter, *Opium and the Romantic Imagination* (Berkeley: Univ. of California Press, 1969). Also M. H. Abrams, *The Milk of Paradise* (New York: Harper & Row, 1970). Its avoidance became paramount: Robert Mauzi, *L'idée du bonheur dans la littérature et la pensée françaises au 18ème siècle* (Paris: Colin, 1960), especially pp. 300-10 on the appearance of the conviction that pain is the only true evil.

⁵⁴ Charles Richet, "Douleur," in *Dictionnaire de physiologie* (Paris: Félix Alcan, 1902), 5:173-93. In his five-volume standard dictionary of physiology he analyzes pain as a physiological and psychological fact without considering either the possibility of its treatment or its diagnostic significance. Ultimately he comes to the conclusion that pain is supremely useful (*souverainement utile*) because it makes us turn away from danger. Every abuse is immediately followed for our punishment by pain, which is clearly superior in intensity to the pleasure that abuse produced.

⁵⁵ Mitford M. Mathews, ed., *A Dictionary of Americanisms on Historical Principles* (Chicago: Univ. of Chicago Press, 1966): "pain-killer. Any one of various medicines or remedies for abolishing or relieving pain. 1853 La Crosse Democrat 7 June 2/4 Ayer's Cherry Pectoral, Perry Davis' Pain Killer. 1886 Ebbutt Emigrant Life 119. We kept a bottle of Pain-killer in the house . . . for medicinal purposes."

⁵⁶ Kenneth Minogue, *The Liberal Mind* (London: Methuen, 1963).

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In this context it now seems rational to flee pain rather than to face it, even at the cost of giving up intense aliveness. It seems reasonable to eliminate pain, even at the cost of losing independence. It seems enlightened to deny legitimacy to all nontechnical issues that pain raises, even if this means turning patients into pets.⁵⁷ With rising levels of induced insensitivity to pain, the capacity to experience the simple joys and pleasures of life has equally declined. Increasingly stronger stimuli are needed to provide people in an anesthetic society with any sense of being alive. Drugs, violence, and horror turn into increasingly powerful stimuli that can still elicit an experience of self. Widespread anesthesia increases the demand for excitation by noise, speed, violence—no matter how destructive.

This raised threshold of physiologically mediated experience, which is characteristic of a medicalized society, makes it extremely difficult today to recognize in the capacity for suffering a possible symptom of health. The reminder that suffering is a responsible activity is almost unbearable to consumers, for whom pleasure and dependence on industrial outputs coincide. By equating all personal participation in facing unavoidable pain with "masochism," they justify their passive life-style. Yet, while rejecting the acceptance of suffering as a form of masochism, anesthesia consumers tend to seek a sense of reality in ever stronger sensations. They tend to seek meaning for their lives and power over others by enduring undiagnosable pains and unrelievable anxieties: the hectic life of business executives, the self-punishment of the rat-race, and the intense exposure to violence and sadism in films and on television. In such a society the advocacy of a renewed style in the art of suffering that incorporates the

⁵⁷ Victor E. Frankl, *Homo patiens: Versuch einer Pathologie* (Vienna: Deuticke, 1950).

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competent use of new techniques will inevitably be misinterpreted as a sick desire for pain: as obscurantism, romanticism, dolorism, or sadism.

Ultimately, the management of pain might substitute a new kind of horror for suffering: the experience of artificial painlessness. Lifton describes the impact of mass death on survivors by studying people who had been close to ground zero in Hiroshima.⁵⁸ He found that people moving amongst the injured and dying simply ceased to feel; they were in a state of numbness, without emotional response. He believed that after a while this emotional closure merged with a depression which, twenty years after the bomb, still manifested itself in the guilt or shame of having survived without experiencing any pain at the time of the explosion. These people live in an interminable encounter with death which has spared them, and they suffer from a vast breakdown of trust in the larger human matrix that supports each individual human life. They experienced their anesthetized passage through this event as something just as monstrous as the death of those around them, as a pain too dark and too overwhelming to be confronted, or suffered.⁵⁹

What the bomb did in Hiroshima might guide us to an understanding of the cumulative effect on a society in which pain has been medically "expropriated." Pain loses its referential character if it is dulled, and generates a

⁵⁸ Robert J. Lifton, *Death in Life: Survivors of Hiroshima* (New York: Random House, 1969).

⁵⁹ Terrence Des Pres, "Survivors and the Will to Bear Witness," *Social Research* 40 (winter 1973): 668-90, gives a constructive critique of Robert Lifton. According to him, the survivors of concentration camps have the urge to render significant a nameless experience they have known: pain which is utterly senseless. According to Des Pres their message is deeply offensive because since the middle of the 19th century the suffering of others has become charged with moral status. Kierkegaard preached salvation through pain, Nietzsche celebrated the abyss, Marx the downtrodden and oppressed. The survivor excites envy of his suffering, and simultaneously testifies that pain can be valued only by the privileged few.

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✓ meaningless, questionless residual horror. The sufferings for which traditional cultures have evolved endurance sometimes generated unbearable anguish, tortured imprecations, and maddening blasphemies; they were also self-limiting. The new experience that has replaced dignified suffering is artificially prolonged, opaque, depersonalized maintenance. Increasingly, pain-killing turns people into unfeeling spectators of their own decaying selves.

4 The Invention and Elimination of Disease

The French Revolution gave birth to two great myths: one, that physicians could replace the clergy; the other, that with political change society would return to a state of original health.¹ Sickness became a public affair. In the name of progress, it has now ceased to be the concern of those who are ill.² ✓

For several months in 1792, the National Assembly in Paris tried to decide how to replace those physicians who profited from care of the sick with a therapeutic bureaucracy designed to manage an evil that was destined to disappear with the advent of equality, freedom, and fraternity. The new priesthood was to be financed by funds expropriated from the Church. It was to guide the nation in a militant conversion to healthy living which would make medical sick-care less necessary. Each family would again be able to take care of its members, and each village to provide for the sick who were without relatives. A national health service would be in charge of health care and would supervise the enactment of dietary laws and of statutes compelling citizens to use their new freedoms for

¹ In this chapter I quote freely from documents gathered in Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*, trans. A. M. Sheridan Smith (New York: Pantheon, 1973).

² Walter Artelt, *Einführung in die Medizinhistorik: Ihr Wesen, ihre Arbeitsweise und ihre Hilfsmittel* (Stuttgart: Enke, 1949). An excellent introduction to the methodology of medical history and its tools.

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from patient-oriented to milieu-oriented medicine are the loss of the sense of boundaries between distinct categories of deviance, and a new legitimacy for total treatment.⁹⁷ Medical care, industrial safety, health education, and psychic reconditioning are all different names for the human engineering needed to fit populations into engineering systems. As the health-delivery system continually fails to meet the demands made upon it, conditions now classified as illness may soon develop into aspects of criminal deviance and asocial behavior. The behavioral therapy used on convicts in the United States⁹⁸ and the Soviet Union's incarceration of political adversaries in mental hospitals⁹⁹ indicate the direction in which the integration of therapeutic professions might lead: an increased blurring of boundaries between therapies administered with a medical, educational, or ideological rationale.¹⁰⁰

The time has come not only for public assessment of medicine but also for public disenchantment with those monsters generated by the dream of environmental engineering. If contemporary medicine aims at making it unnecessary for people to feel or to heal, eco-medicine promises to meet their alienated desire for a plastic womb.

⁹⁷ For reference see Robert Harris, *Health and Crime Abstracts 1960-1971*, Houston Project for the Early Prevention of Individual Violence (Houston: Univ. of Texas School of Public Health, 1972). William Morrow et al., *Behavior Therapy Bibliography 1951-1969, Annotated and Indexed*, University of Missouri Studies no. 54 (Columbia: Univ. of Missouri Press, 1971).

⁹⁸ David J. Rothman et al., "An Historical Overview: Behavior Modification in Total Institutions," *Hastings Center Report* 5 (February 1975): 17-24. Roy G. Spece, Jr., "Conditioning and Other Technologies Used to 'Treat', 'Rehabilitate?', 'Demolish?' Prisoners and Mental Patients," *Southern California Law Review* 45, no. 2 (1972): 616-84. A survey of the legal status in the U.S. of therapies that aim at the alteration of behavior.

⁹⁹ For a particularly sensitive autobiographical report circulated in the Samizdat and published in the original in *Grani*, no. 79, 1971, see G. M. Shimanoff, "Souvenirs de la Maison Rouge," *Esprit* 9 (September 1972): 320-62.

¹⁰⁰ D. A. Begelman, "The Ethics of Behavioral Control and a New Mythology," *Psychotherapy* 8, no. 2 (1971): 165-9.

8

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^{read} ^{*264} Much suffering has been man-made. The history of man is one long catalogue of enslavement and exploitation, usually told in the epics of conquerors or sung in the elegies of their victims. War is at the heart of this tale, war and the pillage, famine, and pestilence that came in its wake. But it was not until modern times that the unwanted physical, social, and psychological side-effects of so-called peaceful enterprises began to compete with war in destructive power.

Man is the only animal whose evolution has been conditioned by adaptation on more than one front. If he did not succumb to predators and forces of nature, he had to cope with use and abuse by others of his own kind. In his struggle with the elements and with his neighbor, his character and culture were formed, his instincts withered, and his territory was turned into a home (an artificial environment).

Animals adapt through evolution in response to changes in their natural environment. Only in man does challenge become conscious and the response to difficult and threatening situations take the form of rational action and of conscious habit. Man can design his relations to nature and neighbor, and he is able to survive even when his enterprise has partly failed. He is the animal that can endure trials with patience and learn by understanding them. He is the sole being who can and must resign

cf. p. 149
Myth as answer to pain - disease - death
- myth as nature, as intrinsic natural mystery / limit

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himself to limits when he becomes aware of them. A conscious response to painful sensations, to impairment, and to eventual death is part of man's coping ability. The capacity for revolt and for perseverance, for stubborn resistance and for resignation, are integral parts of human life and health.
cf. liberation through suffering

But nature and neighbor are only two of the three frontiers on which man must cope. A third front where doom can threaten has always been recognized. To remain viable, man must also survive the dreams which so far myth has both shaped and controlled. Now society must develop programs to cope with the irrational desires of its most gifted members. To date, myth has fulfilled the function of setting limits to the materialization of greedy, envious, murderous dreams. Myth assured the common man of his safety on this third frontier if he kept within its bounds. Myth guaranteed disaster to those few who tried to outwit the gods. The common man perished from infirmity or from violence; only the rebel against the human condition fell prey to Nemesis, the envy of the gods.

cf. "The Cure of the Sacred" p. 266: myth used refers to natural limit to human life - now

Industrialized Nemesis *replaced by industry - e.g. industry is now an institutionalized force*

Prometheus was hero, not Everyman. Driven by radical greed (*pleonexia*), he trespassed beyond the limits of man (*aitia* and *mesotes*) and in unbounded presumption (*hubris*) stole fire from heaven.¹ He thus inevitably brought Nemesis on himself. He was put into irons and chained to

¹ On the political use of divine envy, see Svend Ranulf, *The Jealousy of the Gods and Criminal Law in Athens*, trans. Annie J. Fausbøll, 2 vols. (Copenhagen: Levin & Munksgaard, 1933-34). On hubris calling forth nemesis, see David Grene, *Greek Political Theory: The Image of Man in Thucydides and Plato* (Chicago: Univ. of Chicago Press, Phoenix Books, 1965; orig. *Man in His Pride*); and E. R. Dodds, *The Greeks and the Irrational* (Berkeley: Univ. of California Press, 1951), especially chap. 2.

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a Caucasian rock. An eagle preyed all day on his liver, and heartlessly healing gods kept him alive by regrafting his liver each night. Nemesis inflicted on him a kind of pain meant for demigods, not for men. His hopeless and unending suffering turned the hero into an immortal reminder of inescapable cosmic retaliation.

The social nature of nemesis has now changed. With the industrialization of desire and the engineering of corresponding ritual responses, hubris has spread. Unbounded material progress has become Everyman's goal. Industrial hubris has destroyed the mythical framework of limits to irrational fantasies, has made technical answers to mad dreams seem rational, and has turned the pursuit of destructive values into a conspiracy between purveyor and client. Nemesis for the masses is now the inescapable backlash of industrial progress. Modern nemesis is the material monster born from the overarching industrial dream. It has spread as far and as wide as universal schooling, mass transportation, industrial wage labor, and the medicalization of health.

Inherited myths have ceased to provide limits for action. If the species is to survive the loss of its traditional myths, it must learn to cope rationally and politically with its envious, greedy, and lazy dreams. Myth alone can do the job no more. Politically established limits to industrial growth will have to take the place of mythological boundaries. Political exploration and recognition of the necessary material conditions for survival, equity, and effectiveness will have to set limits to the industrial mode of production.

cf. 272: Political considerations of health
Nemesis has become structural and endemic. Increasingly, man-made misery is the by-product of enterprises that were supposed to protect ordinary people in their struggle with the inclemency of the environment and against the wanton injustice inflicted on them by the elite.

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The main source of pain, of disability, and of death is now engineered, albeit nonintentional, harassment. Our prevailing ailments, helplessness, and injustice are largely the side-effects of strategies for more and better education, better housing, a better diet, and better health.

A society that values planned teaching above autonomous learning cannot but teach man to keep his engineered place. A society that relies for locomotion on managed transport must do the same. Beyond a certain level, energy used for transportation immobilizes and enslaves the majority of nameless passengers and provides advantages only for the elite. No new fuel, technology, or public controls can keep the rising mobilization and acceleration of society from producing rising harriedness, programmed paralysis, and inequality. The same is true for agriculture. Beyond a certain level of capital investment in the growing and processing of food, malnutrition will become pervasive. The results of the Green Revolution will then rack the livers of consumers more thoroughly than Zeus's eagle. No biological engineering can prevent undernourishment and food poisoning beyond this point. What is happening in the sub-Saharan Sahel is only a dress rehearsal for encroaching world famine. This is but the application of a general law: When more than a certain proportion of value is produced by the industrial mode, subsistence activities are paralyzed, equity declines, and total satisfaction diminishes. It will not be the sporadic famine that formerly came with drought and war, or the occasional food shortage that could be remedied by good will and emergency shipments. The coming hunger is a by-product of the inevitable concentration of industrialized agriculture in rich countries and in the fertile regions of poor countries. Paradoxically, the attempt to counter famine by further increases in industrially efficient agriculture only widens the scope of the

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catastrophe by depressing the use of marginal lands. Famine will increase until the trend towards capital-intensive food production by the poor for the rich has been replaced by a new kind of labor-intensive, regional, rural autonomy. Beyond a certain level of industrial hubris, nemesis must set in, because progress, like the broom of the sorcerer's apprentice, can no longer be turned off.

Defenders of industrial progress are either blind or corrupt if they pretend that they can calculate the price of progress. The torts resulting from nemesis cannot be compensated, calculated, or liquidated. The down-payment for industrial development might seem reasonable, but the compound-interest installments on expanding production now accrue in suffering beyond any measure or price. When members of a society are regularly asked to pay an even higher price for industrially defined necessities—in spite of evidence that they are purchasing more suffering with each unit—*Homo economicus*, driven by the pursuit of marginal benefits, turns into *Homo religiosus*; sacrificing himself to industrial ideology. At this point, social behavior begins to resemble that of the drug addict. Expectations become irrational and nightmarish. The self-inflicted portion of suffering outweighs the damage done by nature and all the torts inflicted by neighbors. Hubris motivates self-destructive mass behavior. Classical nemesis was the punishment for the rash abuse of privilege. Industrial nemesis is the retribution for dutiful participation in the technical pursuit of dreams unchecked by traditional mythology or rational self-restraint.

War and hunger, pestilence and natural catastrophes, torture and madness remain man's companions, but they are now shaped into a new *Gestalt* by the nemesis that overtakes them. The greater the economic progress of any community, the greater the part played by industrial nemesis in pain, impairment, discrimination, and death.

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The more intense the reliance on techniques making for dependence, the higher the rate of waste, degradation, and pathogenesis which must be countered by yet other techniques and the larger the work force active in the removal of garbage, in the management of waste, and in the treatment of people made literally redundant by progress.

2.9 - Reactions to impending disaster still take the form of more better educational curricula, more health-maintenance better services, or more efficient and less polluting energy industry transformers, and solutions are still sought in better technology engineering of industrial systems. The syndrome corresponding to nemesis is recognized, but its etiology is still sought in bad engineering compounded by self-serving management, whether under the control of Wall Street or of The Party. Nemesis is not yet recognized as the materialization of a social answer to a profoundly mistaken ideology, nor is it yet understood as a rampant delusion fostered by the nontechnical, ritual structure of our major industrial institutions. Just as Galileo's contemporaries refused to look through the telescope at Jupiter's moons because they feared that their geocentric worldview would be shaken, so our contemporaries refuse to face nemesis because they feel incapable of putting the autonomous rather than the industrial mode of production at the center of their sociopolitical constructs.

Jillich: nemesis responds to hubris of industry / technology
answer: autonomy

From Inherited Myth to Respectful Procedure

Primitive people have always recognized the power of a symbolic dimension; they have seen themselves as threatened by the tremendous, the awesome, the uncanny. This dimension set boundaries not only to the power of the king

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and the magician, but also to that of the artisan and the technician. Malinowski claims that only industrial society has allowed the use of available tools to their utmost efficiency; in all other societies, recognizing sacred limits to the use of sword and of plow was a necessary foundation for ethics. Now, after several generations of licentious technology, the finiteness of nature intrudes again upon our consciousness. The limits of the universe are subject to operational probings. Yet at this moment of crisis it would be foolish to found the limits of human actions on some substantive ecological ideology which would modernize the mythic sacredness of nature. The engineering of an eco-religion would be a caricature of traditional hubris. Only a widespread agreement on the procedures through which the autonomy of postindustrial man can be equitably guaranteed will lead to the recognition of the necessary limits to human action.

* Common to all ethics is the assumption that the human act is performed within the human condition. Since the various ethical systems assumed, tacitly or explicitly, that this human condition was more or less given, once and for all, the range of human action was narrowly circumscribed.

In our industrialized epoch, however, not only the object but also the very nature of human action is new.² Instead of facing gods we confront the blind forces of nature, and instead of facing the dynamic limits of a universe we have now come to know, we act as if these limits did not translate into critical thresholds for human action. Traditionally the categorical imperative could circumscribe and validate action as being truly human. Directly enjoining limits to one's actions, it demanded

² I have taken this argument, in part, verbatim from Hans Jonas, "Technology and Responsibility: Reflections on the New Task of Ethics," *Social Research* 40 (1972): 31-54.

we now ~~defeat~~ ^{know} ~~human nature~~ - this ~~industry~~ ^{knows} no limit - ^{Limits to Medicine} ^{product of myth - (1955 - "the} ^{awe of the sacred" (29.} ^{human nature} ^(self)

respect for the equal freedom of others. The loss of a normative "human condition" introduces a newness not only into the human act but also into the human attitude towards the framework in which a person acts. If this action is to remain human after the framework has been deprived of its sacred character, it needs a recognized ethical foundation within a new imperative. This imperative can be summed up only as follows: "Act so that the effect of your action is compatible with the permanence of genuine human life." Very concretely applied, this could mean: "Do not raise radiation levels unless you know that this action will not be visited upon your grandchild." Such an imperative obviously cannot be formulated as long as "genuine human life" is considered an infinitely elastic concept.

Is it possible, without restoring the category of the sacred, to attain the ethics that alone would enable mankind to accept the rigorous discipline of this new imperative? If not, rationalizations could be created for any atrocity: "Why should background radiation not be raised? Our grandchildren will get used to it!" In some instances, fear might help preserve minimal sanity, but only when consequences were fairly imminent. Breeder reactors might not be made operational for fear that they would serve the Mafia for next year's extortions or cause cancer before the operator died. But only the awe of the sacred with its unqualified veto, has so far proved independent of the computations of mundane self-interest and the solace of uncertainty about remote consequences. This could be reinvoked as an imperative that genuine human life deserves respect both now and in the future. This recourse to the sacred, however, has been blocked in our present crisis. Recourse to faith provides an escape for those who believe, but it cannot be the foundation for an ethical imperative, because faith is either there or not

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there; if it is absent, the faithful cannot blame the infidel. Recent history has shown that the taboos of traditional cultures are irrelevant in combatting an overextension of industrial production. The taboos were tied to the values of a particular society and its mode of production, and it is precisely those that were irrevocably lost in the process of industrialization.

It is not necessary, probably not feasible, and certainly not desirable to base the limitation of industrial societies on a shared system of substantive beliefs aiming at the common good and enforced by the power of the police. It is possible to find the needed basis for ethical human action without depending on the shared recognition of any ecological dogmatism now in vogue. This alternative to a new ecological religion or ideology is based on an agreement about basic values and on procedural rules.

It can be demonstrated that beyond a certain point in the expansion of industrial production in any major field of value, marginal utilities cease to be equitably distributed and over-all effectiveness begins, simultaneously, to decline. If the industrial mode of production expands beyond a certain stage and continues to impinge on the autonomous mode, increased personal suffering and social dissolution set in. In the interim—between the point of optimal synergy between industrial and autonomous production and the point of maximum tolerable industrial hegemony—political and juridical procedures become necessary to reverse industrial expansion. If these procedures are conducted in a spirit of enlightened self-interest and a desire for survival, and with equitable distribution of social outputs and equitable access to social control, the outcome ought to be a recognition of the carrying capacity of the environment and of the optimal industrial complement to autonomous action needed for the effective pursuit of personal goals. Political procedures oriented to the

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value of survival in distributive and participatory equity are the only possible rational answer to increasing total management in the name of ecology.

The recovery of personal autonomy will thus be the result of political action reinforcing an ethical awakening. People will want to limit transportation because they want to move efficiently, freely, and with equity; they will limit schooling because they want to share equally the opportunity, time, and motivation to learn *in* rather than *about* the world; people will limit medical therapies because they want to conserve their opportunity and power to heal. They will recognize that only the disciplined limitation of power can provide equitably shared satisfaction.

The recovery of autonomous action will depend, not on new specific goals people share, but on their use of legal and political procedures that permit individuals and groups to resolve conflicts arising from their pursuit of different goals. Better mobility will depend, not on some new kind of transportation system, but on conditions that make personal mobility under personal control more valuable. Better learning opportunities will depend, not on more information about the world better distributed, but on the limitation of capital-intensive production for the sake of interesting working conditions. Better health care will depend, not on some new therapeutic standard, but on the level of willingness and competence to engage in self-care. The recovery of this power depends on the recognition of our present delusions.

The Right to Health (*dist. health care*)

Increasing and irreparable damage accompanies present industrial expansion in all sectors. In medicine this damage appears as iatrogenesis. Iatrogenesis is clinical when pain, sickness, and death result from medical care; it

- abuse of power
- Appropriation of health care
- " " of health itself (autonomy, self, death)

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is social when health policies reinforce an industrial organization that generates ill-health; it is cultural and symbolic when medically sponsored behavior and delusions restrict the vital autonomy of people by undermining their competence in growing up, caring for each other, and aging, or when medical intervention cripples personal responses to pain, disability, impairment, anguish, and death.

Most of the remedies now proposed by the social engineers and economists to reduce iatrogenesis include a further increase of medical controls. These so-called remedies generate second-order iatrogenic ills on each of the three critical levels: they render clinical, social, and cultural iatrogenesis self-reinforcing.

The most profound iatrogenic effects of the medical technosystem are a result of those nontechnical functions which support the increasing institutionalization of values. The technical and the nontechnical consequences of institutional medicine coalesce and generate a new kind of suffering: anesthetized, impotent, and solitary survival in a world turned into a hospital ward. Medical nemesis is the experience of people who are largely deprived of any autonomous ability to cope with nature, neighbors, and dreams, and who are technically maintained within environmental, social, and symbolic systems. Medical nemesis cannot be measured, but its experience can be shared. The intensity with which it is experienced will depend on the independence, vitality, and relatedness of each individual.

The perception of nemesis leads to a choice. Either the natural boundaries of human endeavor are estimated, recognized, and translated into politically determined limits, or compulsory survival in a planned and engineered hell is accepted as the alternative to extinction. Until recently the choice between the politics of voluntary

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poverty and the hell of the systems engineer did not fit into the language of scientists or politicians. Our increasing confrontation with medical nemesis now lends new significance to the alternative: either society must choose the same stringent limits on the kind of goods produced within which all its members may find a guarantee for equal freedom, or society must accept unprecedented hierarchical controls³ to provide for each member what welfare bureaucracies diagnose as his or her needs.

In several nations the public is now ready for a review of its health-care system. Although there is a serious danger that the forthcoming debate will reinforce the present frustrating medicalization of life, the debate could still become fruitful if attention were focused on medical nemesis, if the recovery of personal responsibility for health care were made the central issue, and if limitations on professional monopolies were made the major goal of legislation. Instead of limiting the resources of doctors and of the institutions that employ them, such legislation would tax medical technology and professional activity until those means that can be handled by laymen were truly available to anyone wanting access to them. Instead of multiplying the specialists who can grant any one of a variety of sick-roles to people made ill by their work and their life, the new legislation would guarantee the right of people to drop out and to organize for a less destructive way of life in which they have more control of their environment. Instead of restricting access to addictive, dangerous, or useless drugs and procedures, such legislation would shift the full burden of their responsible use onto the sick person and his next of kin. Instead of

³ The Honorable James McRuer, *Ontario Royal Commission Inquiry into Civil Rights* (Toronto: Queen's Printer, 1968, 1969, 1971). On self-governing professions and occupations, see chap. 79. The granting of self-government is a delegation of legislative and judicial functions that can be justified only as a safeguard to public interests.

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submitting the physical and mental integrity of citizens to more and more wardens, such legislation would recognize each man's right to define his own health—subject only to limitations imposed by respect for his neighbor's rights. Instead of strengthening the licensing power of specialized peers and government agencies, new legislation would give the public a voice in the election of healers to tax-supported health jobs. Instead of submitting their performance to professional review organizations, new legislation would have them evaluated by the community they serve.

Health as a Virtue

Health designates a process of adaptation. It is not the result of instinct, but of an autonomous yet culturally shaped reaction to socially created reality. It designates the ability to adapt to changing environments, to growing up and to aging, to healing when damaged, to suffering, and to the peaceful expectation of death. Health embraces the future as well, and therefore includes anguish and the inner resources to live with it.

Health designates a process by which each person is responsible, but only in part responsible to others. To be responsible may mean two things. A man is responsible for what he has done, and responsible to another person or group. Only when he feels subjectively responsible or answerable to another person will the consequences of his failure be not criticism, censure, or punishment but regret, remorse, and true repentance.⁴ The consequent states of grief and distress are marks of recovery and healing, and are phenomenologically something entirely different from guilt feelings. Health is a task, and as such is not

⁴ Alfred Schutz, "Some Equivocations in the Notion of Responsibility," in *Collected Papers*, vol. 2, *Studies in Social Theory* (The Hague: Nijhoff, 1964), pp. 274-6.

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comparable to the physiological balance of beasts. Success in this personal task is in large part the result of the self-awareness, self-discipline, and inner resources by which each person regulates his own daily rhythm and actions, his diet, and his sexual activity. Knowledge encompassing desirable activities, competent performance, the commitment to enhance health in others—these are all learned from the example of peers or elders. These personal activities are shaped and conditioned by the culture in which the individual grows up: patterns of work and leisure, of celebration and sleep, of production and preparation of food and drink, of family relations and politics. Long-tested health patterns that fit a geographic area and a certain technical situation depend to a large extent on long-lasting political autonomy. They depend on the spread of responsibility for healthy habits and for the sociobiological environment. That is, they depend on the dynamic stability of a culture.

The level of public health corresponds to the degree to which the means and responsibility for coping with illness are distributed among the total population. This ability to cope can be enhanced but never replaced by medical intervention or by the hygienic characteristics of the environment. That society which can reduce professional intervention to the minimum will provide the best conditions for health. The greater the potential for autonomous adaptation to self, to others, and to the environment, the less management of adaptation will be needed or tolerated.

A world of optimal and widespread health is obviously a world of minimal and only occasional medical intervention. Healthy people are those who live in healthy homes on a healthy diet in an environment equally fit for birth, growth, work, healing, and dying; they are sustained by a culture that enhances the conscious acceptance of limits to

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population, of aging, of incomplete recovery and ever-imminent death. Healthy people need minimal bureaucratic interference to mate, give birth, share the human condition, and die.

Man's consciously lived fragility, individuality, and relatedness make the experience of pain, of sickness, and of death an integral part of his life. The ability to cope with this trio autonomously is fundamental to his health. As he becomes dependent on the management of his intimacy, he renounces his autonomy and his health must decline. The true miracle of modern medicine is diabolical. It consists in making not only individuals but whole populations survive on inhumanly low levels of personal health.

Medical nemesis is the negative feedback of a social organization that set out to improve and equalize the opportunity for each man to cope in autonomy and ended by destroying it.