GOALS OF MEDICINE

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May 2014

Draft only – not for quotation

Some say that certain acts by physicians, though not immoral in themselves, violate the nature of medicine. That is, an "internal morality of medicine" (§II) is thought to restrict doctors independently of general morality. Such internal ethics is usually grounded on a list of goals believed to define medicine as a profession. Acts not aimed at, or damaging, these goals are forbidden to the ethical physician -- or, at least, violate *prima facie* internal duties that external morality must overrule. In the first category, forbidden acts, many writers put doctors' participation in torture or in executions, even if capital punishment or torture is justified by general morality. Some writers also put contraception, sterilization, cosmetic surgery, and "enhancements" (§VI) in the same category. Others accept them on balance despite seeing a moral conflict with the nature of medicine (§III). This idea of an internal medical morality (IMM), like that of an ethics specific to law, education, and other professions, is not so implausible. Still, there are various reasons for skepticism, and I shall stress two points not yet fully appreciated. One is the ambiguity of the key concepts of 'physician' and 'medicine', and the obscurity of their relations to each other and to 'health'. The second is the indeterminacy of the Western medical tradition.

My main thesis, however, is simple. As a matter of history, whenever one supposes the Western medical tradition began, physicians from the start have done things other than to fight disease and promote health.[1] In §IV, I examine two key examples at length: ancient contraception and Victorian obstetrical anesthesia. These and other examples prove one of two things. Either, contrary to the usual view, medicine has no essential connection to disease or health. In that case, there are no distinctively medical goals, only distinctively medical means. Alternatively, physicians, *qua* physicians, may properly practice something besides medicine. But either way – whether one says that medicine is not limited to health, or that physicians are not limited to medicine – our tradition does not, in fact, limit physicians to promoting health. There never was a classical golden age of purely pathocentric physicians. Consequently, no IMM offers good reason to ban many controversial activities by doctors, including voluntary euthanasia and human enhancement – though such activities, even if acceptable in principle, may be dangerous in practice.

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[1]In this essay, I use 'fighting disease' as an abbreviation for any of three things: (1) preventing pathological conditions, (2) reducing their severity, and (3) mitigating their bad effects (*cf.* §V).

In line with my (1977), 'promoting health' might embrace not only all these, but also creating "positive health," in the sense of unmixed improvements of normal part-function -- one kind of "enhancement." But for clarity, I ignore the concept of positive health below. It is unnecessary to this paper's arguments: *e.g.*, both examples in §IV (contraception and obstetrical anesthesia), and most of the other examples in §I, are outside positive health as well. Still, it is natural to imagine an independent argument, specifically for enhancements, based on positive health. I thank Jean Gayon for alerting me to this connection.

A few conceptual clarifications are wise. First, by 'health', I mean theoretical health as understood by Western scientific medicine for at least the last 150 years: namely, the total absence of disease, or, in better terminology, of all pathological conditions. So my historical claim is that, *e.g.*, Hippocratic contraception did not aim at health in this contemporary sense, regardless of what any corresponding classical Greek noun embraced. Second, I always rely on my own analysis of a pathological condition as a state of statistically species-subnormal biological part-function, relative to sex and age (1977, 1987, 1997). Still, my arguments presumably work on any other "dysfunction-requiring" view, such as Wakefield's "harmful-dysfunction analysis" (1992, 1999a, 1999b). If a medical treatment does not treat biological dysfunction at all, it does not treat harmful biological dysfunction. And my final conclusion, that IMM does not limit how physicians may use their expertise for patients' benefit, is probably reachable even faster on some non-dysfunction-requiring analyses of health, such as Nordenfelt's (1987). So the arguments of this paper are of interest to those who do not share my view of health and disease.[2]

I SOME CONCEPTUAL ANALYSIS

A physician, *The Oxford English Dictionary* tells us, is "a person trained and qualified to practice medicine, *esp.* one who practices medicine as opposed to surgery." Medicine, in turn, is "the science or practice of the diagnosis, treatment, and prevention of disease." These simple, natural definitions face a host of difficulties. On analysis, it turns out to be hard to maintain a conceptual relation even between 'physician' and 'medicine', let alone between either term and 'disease' or 'health'.

1. **Physicians**. Who is a physician? The answer is a little obscure even in the contemporary West, and far more so in historical or cross-cultural context. Nowadays, in advanced countries where medicine is strictly regulated by law, we think of a physician as someone who has earned a certain degree and has officially qualified to practice medicine. At least in lay usage, surgeons are included under the term, though during much of Western medical history they were a separate, rival guild. What degree is legally acceptable varies with jurisdiction. Not only M.D.'s, but also D.O.'s usually qualify, while some US states treat a chiropractic degree on a par. What of podiatry, which has a separate degree "Doctor of Podiatric Medicine," and whose practitioners often work on a medical team? Some would exclude podiatrists on the grounds that their training is less extensive and rigorous than medical school. As regards difficulty of training, however, three degrees comparable to the M.D. are the D.D.S., D.M.D. (Doctor of Medicine in Dentistry), and V.M.D. Are dentists physicians? Most dentistry is clearly health care; is it also medical care, given by a special kind of physician? Perhaps one should deny the label 'physician' to podiatrists and dentists on the ground that, having not studied

[2]One influential analysis of health with which this paper is inconsistent is that of Clouser, Culver, and Gert (1981, 1997); see §III below. I also presuppose, of course, that Veatch is wrong about the infinite elasticity of health, a concept he finds "so vague as to be virtually meaningless" (2001, 629).

the whole range of human disease, they are unqualified to supervise patients' overall health. That does not apply, however, to veterinarians, who supervise the overall health of patients of many species. So, even in Western society, there is at least mild uncertainty about whom to call a physician, and that is so even if we wholly exclude practitioners of "alternative" or "complementary" medicine such as homeopaths, iridologists, acupuncturists, herbalists, chelators, and foot reflexologists.

Either cross-culturally or historically, degrees are hopeless for settling who is a physician. Medical practitioners in India, Singapore, and many other countries lack an M.D., yet are clear local counterparts to Western physicians. Nearly all primitive societies have shamans, who are central to cultural life. Probably most medical-ethics writers exclude magical or religious healers as outside any relevant tradition. But notice, first, that significant parts of the history of post-primitive Western medicine are also usually excluded, beginning with the various rival non-Hippocratic schools, some religiously based, in classical Greece. And until the late medieval period, none of history's revered physicians had anything like an M.D.[3] Nevertheless, viewing the vast panorama of quasi-medical history, writers normally select some practitioners as paradigm physicians, while rejecting others. Hippocrates but not Thessalos may join the canon, Celsus but not Paracelsus, Charcot but not Mesmer, based on our admiration, or otherwise, of their work. And such value-based selection seems inevitable. History is objective. But what part of history counts as "the Western medical tradition" is not, and obviously cannot be if that tradition is to exercise moral authority over contemporary practice.[4]

To illustrate the importance of this value-ladenness thesis, note how forcefully it can be argued that our own medical tradition -- Western *scientific* medicine – actually begins two millennia after Hippocrates, in the mid-19th century. In his superb book *Bad Medicine*, the first scholarly work to tell the truth about medical history, David Wootton finds that "[b]efore 1865 all medicine was bad medicine, that is to say, it did far more harm than good."[5]

> Hippocratic medicine was not a science, but a fantasy of science; and in this it is much more like astrology than it is like Ptolemaic astronomy .... (11) [M]odern medicine is no more a development of ancient medicine than modern astronomy is a development of medieval astrology. (70)

Even after major progress in physiological science, medical treatment was unchanged: it remained essentially Hippocratic until the rise of the germ theory and antiseptic surgery circa

[3]Wooton (2006, 50) says that the first medical degree was awarded in 1268.

[4]As Beauchamp says, "*Medicine* is a vague and inherently contestable concept" (2001, 604).

[5]Wootton (2006), 26. Later, Wootton makes a stronger claim. The appropriate standard of harm, he says, is this: a harmful treatment is one worse than a placebo, such as a sugar pill, or homeopathic or magical healing. Hence, though he allows that many patients did benefit from Hippocratic therapies like bloodletting, he calls nearly all standard treatments harmful because they also weakened the patient and gave only a placebo benefit.

1865. But if "real medicine begins with germ theory" (23), then "the very idea that there is continuity" between ancient and modern medicine "is profoundly misleading" (70).

2. <u>Physicians and medical care</u>. The above points mostly apply equally to 'physician' and 'medicine', but we may now begin to separate these categories. It is surprising how many reasons there are to doubt that either is definable via the other. First, it seems clear that a great deal of actual medical care, perhaps most, is now given by nonphysicians. Even if we exclude the alternative practitioners mentioned in §I.1, it is implausible to deny that many treatments given by nurses and other standard members of a health-care team are medical. Nurses commonly give drugs by mouth, by injection, or by IV, and monitor vital signs; phlebotomists draw blood samples; emergency medical technicians maintain or resuscitate patients on the verge of death. These are jobs that physicians would do themselves if such professionals were unavailable, as they sometimes are. It seems silly to claim that a given treatment is medical if and only if it is actually performed by physicians. Nor can one escape this point by observing that all other members of the team are under physicians' supervision. In some situations this too is untrue. If a nurse or EMT is in a group of hikers on a remote mountain, and an injured hiker needs anything from first aid to an emergency procedure, no physician may ever be involved in the process. Yet it seems natural to describe such treatment as medical care. We should also note that when laboratory diagnosis is needed for treatment, many diagnostic workers play an essential role. Some of these are physicians (*e.g.*, pathologists, radiologists), while others (laboratory workers, ultrasound technicians) are not. And the work of a pathologist, say, is the same whether done by an M.D. or a Ph.D.

Since we habitually think about who is a physician in legal terms, it is worth adding that when health law bars certain conduct by nonphysicians, it is called "unauthorized practice of medicine."[6] Thus, if a man drops out of medical school, hangs out a shingle as Dr. Welby, and begins treating patients in medically normal ways, he is still giving medical care. His offense is not "attempted" or "pretended" practice of medicine, or "practice of pseudo-medicine." Rather, he is practicing medicine without a license. *A fortiori*, if a qualified nurse or physician assistant did the same thing, he or she would surely be giving medical care. At least for philosophical purposes, unlawful medicine is still medicine, if it conforms to prevailing standards.[7] In sum, whether a treatment is medical cannot depend on who administers it.

3. <u>Physicians, medical care, and health</u>. Reacting to points like these, Veatch goes so far as to propose to "use the terms *medicine* and *health* interchangeably."

> Some, including Pellegrino, tend to limit the use of the word *medicine* to the physician's role. I think this is wrong on two counts. First, medicine is an institution that involves both professionals and lay people .... Second, even on the

[6]Furrow *et al.* (1995), 59-67.

[7]Indeed, one of history's most celebrated medical treatments was unlawful: Pasteur's 1885 inoculation with Roux's anti-rabies vaccine of a boy bitten by a rabid dog.

> professional side ..., there are many professional roles including that of nurse, pharmacist, dentist, and social worker, in addition to that of physician. All are, as I use the term, medical professionals. ... In the real world, *medical* and *health* are often used interchangeably. ...[T]he fact that a school of nursing or dentistry can be in a medical center makes clear that at least some uses of the term *medicine* clearly refer to more than the physician. ... [But] nothing I say here hinges on this usage. If the reader prefers he or she can substitute the word *health* so that the internal morality thesis involves analyzing the ends of health rather than the ends of medicine. The issues will be identical.[8] (2001, 640-1)

With some of this, however, I disagree. That patients are the objects of medical care does not, as Veatch suggests (*ibid*.), show that the practice of medicine extends beyond physicians, any more than the need for an audience at a concert makes the listeners musicians.

But the key point of this paper is that, contrary to both Veatch and the *OED*, a great many generally accepted[9] ways in which physicians (and other health-care professionals) treat patients clearly do not aim at those patients' theoretical health, in the sense of freedom from pathological conditions. We just noted obstetrical anesthesia: pain in childbirth is normal for the human female (§IV.2). Two other examples often cited are contraception and cosmetic surgery. Fertility, even if undesired, is normal; indeed, a suppressed menstrual cycle is presumably pathological, and certainly tubal ligation or vasectomy produces a pathological condition. Typical cosmetic surgery removes body features which are normal for the patient's age, at the cost of tiny scars. And there are many more examples rarely noted. Removing a donor's kidney aims to treat the recipient's pathological condition, but none of the donor. On the contrary, again, it produces a pathological condition, and one of considerable gravity. Except for the gravity, the same is true for various other donations of organs, tissues, and of course blood. Finally, one of Brody and Miller's (1998) goals of medicine, reassuring the "worried well," likewise does not aim at protection from pathological conditions. An imaginary disease is not a disease. Rather, once again, the physician is simply using expert medical knowledge to serve the patient's well-being. For convenience, I list these and other examples:

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[8]2001, 640. Actually, Veatch does not consistently view medical care and health care as identical in his essay. On the contrary, he allows several times that justified medical treatment might not aim at "health and healing" (639; *cf*. 633). What is true is that he does not restrict medicine to physicians.

[9]Because I am sticking to fairly uncontroversial examples, I omit nontherapeutic abortion. Still, there is at least one case of abortion that only very conservative ethicists would oppose: abortion of an anencephalic fetus, or any other with no chance at sentience. Pregnancy with an anencephalic fetus does not seem to be a pathological condition of the mother. The pregnancy may be perfectly normal; rather, the defect is in another organism.

Some generally accepted medical treatments not aimed at the patient's health

contraception and sterilization
obstetrical anesthesia
other obstetrical activities during normal childbirth, and "well-baby" care
relief of discomfort from other normal conditions (teething, menstrual cramps)
adjustments to sleep cycle (*e.g.*, to help compensate for air travel)[10]
treating typical dysfunctions of old age[11]
cosmetic surgery
anesthetic drug injection in sports[12]
organ, tissue, blood removal for donation
reassuring the worried well

4. Medicine more broadly, and health promotion. For completeness, we must also mention broader categories, though they have no role in my analysis below. First is wider senses of 'medicine'. Even within the mainstream of patient care, Nordenfelt distinguishes four expanding senses of the term. 'Medicine 1' is medical care; to this 'medicine 2' adds medical disease prevention; 'medicine 3' adds nursing care and rehabilitation; and 'medicine 4' adds psychological care and health education.[13] These are useful distinctions. In a still more comprehensive sense, medicine extends beyond patient care. Physicians may work in epidemiology or public health, promoting health at the population rather than the individual level. Then there is forensic medicine, beginning with the coroner or "medical examiner," and

[10]For the menstrual and sleep-cycle examples, I thank Elselijn Kingma.

[11]According to my analysis of health, a functional level typical of an age group cannot be pathological. *E.g.*, after a certain age presbyopia is normal; yet no one objects to its correction as unmedical. Many similar examples could be found. I thank Kate Rogers for the example and the general point. These examples would vanish, however, on a revised analysis that judges all adults by the standards of young ones. For brief discussion, see my "A second rebuttal on health."

[12]According to Sherry and Wilson (1998), local or intraarticular injections during competition of anti-inflammatory drugs (corticosteroids) or anesthetics (*e.g.*, procaine) are permissible, if reported.

I have not yet found evidence of physicians acting as trainers to help athletes achieve peak performance. But if biomedical knowledge were used in this way, would anyone object? In ancient Greece there were two main kinds of trainer, *paidotribes* and *gymnastes*, neither of whom was a physician (Kyle 1987, 142). But there was a school of "medical gymnastics," and the term *iatroleiptes* may indicate that some practitioners combined medical and athletic roles (Golden 2008, 149 n 83). An early example may be Herodicus, alleged teacher of Hippocrates.

[13](1996), 50. It is interesting to note that Nordenfelt assumes medicine to be "a species of health enhancement."

continuing through physicians' expert testimony in court cases both civil and criminal. Finally, 'medicine' is sometimes used very generically, as in "alternative medicine," "complementary medicine," "primitive medicine," and so on, for practices which many wish to exclude from a genuine tradition of scientific Western medicine to which contemporary physicians belong.[14]

We should also note many activities and institutions promoting health which are not medicine. They include paternalistic legal or institutional restrictions on people's behavior, such as taking drugs (heroin, tobacco) or wearing seatbelts. There is also a vast body of environmental law to assure a healthful environment, pure food and drug laws to guarantee safe products, and so on. Although physicians may take part in such activities – *e.g.*, testifying in support of new legislation, or even administering a government health agency – it is doubtful whether in so doing they are practicing medicine, since nonphysicians who played the same roles would certainly not be.

II INTERNAL MORALITY OF MEDICINE: A SURVEY OF VIEWS

Is there an internal morality of medicine (IMM)? A recent symposium[15] shows near-total disagreement about the existence and scope of one. Recall that such a morality, based on the defining ends of medicine, is meant to decide controversies in medical ethics, especially by showing certain practices by doctors to be wrong because unmedical, as opposed to being wrong by ordinary "external" moral rules. Recent influential sources for this idea are Leon Kass (1975) and John Ladd (1983), with further inspiration from the work of Alasdair MacIntyre (1981) on practices.

The most robust conception of an IMM is the Thomistic essentialism of Edmund Pellegrino (2001; see also Pellegrino and Thomasma 1981, 1988, 1993). Clinical medicine[16] as a human activity has an essential nature determined by a single end, or intrinsic good, that it serves: "healing."

> Medicine exists because being ill and being healed are universal human experiences, not because society has created medicine as a practice. Rather than a social construct, the nature of medicine, its internal goods and virtues, are defined by the ends of medicine itself, and therefore, ontologically internal from the outset. (2001, 563)

The specific "medical good" of health is "the return of physiological function of mind and body"

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[14]Wootton's title, *Bad Medicine*, coupled with his claim that "real medicine" begins with the germ theory, shows an ambiguity of usage reminiscent of a common fallacy in esthetics: confusing the questions "What is art?" and "What is good art?"

[15]*Journal of Medicine and Philosophy* 26(2001). One essay in the symposium (Arras 2001) includes an analytical survey of the full spectrum of views.

[16]Pellegrino's theory applies only to clinical medicine, not to other "branches" such as preventive or social medicine or medical science (2001, 564).

and "the relief of pain and suffering."[17] Medical care that does not aim at this basic good is not truly medical, and so forbidden to the ethical physician. Presumably, then Pellegrino's view condemns contraception, abortion, cosmetic surgery, and physician-assisted suicide, to name only a few current practices. Pellegrino also requires pursuit of the medical good to harmonize with three other, higher aspects of the patient's good: his perception of it, the good for humans, and spiritual good (569-71). These four levels of good are in strict order of moral priority from lowest to highest (575). Analogously, other helping professions – law, education, and ministry – each have a different basic level of "technical good," like health in medicine, but are likewise further bound by the same three higher-level goods.[18] A derived set of professional virtues completes the theory in each case (575).

A different theory of internal medical morality is Miller and Brody's evolutionary view, discussed at length in §III. They reject the idea of a fixed eternal essence of medicine.

> [T]he goals of medicine are not timeless and unchanging; of necessity they evolve along with human history and culture. At least some [such] changes .... represent positive evolutionary changes. Therefore, in debating a question that arises under the IMM, it is insufficient simply to argue that the proposed practice would alter the traditional goals of medicine. (2001, 585)

In general, they say, such changes

> will be one of two types: (1) new goals of medicine or internal duties of physicians may be seen as properly within the scope of medicine; and (2) traditional goals or duties may become subject to new interpretations.

As we shall see later, such evolution, for Miller and Brody, can result either from adaptation of the internal morality to new social facts, or from its dialogue with changing social values. As an example of (1), new goals or duties, obtaining informed consent might come to be viewed as an internal, not external, duty (2001, 587). As examples of (2), reinterpretation, some acceptance of physician-assisted suicide (PAS) might come from reinterpreting the Hippocratic duty not to give a deadly drug (1998, 397), and acceptance of a doctor's role in cost containment in managed care may involve reinterpreting the duty of fidelity (1998, 402-5). Finally, Miller and Brody hold that the IMM creates only *prima facie* duties, which can be outweighed by external morality. We shall see the Miller-Brody view in action on more examples in §III.B.

These two internalist views, essentialist and evolutionary, are sharply criticized by other

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[17]2001, 569. Since Pellegrino believes that 'health' means "making whole again" (568), it seems unclear how pain relief, which is merely blocking a sensation, is a case of it, and similarly for suffering in general.

[18]For the analogy, see 573-5. It is weakened by the fact that "[e]ach profession operates most directly on one or other of the four levels" (573). *E.g.*, ministry "has its moral dimension most specifically at level four" (574) -- not level one, as with medicine.

writers. To Pellegrino, Arras (2001) makes several objections. His theory, Arras thinks, cannot acount for the rise of the duty of informed consent. It also cannot fix the limits of duties like confidentiality (*e.g.*, in psychiatry) or resolve conflicts between internal norms, such as the ban on active killing and the duty to alleviate suffering (651). Beauchamp complains that

> Pellegrino's vision of medicine ... lacks a principled basis to exclude alternative accounts and disregards many benefits that physicians can and do provide that are of great importance to society and patients .... (604)

> If beneficence is a general moral principle (and it is), and if physicians are positioned to supply many forms of benefit (and they are), then there is no manifest reason to tie physicians' hands or duties to the single benefit of *healing*. Patients and society may, with good reason, regard cosmetic surgery, sleep therapies, assistance in reproduction, genetic counseling, hospice care, physician-assisted suicide, abortion, sterilization, and other actual or potential areas of medical practice as important benefits that only physicians can safely and efficiently provide. These activities are not forms of healing .... (603)

Beauchamp's own view is that "[a]ll internal medical morality is community-specific," though its ultimate justification rests on a universal "common morality" (613).

As to Miller and Brody, Arras and Beauchamp argue that their theory is internalist only in a very weak sense. Beauchamp notes that

> the major shifts in moral perspective in the last quarter-century in medicine -- such as new guidelines for informed consent, care of the dying, and ... protections for human subjects of research -- have come primarily from external groups and external standards. (606)

Arras says that Miller and Brody "avoid the traditional pitfalls of internalism by abandoning internalism itself." That is for two reasons:

> (1) Evolutionary internalism has given up any claim to being a comprehensive method of bioethical problem solving, and (2) the substantive content of internalism proper has become virtually impossible to identify. (2001, 658)

The explanation of the latter point is that, on the evolutionary view,

> the precise determination of what's internal and what's not in any moral analysis will be extremely problematical. This is because what at any given time physicians consider to be the proper goals and duties of medical practice will itself *already* be the product of a dialectical interaction of internal and external social forces.[19]

[19]2001, 659. To this I would add my impression that, when fully stated, Miller and

Arras concludes that all the internalist theories he surveys either are of no use in bioethical controversies, or, when they are, are no longer internalist. He proposes a far more modest IMM, partly analogous to Fuller's internal morality of law, which can help give physicians a professional identity, but not resolve moral disputes (660-1).

Finally, Veatch argues that no internal morality of medicine is possible. He lists

> three reasons why morality cannot be derived from reflection on the ends of the practice of medicine: (1) there exist many medical roles and these have different ends or purposes, (2) even within any given medical role, there [exist] multiple, sometimes conflicting ends, and most critically, (3) the ends of any practice such as medicine must come from outside the practice, that is, from the basic ends or purposes of human living. (2001, 621)

As to the first point, even among doctors, Veatch thinks pediatricians' goals differ from those of internists (*e.g.*, the latter but not the former require the patient's informed consent), and the goals of all physicians may differ from those of other health professionals, such as nurses, pharmacists, or medical researchers. As to the second point, Veatch names "four goods of medicine": to prolong life, cure disease, relieve suffering, and prevent disease and promote health (631). These goals can clash, but no reflection on the nature of medicine can resolve the conflict.

Veatch's argument for his third thesis uses a striking hypothetical case: a society in which a key cultural role, of supreme status, is that of priestly *castrati* who are cantors of religious chants. Nothing about the nature and goals of medicine, Veatch thinks, can settle the issue of whether it is moral for this society's surgeons to castrate boys eager for this honor. The issue is whether the society can legitimately create this role in the first place. "The rightness or wrongness of the surgeons' actions depends not on any goals of medicine, but rather on the correctness of the society's broader cultural beliefs and rituals" (634). Veatch maintains that the same is true of any medical procedure: its status depends on general external morality, not any internal one.

Some other writers, of course, would condemn surgical castration on the internal grounds that adult male sexual characteristics are normal, not pathological. Miller and Brody reply that in Veatch's example,

> it is clearly and unambiguously the case that the medical profession is being hijacked, as it were, by an external sociocultural belief system. These castrations serve no medical goal and have nothing whatever to do with health or treatment of disease. (593)

But any such reply must face our examples of justified surgery on normal organs such as *vasa*

Brody's theory is too complex to yield any definite answers in disputed cases. (*Cf.* their 2001, 594-7, and discussion below in §III.B.) For other criticism of Miller and Brody's view, see Wreen (2004).

deferentia, oviducts, and small breasts, not to mention the nonsurgical items on our list. And just for that reason, Miller and Brody do not regard their point as dispositive:

> The IMM creates a prima facie case that physicians should not perform the castrations, but by invoking the external morality, one might conclude that the physicians ought to participate, all things considered. (594)

III GOALS OF MEDICINE: TWO PROPOSED LISTS

Like several writers in §II, I restrict my focus from now on to the core of medicine: medical care of patients. A list of goals intrinsic to and constitutive of such medicine, able to generate an internal morality, should presumably have several features. First, they must be distinctive of medicine, as opposed to other professions and practices and to human activity in general. We do not want goals like "doing the right thing" – though I shall argue in §V that this is, in the end, nearly the best we can do. Second, the goals should be as independent as possible of one another. If it is not possible for physicians to pursue G2 except in pursuing G1, then G2 is not a genuinely separate goal and does not belong on our list. Third, they should be as ultimate as possible given the first two constraints. We do not want to list "maintaining an airway" or "restoring the ability to walk" as goals of medicine, since, however distinctive of medicine, these are obviously subgoals of something more basic. At the same time, we should avoid conflating importantly different activities, such as cure and prevention. Two things that we should not require are these. First, we should not insist on goals that cannot conflict. On the contrary, goal conflict is common in medicine: for example, the best drug to cure one disease often raises the risk of others, causing a conflict between curing disease and preventing disease. Second, I believe that trying to say how to resolve goal conflicts, *e.g.*, by prioritizing some goals over others, is unnecessary for our purposes and has led to confusion in some essays.[20]

Let us examine two influential lists of medical goals and then see if we can improve them. Both lists assume, *contra* Pellegrino, that "medicine is too complex and diverse in its legitimate scope to be encompassed by any single, essential goal, such as healing or promoting health."[21]

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[20]The Hastings Center report mentions a "consensus" that it is "not helpful, nor really possible, to set fixed priorities" among medical goals (Hanson and Callahan 1999, 20). Unfortunately, its own text often uses a distinction between "primary" or "core" goals of medicine and "secondary" ones (11).

In an earlier essay, I too used the terminology of core and peripheral medicine (1977, 382-4), though "therapeutic" and "nontherapeutic" might have been better. I was clear that both were permissible, so the present essay changes no doctrine. But in its light, such statements as "Peripheral medical treatment is medical only in that physicians do it" (383) may need revision.

[21]Miller, Brody, and Chung (2000), 354. Miller and Brody (1995, 11) had already made a similar statement.

1. The Hastings Center Project Report

One important proposal is in the Hastings Center's consensus report (Callahan 1999) on its international project on this topic. After an opening nod to *Dorland's Medical Dictionary's* definition of medicine and list of traditional goals (4-5), the report settles on a list of "four goals of medicine":

1 the prevention of disease and injury and the promotion and maintenance of health

2 the relief of pain and suffering caused by maladies

3 the care and cure of those with a malady, and the care of those who cannot be cured

4 the avoidance of premature death and the pursuit of a peaceful death.

Unfortunately, this list, I will argue, is disorganized, includes a serious moral error, and is set within a framework rife with inconsistencies. Fortunately, for other reasons it turns out not to be interpretable anyway as the basis of an IMM.

The term 'malady' in goals 2 and 3, along with most of a specific definition of it, is borrowed without attribution from Culver, Gert, and Clouser. A malady is "that circumstance in which a person is suffering, or at an increased risk of suffering an evil (untimely death, pain, disability, loss of freedom or opportunity, or loss of pleasure) in the absence of a distinct external cause."[22] Thus the term "is meant to cover a variety of conditions, in addition to disease, that threaten health," including "impairment, injury, and defect" (20). Yet the authors do not, as one might expect, say that health is the absence of malady. Rather, they define health as "the experience of well-being and integrity of mind and body," and say that "it is characterized by an acceptable absence of significant malady" (20). This is unsatisfactory for several reasons. One is that a person can have a false experience of well-being and integrity, despite an undetected disease like coronary atherosclerosis or early cancer. Health, on my view, is neither a good experience nor the lack of a bad one; it is not an experience at all. A second problem is that the writers fail to distinguish between theoretical or perfect health, the complete absence of pathology, and practical health, the absence of "significant" or "unacceptable" pathology (Boorse 1997, 44-51).

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[22] *Op. cit.*, 20. For Culver, Gert, and Clouser's original discussions, see Clouser, Culver, and Gert (1981, 1997) and Culver and Gert (1982). For my criticisms of this definition of malady as a general account of medical abnormality, see (1997, 43-4). One is that, as its authors concede (1986), it makes many normal conditions maladies, such as pregnancy and menstruation.

The Hastings writers make two changes in the Culver-Gert definition. An unimportant one is from "sustaining" cause to "external" cause. The important one is from 'death' to 'untimely death', a change I criticize below. Obviously, for a person's death to be an evil, it need not be untimely.

In any case, in this conceptual framework, presumably "the prevention of disease and injury" is one part of "the promotion and maintenance of health." This suggests that goal 1's description should just be the second phrase. And since maintenance seems to be part of promotion, one might think that term better omitted, as it was on page 19. On the other hand, the authors apparently wish to exclude curing maladies from health "promotion," since cure is part of goal 3. On the whole, then, given that health is to be the acceptable absence of significant malady, it would have been clearer to make goal 1 simply "the prevention of malady."

As for goal 2, a well-known defect in the Culver-Gert definition is that, as they concede, pregnancy, like menstruation and various other normal conditions, is a malady (Gert, Clouser, and Culver 1986). Eliminating all pregnancy is hardly a goal of traditional medicine, and that poses a problem for goal 3 (cure of maladies) and also for 1 if revised to prevention of malady. The obvious fix is to restrict 1 and 3 to unwanted maladies. But the same restriction would make goal 2 (relief of pain and suffering from maladies) unduly restrictive. As I constantly note in this paper, anesthesia in childbirth aims to eliminate normal pain. And, of course, much else that obstetricians do is "care" (also in goal 3) of desired pregnancies. Note that the obstetrical objections remain even if one replaces 'malady' by 'pathological condition', as I do.

Goal 3 unnecessarily combines two very different activities, cure and care. I will not quote all of the authors' description of care (26-7), but its unifying theme seems to be that care is "helping a person cope effectively" with maladies, especially the "nonmedical problems" which they cause. Thus care covers some of rehabilitation, advice on finding "supportive social and welfare services," and help for the chronically ill in "making personal sense" of their new situation. An emphasis on this goal is commendable, though I would not go so far as to call it "healing" (26). But care, so defined, needs to be separated from cure. Also, care seems to overlap with goal 2, especially if "suffering" in goal 2 is "a state of psychological burden or oppression" (21).

Goal 4 is the most objectionable on this list. It seems to consist of two superfluous elements, already covered by earlier goals, plus a shocking, morally indefensible limit on proper medical care. First, on my analysis of health, death is always pathological. Although I count diseases typical of an age group as normal, only living members are in the reference class. Any aspect of a disease that kills you is, obviously, not typical of live human beings of your age. And this approach seems essential to biomedical thinking; otherwise, no one could have any disease after the age by which most human beings are dead, which, in 2010, was about 67. But, if so, then preventing death is just a subgoal of preventing maladies (better, pathological conditions), and "the humane management" (29) of the dying process is just a subgoal of goals 2 or 3.

What is not superfluous in goal 4 is either confused or appalling: the limitation of death prevention to "premature death." What is premature death? The authors define it disjunctively. First, it may

> take place when a person dies before having had an opportunity to experience the main possibilities of a characteristically human life cycle: the chance to pursue and gain knowledge, to enter into close and loving relationships with others, to see one's family or other dependents safely into their own adulthood or independence, to be able to work or otherwise develop one's individual talents and pursue one's life goals, and, most broadly, to have the chance and capacity for

personal flourishing. (28)

Alternatively, "within an individual life cycle a death may be premature if, even at an advanced age, life could be preserved or extended with no great burden on the individual or society" (28). Still,

> The pursuit of increased life expectancy for its own sake does not seem an appropriate medical goal. The average life expectancy in the developed countries allows citizens a full life, even if many of them might like longer lives. This is surely not an unacceptable personal goal, but given the costs and difficulties of achieving significant additional gains through technological innovation, it is doubtful that this is a valid global or national goal, or a goal for medical research more generally. (28-9).

The kindest thing one can say about these passages is that they confuse two questions: what is a legitimate goal of medicine, and how much medical care of a patient other people ought to pay for. The authors seem to assume a system of socialized medicine, whereby society at large buys a limited array of medical resources that physicians must ration out ethically. But socialized medicine is a very recent phenomenon, not yet fully victorious even in America. On any view of our medical tradition, for most of its history, patients paid for their own medical care. Even in nearly all countries today with socialized medicine, patients can still buy medical treatment in a private market. Moreover, the writers sometimes seem to accept this possibility.[23]

Surely everyone has an incontestable right to spend his own money in self-defense against death, either directly or by buying a suitable insurance policy. What use of one's own money could possibly be more a matter of right? So, even if someone has already had what the Hastings authors judge a full life, if he wishes a still longer one "for its own sake" – *i.e.*, he is enjoying life and unwilling to die – it would be absurd to suggest that a doctor whom he pays to keep him alive is practicing improper medicine. Whether such life–prolonging treatment is too great a "burden" is, normally, up to the patient or his surrogates. Of course, insofar as end-of-life treatment decisions fall to a doctor, they face the general limitation on all medical care that it should be in the patient's best interest. But I fail to see how considering whether the patient's life is "full" yet is necessary or relevant in private medicine. Perhaps the authors do not mean the

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[23]They write:

> [E]very civilized society should guarantee all of its citizens a decent basic level of health care, regardless of their ability to pay for it. Beyond that basic minimum ... patients should be free to spend their own money to gain additional benefits. (40)

Yet does not this statement contradict the writers' demand for "an equitable medicine" which is "affordable to all" (51)? Given the patient freedom in the displayed quotation, inequality of wealth guarantees inequality of medical care.

implications I find in their text, but I think they do.[24] At any rate, someone who calls life-saving treatment of a paying patient improper medicine because he has already had a Hastings-approved life, containing all the "opportunity" he needs, deserves the name neither of ethicist nor of physician. Likewise, when medical research is publicly funded, various goals must compete for an allocation of public money. But to deny that extending the human lifespan is an appropriate goal of medical research at all – private or public – is a moral travesty.

Besides their four goals of medicine, the authors also recognize four categories of "potential misuses of medical knowledge" (30), which they also sometimes call "nonmedical uses" (31). Acts in the first category are "unacceptable under any and all circumstances," such as the use of medical skills for torture or capital punishment. The second is uses that "fall outside the traditional goals of medicine" yet are acceptable to serve "social and individual purposes" other than health. Besides cosmetic surgery and contraception, this category includes forensic medicine. Third is "uses of medicine acceptable under some circumstances"; here is where growth-hormone treatment of healthy short children, and all other kinds of "enhancement," fall. Fourth is uses unacceptable except for "the most compelling social reasons." Although the doctrines of this section are unclear, some uses of genetic and other predictive information are in this category, as well as "the coercion of people by medical means," as in forced abortion or forcing people to change unhealthful habits.

Again in this part of the report we see a fairly high level of conceptual confusion, or at least ambivalence. One problem is that the authors sometimes substitute "uses of medicine" for "uses of medical knowledge." But many other phrases, too, suggest indecision about whether the practices in question are part of medicine, or not. The section's title includes "mistaken medical goals" (30), which suggests that the condemned activities are part of medicine, but should not be. Similarly, the introductory paragraph refers to pressure to "move medicine beyond narrowly medical goals" (30), a phrase which, though confusing, suggests an expansion of medicine itself. Now if acceptable new practices, like cosmetic surgery and contraception, are forms of medicine, then their goals are by definition medical. In that case, the Hastings list of goals is too narrow. But if such practices are not forms of medicine at all, why would they need to be "compatible with the primary goals of medicine"? The writers seem torn between two modes of description: (1) medicine is evolving to include some new types of acceptable activities, not aimed at its original health-related goals; or (2) new "acceptable nonmedical uses of medical knowledge" (31) are not part of medicine. On neither interpretation, however, can the writers' list of goals be seen as generating an IMM. On view (1), the goal list is incomplete; on view (2), it does not morally bind physicians.

2. Miller and Brody

Some authors who do explicitly want their list of goals to define an internal morality

[24]For example, their "equitable medicine" will not "continually develop drugs and machines that only the affluent can afford..." (51). Such drugs and machines, of course, are privately funded and so should be acceptable by pages 40 and 28. Regrettably, the Hastings chapter often contradicts itself.

binding on physicians are Miller and Brody (1995, 1998, 2000, 2001). Here is their list:

> The goals of medicine are directed to a variety of ways in which physicians help patients who are confronting disease or injury. These include:
>
> 1 Reassuring the "worried well" who have no disease or injury;
> 2 Diagnosing the disease or injury;
> 3 Helping the patient to understand the disease, its prognosis, and its effects on his or her life;
> 4 Preventing disease or injury if possible;
> 5 Curing the disease or repairing the injury if possible;
> 6 Lessening the pain or disability caused by the disease or injury;
> 7 Helping the patient to live with whatever pain or disability cannot be prevented;
> 8 When all else fails, helping the patient to die with dignity and peace.[25]

These admirably clear, and mutually exclusive, categories seem nicely to separate many conceptually diverse goals. The list is superior to many others in including not only 3 and 7 (which fall into the Hastings project's "care" category), but also cognitive goals: diagnosis and prognosis (2, 3). It is usually forgotten that a major goal of Hippocratic medicine was not therapy, but prognosis -- above all, to answer the question whether and when the patient would die. It is partly by adding other cognitive goals in the treatment of patients that I hope to improve existing goal lists. Still more important, however, is to eliminate Miller and Brody's limitation of medicine to "disease or injury," a phrase which I shall presume amounts more or less to "pathological condition." (Observe that the authors fail to notice that the "worried well" are not, in fact, "confronting disease or injury" at all.)

Miller and Brody add to their list of goals a category of "internal standards of performance" in pursuing those goals, with four examples of such duties.[26] Then, like the Hastings writers, Miller and Brody offer examples of activities that do not fit their IMM. First are "relatively straightforward violations," such as treating family members, having sex with patients, prescribing anabolic steroids for athletes, and executing convicts by lethal injection (1998, 389-90). Steroid prescriptions are wrong not just because they are dangerous, but also because "no true medical goal is served," since mediocre athletic ability is not a disease (389). Miller and Brody do not explain why this objection does not also condemn obstetrical anesthesia and any other relief of normal painful conditions. Somewhat similarly, their additional objection to medical execution – that it is not "the remorseless progress of some disease which has declared that the patient is to die at this time" (390) – applies equally to PAS and voluntary

[25] 1998, 386-7. This list improves their earlier shorter one: "healing, promoting health, and helping patients achieve a peaceful death" (1995, 12).

[26] 1998, 387. In a later essay, they also recognize a set of "clinical virtues" (2001, 582). I shall not discuss either of these aspects of their view.

active euthanasia (VAE).[27]

More important for our purposes are Miller and Brody's examples of "borderline medical activities" (390-92), where they place cosmetic surgery and contraception. They write:

> Besides medical activities which are fully consistent with medicine's internal morality, and those which violate that morality, there may be a third category – activities which are considered morally permissible for physicians, but which occupy a borderline status in relation to internal morality. (1998, 390)

A first question about this category is whether it is coherent. What would a partial "violation" of, or "inconsistency" with, medicine's internal morality be, and how could such an act, if medical (391), still be morally permissible for physicians? The concept of a permissible partial violation of duty makes no sense. No permissible act can violate an actual duty, only a *prima facie* duty. And that is just what Miller and Brody say in 2001. Also changing "borderline" to "peripheral," they say that medical treatments which have no relation to health and disease are *prima facie* violations of the IMM. But they can be legitimized by their acceptance by society (2001, 594). This is, at first sight, a mysterious view. It is hard enough to understand the basic internal-morality idea, that certain acts are not immoral *per se*, but immoral for certain professionals to perform. It is still harder to grasp how society could give valid permission for the otherwise impermissible. One might think the answer is that Miller and Brody's "evolutionary" view, as described in §II, assumes a sort of cultural relativism for socially created roles. But that is not what they say. Instead, their view is that, *e.g.*, religious castration by physicians (as noted in §II) clearly violates the IMM, but may still be justified by external morality.[28]

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[27]Miller and Brody's original IMM essay (1995) has more on the contrast between PAS and medical execution. They object that in medical execution, (i) the doctor is an agent of the state, not of the patient; (ii) execution does not serve any "medical goals"; (iii) lethal injection is not "a medical treatment or procedure"; (iv) it does not "aim at responding effectively to the patient's medical condition"; and (v) it is not intended for the benefit of the patient. Therefore even if capital punishment is justified, doctors must not take part in executions (1995, 15-16).

Yet consider these writers' own scenario (16). An inmate asks his own prison doctor for a lethal injection in lieu of electrocution, and the state agrees. It does not seem that Miller and Brody's reasons can condemn such an action. Contra (ii), as to VAE, Miller and Brody count "peaceful death" as a medical goal sometimes justifying lethal injection (12). Presumably, then, lethal injection can be a "medical procedure," contra (iii). Contra (i) and (v), in the prison story the doctor does seem to act as the prisoner's agent, at his request and for his benefit. That leaves only (iv), which seems circular: why isn't impending painful death a "medical condition," here as elsewhere? In my view, as noted in §V, if a horribly painful death is otherwise inevitable, for a doctor to grant a competent euthanasia request is not just permissible, but obligatory.

[28]Miller and Brody had already stated that the IMM creates only *prima facie* duties in their original essay (1995, 16). But only in 2001 are they clear about how this view of disputable cases differs from a "borderline" view of them. The borderline view is that such cases do not

> The IMM creates a prima facie case that physicians should not perform the castrations, but by invoking the external morality, one might conclude that the physicians ought to participate, all things considered. (594)

On contraception, another example, Miller and Brody say that, like steroids and executions, it "arguably fails to promote any medical goal, since fertility is not a disease" (391). This recognition that fertility is not a health defect is to their credit, as it is to the Hastings authors'. Unlike the Hastings team, however, they think this fact means that a justification of doctors' involvement in contraception and sterilization "is rather hard to provide on a principled basis" (391). Such justification rather comes from three "practical" considerations: (1) the means to contraception, such as drugs and surgery, are similar or identical to other medical treatments; (2) society has given physicians "a virtual monopoly" over these techniques; and (3) reproductive matters are "intensely personal." Given these three points,

> [w]e could envision a hypothetical negotiation between the medical profession and the larger society. Imagine that everyone agreed that contraception and sterilization are social goods, everything being equal. When push comes to shove, there seem to be two ways to provide this good. Either physicians will stretch a point and agree to provide this service despite the potential compromise of their professional integrity.... Or, society will somehow create a new set of professionals or technicians who will learn these skills .... All might readily agree that the first course of action is a much wiser use of all sorts of social resources than the second. (392)

Cosmetic surgery is a similar "borderline practice," but may be "more problematic" for two reasons: it may be "an inappropriate and dangerous increase in the power of the medical profession," and it "seems more driven by market forces than by any true desire to aid suffering humanity" (392).

Confusingly, in a longer essay on cosmetic surgery the previous year, Miller and Brody, joined by Chung (2000), revised their IMM by adding the Hastings report's term 'malady.' We have seen that the original Clouser-Culver-Gert definition of this term counts many conditions as maladies, such as menstruation and pregnancy, that are normal in medical thought. But Miller, Brody, and Chung do not repeat either version of that definition, and in fact deny that pregnancy is a malady (356). The closest they come to a new definition is this: "'Malady' in the medical context suggests an objectively diagnosable condition calling for medical treatment" (358). But, in the first place, 'malady' is not a medical term. In the second place, since the issue is what medical treatments are justified, the only non-circular content of this formula is "objectively diagnosable." The authors argue that, *e.g.*, a large port-wine stain meets this test, but not typical complaints of cosmetic-surgery patients, even those of racial appearance. That is false. Many

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clearly violate IMM. On the *prima-facie* duty view, IMM is clearly violated, but overruled by external morality.

targets of cosmetic surgery, such as jowls, wrinkles, eyebags, and small breasts, are identifiable by objective observers. There is also wide agreement on who looks black, Jewish, etc. For that matter, given before-and-after photos of any surgery patient, anyone can identify which way the patient looks today. In all three cases, an individual patient's preference for the "after" look exactly parallels an individual pregnant woman's preference not to be pregnant. In a remarkable passage, Miller, Brody, and Chung suggest that the latter means she would have been healthier with contraception.

> Although not a disease or a malady, pregnancy is a condition that in our society brings women under medical attention. Unwanted pregnancy can be understood as a disability, which interferes with the ability of women to function normally in social life. This suggests the conclusion that contraception promotes the health of women. (2000, 356)

Suddenly, quite apart from disease, injury, and malady, disability is now a fourth type of "medical condition" (357), and whether pregnancy is a disability depends on whether the woman likes it! The authors seem to make continual ad-hoc adjustments to their health concept to get the results they prefer.[29] Their invented category "malady" is already tendentious and ill-defined. But on a proper definition of health, I argue, Miller and Brody are wrong to think that traditional medical care has ever been restricted to health promotion. Hence, there need be no threat to "professional integrity" when physicians go beyond health-related goals. Let us now try to nail this point down once and for all.

IV SOME LESSONS OF HISTORY

Two key examples -- ancient contraception and Victorian obstetrical anesthesia -- argue that whenever our own medical tradition began, doctors were willing to go beyond promoting health from the start.

[29]The rest of the quoted paragraph raises further questions. The authors say that female contraception differs from vasectomy because "[u]nwanted paternity, unlike unwanted pregnancy, does not qualify as a medical condition to be prevented" (357). What makes pregnancy a "medical condition" is apparently that it "brings women under medical attention" (356). But so, for vasectomy patients, does male fertility. Moreover, the "disability" argument cannot excuse vasectomy, so it seems to be outside even their newly expanded list of the goals of legitimate medicine. Still, the authors consider it "an acceptable peripheral medical practice that does not threaten or violate professional integrity" (357). Yet three pages later, they say: "All peripheral medical procedures and practices challenge professional integrity, since they are at best weakly supported by the goals of medicine ..." (360).

1. Ancient Contraception

As recent scholarship[30] reveals, contraception can "be regarded as a universal phenomenon, to be found at different times and in the most diverse of societies" (Jütte 2008, 4). In particular, ancient physicians, who were often also pharmacists, dispensed many remedies to block or abort pregnancy. One medical historian counts 413 such techniques (Fontanille 1977, 78 *ff.*). After the earliest birth-control recipes in Egyptian medical texts and in the Talmud (Jütte 2008, 29-31), an expanding list of them becomes a staple of Greek and Roman medical literature, with 125 references in the Hippocratic corpus and over 30 references each in Dioscorides, Soranus, Oribasius, and Aetius (Fontanille 1977, 124). Although the empirical difference was often obscure to ancient science, Soranus and others distinguished clearly between abortives (*phthoreion*) and contraceptives (*atokeion*) (Jütte 35). Moreover, although many prescriptions were wholly or partly magical (48-50), recent scientific testing has shown that a long list of ancient remedies – especially plants such as pomegranate, pennyroyal, artemisia, rue, Queen Anne's lace, juniper, aloe, birthwort, and willow – have powerful contraceptive or abortive effects.[31] In fact, Riddle and some other writers believe that folk knowledge of such remedies had dramatic demographic results in various eras.

Admittedly, the ancient world embraces a wide variety of moral views on contraception and abortion. As an illustration of the range, Augustine's first religion, Manicheism, held sexual intercourse permissible only if non-reproductive – the opposite of his doctrine as a Christian (Noonan 1966, ch. 4; Jütte 2008, 25). A rough generalization is that pre-Christian attitudes were very tolerant of contraception, abortion, and even infanticide. Riddle states that before 300 B.C., "the evidence is clear that birth control was acceptable so long as a man's asserted right to have a child sired in wedlock was protected" (1997, 81). A god, Hermes, gives contraceptive advice (pennyroyal) in Aristophanes' play *Peace* (Jütte 39). Both Plato and Aristotle implicitly endorse contraception for population control.[32] Even the Talmud allows some contraceptive use by women, though commentators disagree about what situations qualify (Riddle 1992, 19-20; Jütte 2008, 19-20). On the other hand, a comprehensive moral ban on all forms of birth control emerges by the first century A.D. in some Greek cults (Riddle 2008, 81) and among such leading Stoics as Musonius Rufus, teacher of Epictetus (Jütte 22). By the fourth century, leading

[30]The pioneering work on the history of contraception was Himes (1936). It is much extended and improved by Noonan (1986), Riddle (1992, 1997), and Jütte (2003).

[31]Riddle (1997), 40-63. The efficacy of ancient contraceptives, while fascinating, is irrelevant to my argument. If we are to use historic physicians as moral exemplars, what matters is not so much what they were doing, but what they thought they were doing.

Also of interest is what historic physicians would have done if they had thought that they could. *E.g.*, during much of medical history, physicians might well have done cosmetic surgery if it had been feasible at the time. That is especially plausible for eras, including classical Greece, when ideals of health and beauty were closely linked; on such linkage see Carvallo's essay in this volume.

[32]Plato, *Laws*, 5.740; Aristotle, *Politics* 7.16.15.1335b19-26 (cited by Riddle 1997, 14).

Christian authorities, such as St. John Chrysostom and Augustine, are fiercely opposed to both contraception and abortion.[33]

No doubt these moral disagreements within society at large were reflected within ancient medicine. Noonan's conclusion seems judicious:

> Some physicians may have taken an ethical stand against any use of contraceptives, others probably following the ideal of not prescribing contraceptives in aid of criminal or frivolous purposes. ... Other doctors must have known no restraints. (1966, 19)

But two points are crucial for my argument. First, because contraception on demand was far from universally condemned, we can erase it from our Western medical tradition only by expelling all ancient physicians who prescribed it. If this is not to be a circular use of history to decide medical ethics, other grounds must exist for such expulsion. Second, even if there are good reasons to view Hippocratic medicine alone as canonical, as is usual, it does not seem to have placed any moral limits on contraception at all.

We have seen that Hippocratic doctors knew and dispensed many anti-fertility drugs. For our purposes, the key question is: did they dispense them only to prevent some form of pathology, such as the effects of especially dangerous pregnancies? The two passages in the Hippocratic corpus most often quoted state no such limitation:

> If a woman does not want to become pregnant, give to her in a drink of water moistened [or diluted] copper ore [*misy*] in the amount of a *vicia* bean, and she will not become pregnant for a year.[34]

The word "want" suggests that the decision was up to the woman, with no moral proviso binding the Hippocratic physician. And, according to historians I have asked, no such proviso appears anywhere in the Hippocratic corpus. On the contrary: a number of passages deal with contraception for *hetairai*, a group of high-class female courtesans whose work would be blocked by pregnancy. As for what is normally called the "Hippocratic Oath," it bans one method of abortion – by pessary -- but says nothing about contraception. Anyway, two modern scholars conclude that this oath was not written by Hippocrates, but rather by a fringe group, and does not reflect the norms of Hippocratic medicine.[35] In sum, there seems to be no evidence of any pathology-prevention limit on either contraception or abortion in classical Greek medicine.

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[33]Jütte 24-5. Riddle finds these Christian views "not much different from prevailing Judaic, Hellenic, and Roman values (1997, 82), which would mean that by then a big change had occurred in the attitudes of the ancient world at large.

[34]*On the Nature of Women*, ch. 98. I quote from Riddle (1992), 74. An almost identical passage, with the heading "Contraceptive" [*atokion*], appears in *Diseases of Women* (I, ch. 76).

[35]Riddle (1997), 38-39, endorses this conclusion of Edelstein's famous essay (1967, xxx-xxx) and of Lichtenthaeler (1984).

Much later statements to the contrary are by writers, such as Scribonius Largus and Soranus, who are mistaken both about the text of the oath and about its authority.[36] Thus, we must side with Riddle above: contraception by doctors for no health-related purpose was routine at what is usually seen as the dawn of Western medicine.

2. Victorian obstetrical anesthesia

On the other hand, just before the time that Wootton considers the dawn of Western scientific medicine, anesthesia for labor in a normal pregnancy achieved rapid, near-total acceptance.

During childbirth, a typical human mother suffers intense, repeated labor pains. The cause seems to be the unusually large comparative size of the human fetus, especially of its cranium and torso. In sharp contrast with nearly all other mammals, an average human fetal

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[36]In the first century A.D. , four centuries after Hippocrates, Scribonius Largus views the oath as prohibiting all abortion, and possibly contraception too. He says that Hippocratic medicine had the goal of "healing, not doing harm," and therefore that it protected even potential persons (Riddle 1992, 8). A bit later, Soranus reports two schools of moral thought about abortion and contraception, endorsing the more liberal one.

> For one party banishes abortives, citing the testimony of Hippocrates who says: "I will give to no one an abortive," moreover, because it is the specific task of medicine to guard and preserve what has been engendered by nature. The other party prescribes abortives, but with discrimination, that is, they do not prescribe them when a person wishes to destroy the embryo because of adultery or out of consideration for youthful beauty; but only to prevent subsequent danger in parturition if the uterus is small and not capable of accommodating the complete development, or if the uterus at its orifice has knobby swellings and fissures, or if some similar difficulty is involved. And they say the same about contraceptives as well, and we too agree with them. [*Gynaeciorum libri* IV, ch. 60] (Jütte 2008, 35)

Three points can be made about these passages. First, contraception is not "harm," nor does it destroy anything already "engendered by nature." So these writers mention no objection of principle to medical contraception except that it is not "healing." Second, both writers are working from a corrupted text, since it now seems clear that the original oath bans only abortion by pessary (Riddle 1992, 7-8; 1995, 38). Third, since the Hippocratic corpus contains books like *Diseases of Women* with many recipes for abortive pessaries (Riddle 1992, 76-7), either the oath or these books are inauthentic. Again, the most likely conclusion is Edelstein's and Lichtenthaeler's: the oath is unrepresentative of Hippocratic medicine.

Note too that once we reject the authority of the oath, physician-assisted suicide becomes a second example, besides contraception, of an accepted ancient treatment by physicians not aimed at health. I thank John Riddle for this point.

head is in one dimension 110% the size of the maternal pelvic inlet. Consequently, a typical fetus must first rotate before passing through, and it must rotate again to accommodate the shoulders – two of the "cardinal mechanisms" of human labor.[37] As a result, human birth requires very strong uterine contractions, as well as wide distention of the cervix, vagina, and other areas. All of this can cause severe pain, especially in a woman's first pregnancy -- pain largely unrelieved by childbirth training.[38] Even proponents of "natural childbirth," such as Dick-Read (1959), view labor pain as normal, and its cross-cultural universality is not in anthropological dispute.[39] In sum, painful childbirth seems to be inherent in the human design, either as a design defect or, as some have suggested, as serving some physiological, psychological, or social function.[40]

As to anesthesia, after the 1846 Boston discovery of the effects of ether, its use in surgery as a general anesthetic spread like wildfire in America, Great Britain, and Europe[41] -- though

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[37]O'Brien and Cefalo describe these mechanisms as

> changes in position of the fetal head during passage through the birth canal. Because of the asymmetry of the shape of both the fetal head and the maternal bony pelvis, such rotations are required for the average size fetus to accomplish passage through the birth canal.

The classical stages are (1) engagement, (2) descent, (3) flexion, (4) internal rotation, (5) extension, (6) external rotation, and (7) expulsion (1996, 372-3).

[38]For some data on intensity of pain and its relation to training, see Melzack *et al.* (1981), 357. A scholarly review of labor pain is Lowe (2002).

[39]I thank Karen Rosenberg for anthropological information, as well as for the 110% figure. For a lively evolutionary and comparative discussion of human childbirth, see Rosenberg and Trevathan (2001, 2002).

[40]Rosenberg and Trevathan (2001, 2002) note a beneficial effect of pain in discouraging women from the anatomically difficult task of giving birth alone, though they do not claim it evolved for this purpose. Psychoanalytic writers have seen labor pain as aiding the mother's emotional bonding with her baby. During the Victorian controversies, W. Tyler Smith, a prominent obstetrician, claimed a number of physiological benefits of pain in assisting labor -- though he conceded that anesthetized women could give birth, or even be "ecstatic" (1847, 595).

[41]A very detailed account of the history of anesthesia is Duncum (1947). Poovey's chapter (1988, 24-50) also has a wealth of historical information, though thickly encrusted with feminist and postmodernist claptrap. One might expect a feminist writer to give some credit to pioneers in relieving women of agonizing pain. But since men always act from the worst motives, Poovey is unsparing in her criticism. Readers should be warned that many of her page references to *The Lancet* are wrong.

I must also query an earlier statement of my own, referring to "a Victorian editor of Lancet who opposed obstetrical anesthesia because pain in childbirth is normal" (1977, 383). I

even surgical anesthesia had its critics, who discerned many benefits in pain.[42] Only months after the first surgical uses of ether, James Young Simpson, a Scottish obstetrics professor, began giving it routinely during childbirth (Duncum 1947, 176). Within a year, however, he had verified the effects of chloroform and switched to that drug in his practice. Decades of practical debate ensued over these two agents' relative merits and the proper methods of their administration, partly because of the mounting toll of chloroform deaths. Our concern, however, is only with one of the several purely moral objections to obstetrical anesthesia in general. And it is amusing how quickly these were overcome, partly by a royal example.

> By the middle of the year 1848 the practice of administering an anaesthetic during labour was well established. In 1850, discreet enquiries on behalf of Queen Victoria herself about chloroform anesthesia were made of John Snow, before the birth of Prince Arthur. Three years later, in April 1853, the seal of perfect propriety was set upon it when Snow was summoned to give chloroform to Her Majesty during the birth of Prince Leopold.[43]

No one defended obstetrical anesthesia more vigorously than Simpson himself. In one chapter of his 1849 book, he lists and rebuts two major objections to it besides its alleged risks. One was the "religious objection": that God himself, in *Genesis*, cursed women with labor pain as punishment for Eve's sin. Simpson's demolition of this argument is a joy to behold, but irrelevant to our topic.[44] Highly relevant is what Simpson describes as the main moral

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no longer recall my source for this statement, so I am uncertain whether any such critic was a *Lancet* editor.

[42] Some quotations collected by Simpson (1849, 38) on the benefits of pain are these: [insert quotes].

[43]Duncum 1947, 177-78. Victoria also took chloroform for her last baby, Princess Beatrice, in 1857 (21).

[44]In brief, Simpson argues that (1) in Eve's curse ("In sorrow thou shalt bring forth children"), the Hebrew word *etzebh*, translated in Victorian Bibles as "sorrow," actually means work or effort throughout the Old Testament, which uses other words for pain (*hhil*, *hhebel*); (2) anesthesia blocks only the pain of labor, not the muscular effort; (3) in the same passage Adam too is cursed, with arduous farming and eating, yet no one makes religious objections to farm implements, draft animals, and cooking; (4) Jesus died for our sins, including original sin; and (5) God himself was the first anesthetist, when he put Adam to sleep to extract a rib to make Eve. Simpson also recalls religious objections to such previous medical discoveries as vaccination.

The fourth objection in his 1849 list, which seems to come from only one writer, was that it is always wrong to destroy consciousness. Simpson replies that no one considers it immoral deliberately to go back to sleep.

W. Tyler Smith and others vocally made one more criticism to which Simpson later replied: that anesthesia during birth evokes signs of sexual arousal in women, like those seen in animals (Poovey 1988, 30-33, 38*ff*). Smith suggested that labor pain has the natural benefit of

objection:

> The principal moral "objection," as it has been termed, against the employment of anaesthesia in midwifery, amounts to the often-repeated allegation, that it is "unnatural." "Parturition," it is avowed, is a "natural function," the pain attendant upon it is a "physiological pain" (Dr. Meigs), and it is argued that it is impossible "to intermeddle with a natural function;" and to use anaesthetics is a piece of "unnecessary interference with the providentially arranged process of healthy labour" (Dr. Ashwell). The above is, perhaps, the most general and approved of all the objections entertained and urged at this moment against the practice of anaesthesia in midwifery. But it certainly is a very untenable objection; for, if it were urged against any of our similar interferences with the other physiological functions of the body (every one of which is as "providentially arranged" as the function of parturition), then the present state of society would require to be altogether changed and revolutionized. For the fact is, that almost all the habits and practices of civilized life are as "unnatural," and as direct interferences with our various "providentially arranged" functions, as the exhibition of anaesthetics during labour. (182-3)

As examples, Simpson cites walking with shoes, riding on horseback or in carriages, and cooking food.

Simpson here replies to an unnaturalness objection which, for some of his critics, is not based purely in medical ethics nor free of religious ideas, just as one would expect a decade before Darwin. But one critic he mentions, the American physician Charles D. Meigs, had clearly stated our topic thesis: that medicine should never treat normal conditions.

> I have always regarded a labour-pain as a most desirable, salutary, and conservative manifestation of life-force. ...
>
> ... There is no reasonable therapia of health. Hygieinical [*sic*] processes are good and valid. The sick need a physician, not they that are well. To be in natural labour is the culminating point of the female somatic forces. There is, in natural labour, no element of disease – and, therefore, the good old writers have said nothing truer nor wiser than their old saying, that "*a meddlesome midwifery is bad.*" (1848)

Actually, even Meigs's objections are more practical than moral. He calls a "therapia of health" unreasonable and unnecessary, not unethical. And in other passages he emphasizes both the

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"neutraliz[ing]" any such "sexual emotions" aroused by birth, and he believed that Englishwomen would prefer even the worst pain to exhibiting lewd behavior (31). As for Simpson, he denied having ever seen such a phenomenon, proposing that the sexual excitement was probably "in the minds of the practitioners" (33).

danger of chloroform and the diagnostic value of labor pain to the obstetrician.

Still, both sides in the controversy agree that labor pain is normal, or "physiological."[45] Neither Simpson nor other anesthesia pioneers claimed that pregnancy or labor pain is pathological.[46] So Western medicine's rapid embrace of obstetrical anesthesia as ethical, a view unchallenged today, is a second firm historical rejection of any limitation of medicine to pathological conditions.

V GOALS OF MEDICINE: AN IMPROVED LIST

I shall now offer a more comprehensive list of medical goals, embracing everything in our previous lists, and more besides. But to emphasize the most important conceptual boundaries, I merge some of our previous writers' goals. Like them, I count only goals in the medical care of individual patients. Other kinds of medicine or applications of medical knowledge are excluded. Thus we will continue to ignore experimental research, public health, forensic medicine, and so on, though, as noted in §I, such activities by doctors could also be considered part of medicine. Adding two new cognitive goals to Miller and Brody's example of diagnosis, I separate the goal list into two parts: benefit to patients and scientific knowledge. Otherwise, besides changing their term 'disease or injury' to 'pathological condition', I make only one significant change. But that one destroys the crucial part of the list.

Goals of Benefit to the Patient

I Preventing pathological conditions

II Reducing the severity of pathological conditions

III Amelioration of the effects of pathological conditions

IV Using biomedical knowledge or technology in the best interests of the patient

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[45]Another critic who, like Meigs, uses this term is Robert Barnes, in contrasting surgical with obstetrical anesthesia: "The pathological pain of surgical operations is not to be compared, in its effects, to the physiological pain inherent to parturition" (1847, 678). But I disagree with Barnes: pain in surgery is normal, not pathological. The surgical wound is pathology; the pain reaction to it is a normal defense mechanism.

[46]Simpson did, however, believe childbirth to be less painful in primitive societies (184, 186).

> ...woman in a savage state, and where she enjoys a kind of natural anaesthesia during labour, recovers more easily and rapidly from the shock of labour than the civilized female. (186)

Knowledge Goals

V Discovering the diagnosis, etiology, and prognosis of the patient's disease, including its response to various treatments

VI Gaining scientific knowledge about the patient's disease type and disease in general, including their response to various treatments

VII Gaining scientific knowledge of normal body function.

Naturally, goal II includes total cure, partial cure, and slowing the progress of a disease, and could be so subdivided if one wished. The Hastings authors' "care," which includes Miller and Brody's goals 3 and 6, I have absorbed into III, as well as their 7, "death with dignity and peace." Reassuring the worried well I see as part of IV. Since goal V is required for Miller and Brody's 3 (helping the patient understand the disease), the list is not as independent as I would like. But since V may also be pursued for the sake of VI, I do not see how to fix this problem.

Goals VI and VII redress the curious omission, by other lists, of general scientific goals in medical treatment. I see no basis for this omission. From the beginning of medicine, whenever one supposes that to be, physicians have used evidence from patient care to construct theories of disease. Most knowledge of specific diseases and of disease in general is based on patient records, not on experimentation with humans or animals. Moreover, the desire to gain such scientific knowledge is a powerful motive for many physicians. And much of our knowledge of normal physiology came from doctors' observations of patients with abnormal conditions. The first understanding of digestion resulted from Dr. William Beaumont's study of a patient with an opening to his stomach. In neurology, virtually all initial knowledge of the localization of brain function came from physicians' cataloguing the effects of diverse head injuries. We could multiply these famous examples to establish a typical pattern: biological and medical science cooperate to understand normal function. Yet even the goal of disease knowledge is seldom mentioned in medical ethicists' lists, and knowledge of normal function virtually never is. Why? Are such goals thought illegitimate because they do not serve the interests of the patient? But one can easily pursue two goals in a single action. As long as a patient's service to medical research is of no or slight burden to him, to use his treatment, especially the records thereof, to serve two ends at once, one in his own interest and one in others', should not violate medical ethics. One may add a consent requirement if one likes, but the point remains. Purely scientific goals of medical care are not only acceptable, but basic to the history of medicine and biology.

Goal IV, using medical knowledge or technology in the patient's interest, is supported by the many examples we noted in §I and §IV, such as obstetrical anesthesia, contraception, and cosmetic surgery. Since the last two of these remain controversial for Miller and Brody, one might think my evidence for goal IV slim. But even pain relief alone is a powerful case. It seems obvious that the morality of relieving pain cannot depend on whether the pain is due to disease or injury. In fact, since the pain of disease or injury is a wholly normal reaction to it, one might expect a true purist about medical goals to condemn nontherapeutic pain relief as not true "healing." Yet no one takes this position. Surely the truth is that it is always permissible (except

when it is inadvisable) to relieve undeserved pain.[47] And as long as doctors have a legal monopoly on the most efficient means of pain relief, it is they who must administer it. For them to do so in suitable circumstances is, I believe, not just permissible but obligatory, and regardless of whether the pain is a reaction to a normal or a pathological condition. Near the end of the movie *Braveheart,* Princess Isabelle visits William Wallace to offer him an analgesic against the pain of his execution the next day. In my opinion, a physician who could safely offer not just an analgesic, but a lethal poison, to a man who he knew would soon be tortured to death, yet failed to do so, would be a moral monster. The best that one could say for such a doctor is that he was struck purblind by a primitive, obtuse professional ethic.

Also, the example of obstetrical anesthesia generalizes in another way. A great deal else in obstetricians' work is not treatment of any pathological condition either. An obstetrician is, of course, valuable in any pregnancy to watch for abnormality, and it is vital for one to be available during delivery for emergencies. During a normal birth, however, the obstetrician's role combines the jobs of physician, midwife, and doula, with most emphasis on the latter two. Traditionally, a midwife gives advice and mechanical assistance with delivery, while a doula gives sympathy and encouragement. Yet no one thinks it actually to violate medical ethics for a physician to perform such functions during a normal birth.

Once we accept my goal IV, however, the patient-benefit part of the list collapses into one goal. For it is undisputed that the pursuit of all the other goals is justified only when it is in the patient's interest. If one can cure a disease only by a treatment with even worse effects, or at an excessive cost of time or money to the patient, everyone agrees that such a cure is wrong.[48] There is no medical imperative to eliminate all pathological conditions at any cost. The same limit applies even to diagnosis, as we have recently found out for prostate cancer. While PSA screening reveals a lot of early, otherwise undetectable prostate cancers, it is at the cost of a painful biopsy, followed, for many of those with cancer, by the choice between probably unnecessary and often damaging treatments, on the one hand, and many years of life-destroying dread on the other. Hence it is no longer recommended. Even the goal of "helping the patient to understand the disease" is limited to whatever understanding fits his or her interest. One can hardly send every diabetic to lectures on pancreatic hormones and their receptors. Indeed, the

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[47]Miller, Brody, and Chung claim that

> The central goal of relief of pain and suffering is confined to conditions that qualify as "maladies." ... [I] t is not within the purview of physicians to attempt to relieve any and all pain and suffering that may afflict human beings. (2000, 354)

But since, as we saw in §IV, pregnancy for them is not a malady (356), this rule bars obstetrical anesthesia. Moreover, they offer no authority for the restriction of medicine to maladies except the Hastings Center panel, nor any definition of the term, since that panel's own definition of 'malady' covers pregnancy.

[48]Miller and Brody (2001, 583) view this limitation as part of physicians' duties, not the goals of medicine.

limitation to action in the patient's interest is not unique to medicine: it is also a feature of every other profession, such as law or investment management, that includes a fiduciary duty to clients. So goal IV in fact subsumes all other noncognitive goals on anyone's list.

VI PHYSICIANS UNBOUND?

If so, then only three positions seem to be possible. One is to retreat, and reject as unethical all our examples of physicians' justified treatment of normal conditions. The second is to endorse these examples as ethical acts by physicians, but not medicine since not directed at health. The third is to accept them as medicine, embracing an IMM containing, on the patient side, only the single goal of using biomedical knowledge and technology for patients' benefit. The first option is, as we saw in §IV, a sharp rejection of medical history. If we do not wish a drastic revolution in medical ethics, then we must choose between the second and third options. But this choice cannot affect controversial medical practices such as VAE and biomedical enhancement. For such practices, if they are in patients' best interests, will either be genuine medicine, or something besides medicine that physicians can permissibly do – in either case acceptable.[49] So all objections to such practices based on IMM collapse, and we are left only with objections based on general external morality.

Apart from any internal ban on physicians killing, which can obviously conflict with their duty to relieve suffering, the case against PAS or VAE rests mainly on a general ethical doctrine, basic to Catholic ethics, that forbids intentionally killing innocent human beings. Besides the argument from this disputed moral principle, many writers argue that PAS and VAE are too liable to abuse to be allowed by law. This kind of argument is relevant to law, but cannot show such practices immoral in themselves except insofar as it shows that physicians cannot reasonably rely on their own judgment about cases.

As for enhancement – the use of biomedical technology to improve people in ways other than eliminating disease – as Wilkinson (1994) notes, it comes in two different kinds. One kind merely raises an individual's level for a given function within the human range, as when disease-free short children are given growth hormone. A stronger kind of enhancement gives a person superhuman powers, like the Bionic Woman. Especially regarding the second kind, a host of moral objections have been raised. Much attention has been given to Sandel's complaint (2007) that the pursuit of enhancement shows an unseemly desire for perfection, inconsistent with a proper appreciation of life as a gift. Other writers express concerns about the effects of enhancements on inequality. Buchanan (2011, 21) finds six other main types of objections. If replies to these objections by Buchanan and others succeed, then external morality does not forbid enhancement to the ethical physician. I have argued that no internal morality can do so either. In that case, there is no good theoretical reason against enhancement.

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[49] Actually, for any medical practices requested by patients in their interest, there are two views worth distinguishing: that they are (1) permissible, or (2) obligatory, to the ethical physician. As to enhancements, like most of the literature, I concentrate on (1), but my arguments for it may support (2) just as strongly. I thank Jodi Arias for calling my attention to the distinction here.

Thus, it may seem that starting with an ultraconservative view of health, I reach an ultrapermissive view of medical treatment. But this impression is unjustified, for two reasons. First is a practical caveat: in the near term, I am deeply skeptical of the value of proposed enhancements. I suspect that for a long time, feasible genuine enhancements will be few. Start with the general excellence of biological designs, coupled with our many limitations of knowledge even of normal physiology, let alone of genetics and the neural basis of psychology, about which we are massively ignorant. Besides these points, the history of medicine and surgery also makes me doubt that doctors will soon be able to be trusted to improve on normality. Unnecessary surgeries like tonsillectomy have enjoyed near-universal popularity. Enhancements are most likely to be done first by pioneering enthusiasts. But many of these pioneers will turn out like the Victorian surgeons William Arbuthnot Lane and Isaac Baker Brown, who likewise preached the benefit of improving humanity by removing normal organs – colon and clitoris, respectively (Comfort 1967). Even today there are obvious treatment fads, like the grotesque overprescription of psychiatric drugs for normal conditions like boyhood, or Szasz's "problems in living." Far too many contemporary physicians continue to drug immature or credulous patients or castrate or mutilate psychotic ones. All of these treatments are harmful, and that leads to the second point. My argument does nothing to disturb two canons of medical ethics: the duty of doctors both not to harm their patients, and to use their own judgment in deciding what is harm.[50] So, if I am right that, in the near future, almost nothing billed as an enhancement will actually be one, an ethical physician will have little of the sort to perform. Rather, for some time, I expect the benefit of enhancements to be dwarfed by that of the familiar medicine of normality promotion.[51]

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[50]This duty is not limited to medicine. In all fiduciary relationships, as opposed to "arm's-length" transactions, the professional has a moral and legal duty to act in the client's interest, consistently with his own best judgment. Thus, if the client demands an action that the professional is sure will damage him – a terrible investment, the amputation of two healthy legs – he must refuse. As Miller and Brody say in the medical case: "The physician is an independent moral agent, committed to the internal morality of medicine, not a tool at the command of the autonomous patient" (1995, 14).

To forestall confusion: I have argued in unpublished work that there is no such thing as pure exploitation, *i.e.*, exploitation without deception or coercion. All consensual, mutually beneficial exchanges are moral. As for a consensual exchange in which A harms B, a libertarian may say that A cannot suffer legal punishment for it. But political libertarianism does not bar moral condemnation of A for profiting by hurting others, even with their consent. And that is uncontroversially wrong in a fiduciary relationship.

[51]For many useful ideas I thank my University of Delaware colleagues, especially Mark Greene, and audience members at Hamburg in September 2012. For discussion of contraception and ancient medicine, thanks to John M. Riddle, Robert Jütte, and Karl-Heinz Leven.

I am also grateful to Jefferson Medical College in general, and to Dr. Gonzalo Aponte and Dr. Steven Herrine in particular, for allowing me to attend classes in pathology and clinical medicine, first in the 1980's and then again in 2012. Most of what I know about medicine I learned beneath Jefferson's winged ox.

BIBLIOGRAPHY

Arras, John D. (2001). "A method in search of a purpose: the internal morality of medicine." *Journal of Medicine and Philosophy* 26:643-62.

Barnes, Robert (1847). "Observations on Dr. Simpson's anaesthetic statistics." *The Lancet* 1847, 2:677-78.

Beauchamp, Tom L. (2001). "Internal and external standards for medical morality." *Journal of Medicine and Philosophy* 26:601-19.

Boorse, Christopher (1977). "Health as a theoretical concept." *Philosophy of Science* 44:542-73.

---------- (1987). "Concepts of health." In Donald VanDeVeer and Tom Regan, ed., *Health Care Ethics: An Introduction* (Philadelphia: Temple University Press), pp. 359-93.

---------- (1997). "A rebuttal on health." In Humber and Almeder (1997), 1-134.

---------- (2011) "Concepts of health and disease." In Fred Gifford, ed., *Philosophy of Medicine* (NY: Springer), pp. 13-64.

Buchanan, Allen (2011). *Beyond Humanity? The Ethics of Biomedical Enhancement*. NY: Oxford.

Callahan, Daniel (1999). "The goals of medicine: setting new priorities," *Hastings Center Report* 26(1996): S1-S28. Reprinted in Mark J. Hanson and Callahan, ed., *The Goals of Medicine: The Forgotten Issue in Health Care Reform* (Washington, DC: Georgetown U. Press), pp. 1-54.

Clouser, K. Danner, Culver, Charles M., and Gert, Bernard (1981). "Malady: a new treatment of disease." *Hastings Center Report* 11:29-37.

----------(1997). "Malady." In Humber and Almeder 1997),175-217.

Comfort, Alex (1967). *The Anxiety Makers*. London: Nelson.

Culver, Charles M. and Gert, Bernard (1982). *Philosophy in Medicine*. NY: Oxford.

Dick-Read, Grantly (1959). *Childbirth Without Fear: The Principles and Practice of Natural Childbirth*. NY: Harper.

Edelstein, Ludwig (1967). *Ancient Medicine*, ed. Owsei and C. Lilian Temkin. Baltimore: Johns Hopkins.

Fontanille, Marie-Thérèse (1977). *Avortement et Contraception dans la Médicine Gréco-Romaine*. Paris.

Furrow, Barry R., *et al*. (1995). *Health Law*. St. Paul: West.

Gert, Bernard, Clouser, K. Danner, and Culver, Charles M. (1986). "Language and social goals." *Journal of Medicine and Philosophy* 11:257-64.

Golden, Mark (2008). *Greek Sport and Social Status*. Austin: University of Texas.

Häyry, Matti, Takala, Tuija, and Herissone-Kelly, Peter, ed. (2010). *Arguments and Analysis in Bioethics.* Amsterdam: Rodopi.

Himes, Norman E. (1936). *Medical History of Contraception*. Baltimore: Williams and Wilkins.

Humber, James M. and Almeder, Robert F. ed. (1997). *What is Disease*? (Totowa, NJ:

Humana), pp. 1-134.

Jütte, Robert (2008 [2003]) (trans. Vicky Russell). *Contraception: A History*. Cambridge: Polity Press. Original German edition München: Verlag C.H. Beck oHG, 2003.

Kass, Leon R. (1975). "Regarding the end of medicine and the pursuit of health." *The Public Interest* 40:11-42.

Kyle, Donald G. (1987). *Athletics in Ancient Athens*. Leiden: E.J. Brill.

Ladd, John (1983). "The internal morality of medicine: an essential dimension of the physician-patient relationship." In Earl Shelp, ed., *The Clinical Encounter: The Moral Fabric of the Physician-Patient Relationship*, pp. 209-31. Dordrecht: Reidel.

Lichtenthaeler, Charles (1984). *Der Eid des Hippokrates: Ursprung und Bedeutung*. Köln.

Lowe, N.K. (2002). "The nature of labor pain." *American Journal of Obstetrics and Gynecology* 106:xxx–xxx.

MacIntyre, Alasdair (1981). *After Virtue*. Notre Dame: University of Notre Dame Press.

Meigs, Charles D. (1848). "Reply to Professor Simpson's letter." *Medical Examiner and Record of Medical Science*, March 1, 1848 (available online in the *American Periodicals* series).

Melzack, R., *et al*. (1981). "Labour is still painful after prepared childbirth training." *Can Assoc Med Journal* 125: xxx–xxx.

Miller, Franklin G. and Brody, Howard (1995). "Professional integrity and physician-assisted death." *Hastings Center Report* 25(3):8-17.

---------- (1998). "The internal morality of medicine: explication and application to managed care." *Journal of Medicine and Philosophy* 23:384-410.

---------- (2000). "Cosmetic surgery and the internal morality of medicine." *Cambridge Quarterly of Healthcare Ethics* 9:353-64.

---------- (2001). "The internal morality of medicine: an evolutionary perspective." *Journal of Medicine and Philosophy* 26:581-99.

Noonan, John T., Jr. (1966; expanded edition 1986). *Contraception*. Cambridge, Mass.: Harvard.

Nordenfelt, Lennart (1996). "On medicine and other species of health enhancement." In Nordenfelt and Tengland, Per-Anders, ed., *The Goals and Limits of Medicine*. Stockholm: Almqvist and Wiksell.

O'Brien, William F., and Cefalo, Robert C. (1996). "Labor and delivery." In Steven G. Gabbe, Jennifer R. Niebyl, and Joe Leigh Simpson, ed., *Obstetrics: Normal and Problem Pregnancies*(NY: Churchill Livingstone, 3rd ed.)

Pellegrino, Edmund D. (1983). "The healing relationship: the architectonics of clinical medicine." In Earl Shelp, ed., *The Clinical Encounter* (Dordrecht: Reidel).

---------- (2001). "The internal morality of clinical medicine: a paradigm for the ethics of the helping and healing professions." *Journal of Medicine and Philosophy* 26:559-79.

Pellegrino, Edmund D. and Thomasma, David C. (1981). *A Philosophical Basis of Medical Practice*. NY: Oxford.

---------- (1988). *For the Patient's Good: The Restoration of Beneficence in Health Care*. NY: Oxford.

---------- (1993). *Virtues in Medical Practice*.

NY: Oxford.

Poovey, Mary (1988). *Uneven Developments*. Chicago: University of Chicago Press.

Riddle, John M. (1992). *Contraception and Abortion from the Ancient World to the Renaissance*. Cambridge, Mass.: Harvard.

---------- (1997). *Eve's Herbs*: *A History of Contraception and Abortion in the West*. Cambridge, Mass.: Harvard.

Rosenberg, Karen R., and Trevathan, Wenda R. (2001). "The evolution of human birth." *Scientific American* November 2001, 77-81.

---------- (2002). "Birth, obstetrics and human evolution." *British Journal of Obstetrics and Gynaecology* 109:1199-1

Sandel, Michael (2007). *The Case Against Perfection*. Cambridge: Harvard.

Sherry, Eugene and Wilson, Stephen F. (1998). *Oxford Handbook of Sports Medicine*. NY: Oxford.

Simpson, James Young (1849). *Anaesthesia, or the Employment of Chloroform and Ether in Surgery, Midwifery, etc.* Philadelphia: Lindsay and Blakiston.

Smith, W. Tyler (1847). "Lectures on parturition, and the principles and practice of obstetricy, IV." *The Lancet*, 2, 595-599.

Varelius, Jukka (2006). "Voluntary euthanasia, physician-assisted suicide, and the goals of medicine." *Journal of Medicine and Philosophy* 31:121-37.

Veatch, Robert M. (2001). "The impossibility of a morality internal to medicine." *Journal of Medicine and Philosophy* 26:621-42.

Wilkinson, Stephen (2006). "On the distinction between positive and negative eugenics." In Häyry, *et al*., ed. (2006), pp. 115-28.

Wootton, David (2006). *Bad Medicine*. NY: Oxford.

Wreen, M. (2004). "Medical futility and physician discretion." *Journal of Medical Ethics* 30:275-78.