

Introduction to some basic ethical orientations

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[1] One of the major branches of philosophy is *ethics*, which involves, among other things, the attempt to articulate ethical principles that underlie our moral intuitions, as well as serve as a guide for morally relevant decisions we might face. We will follow convention in using 'moral' and its cognates to describe first-order situations and attitudes. Moral situations arise all the time, and moral behavior (or immoral behavior) is behavior that is assessable as good or bad. Ethics is *the study of* morally relevant situations and morally assessable behavior.

[2] The way I described the use of ethical principles just now had two components: a descriptive and a prescriptive component. A *descriptive* enterprise is one that simply observes and describes what happens. For example I might observe people who are speaking some language, and simply record what they say and try to determine the rules, if any, that determine what they say; perhaps they sometimes use double-negatives, like 'I don't want no eggs'. In such a case, I would simply observe what they do, and try to account for why it is they are doing that. This would be a descriptive grammar. In the context of ethics, I might undertake a descriptive ethical enquiry, trying to determine the principles that some person or group of people use when making their morally relevant decisions: perhaps they do whatever they feel like, or perhaps they do what they think God wants them to do, or perhaps they do what they think will lead to the greatest overall happiness of people. Whatever the details, the descriptive task would simply seek to determine what ethical principles, if any, are in fact being used by some person or group in their morally relevant behavior.

[3] By contrast, a *prescriptive* enterprise is one that attempts to articulate the 'correct' principles that people *ought* to apply. For example we are all familiar with prescriptive grammars that articulate the 'correct' way to speak a language. Someone involved in a prescriptive enterprise might try to correct the speakers mentioned above, by telling them that double negatives are incorrect. In the domain of ethics, a prescriptive ethics tries to determine what ethical principles we *ought* to adopt and employ when making morally relevant decisions.

[4] By and large ethical theory involves both components. The problem can be set up more or less as follows: there are roughly two kinds of morally relevant situation: those in which moral intuitions are very clear and practically universally shared. For example 'If Smith offers Jones \$5 to kill Smith's family because Smith is tired of hanging around them, should Jones accept?'. In this sort of case, almost everyone's intuitions converge on the same answer. The second and more problematic area are cases where moral intuitions within a given individual are less clear, and opinions among different people may diverge: is abortion permissible? is euthanasia? should those convicted of violent crimes be given the same rights of access to donated organs as normal citizens when such organs are in short supply? is it right to steal money if you need it to do something that, considered in itself, is a good action (e.g. stealing money from a hard working single mother in order to buy Christmas gifts for orphans)? The typical tactic in ethical theory is to use the cases on which there is a high degree of agreement in order to try to figure out what the ethical principles are that we are implicitly employing to arrive at those judgments, and then using those descriptively arrived-at principles in order to make a prescriptive claim about the less obvious cases.

[5] This discussion has been a bit abstract, but as we go on it should become more clear. In the next few sections, we will cover a few of the most influential ethical orientations.

1. Utilitarian views

[6] The basic utilitarian view is that when presented with a morally relevant decision between a number of options, the right one, *the one you ought to do*, is the one that does the greatest good for the greatest number of people. Before we look more carefully at what this means, let's look first at what it does not say. First off, it does not give anyone, including the person making the decision and that person's friends or family, any special status; it is thus, like most of the views we will discuss, *impartial*. Second, it quite avoids a number of other ethical outlooks, such as divine command (which would maintain that you do what God tells you, regardless of what good or bad comes from it), or deontological views that prescribe certain duties (e.g. respect the dignity of all people) regardless of the results. Third, it makes no immediate distinction between acting and failing to prevent an action: and so accordingly pushing someone off a building is exactly as bad as failing to help someone from falling off (assuming that one is in a position to help without putting oneself at risk).

[7] The basic idea of utilitarianism is easy and plausible enough: the morally right thing to do is to make the world a better place. Thus what makes some act right or wrong is its utility in bringing about good consequences, and not, for example, the intentions behind the act. So when presented with some decision one does one's best to calculate the expected utility of the different options, and then implements the option that has the highest expected utility.

[8] So what is expected utility? One idea is that utility is cashed out in terms of something like happiness, and so we suppose that we can assign various quantitative values to various kinds of happiness and unhappiness. Then, for each possible action we might perform, we determine what all the possible outcomes are, and how likely that outcome is. We then multiply the outcome times the likelihood of that outcome, and add up the result for each outcome. The final result is the expected utility of that action.

[9] For example, suppose I have \$100 dollars and someone gives me the opportunity to make a bet. I roll a die, and if it comes up '6', I get \$1000, and if it comes up any other number, I lose my \$100. My two options are: take the bet, or don't take the bet. What is the expected utility of each? The expected utility of not taking the bet is easy. There is only one possible outcome (since I am not doing anything), and on that outcome, I neither lose nor gain anything. So the expected utility of not taking the bet is \$0. (Note that I am now using dollars as the units of utility.)

[10] What about taking the bet? There are six possible outcomes, one for each number that could come up on the die. On a 1 through 5, I lose \$100; and on a 6 I win \$1000. So first I determine how likely each option is, and then I multiply that likelihood times the loss/gain, and then add them up. So:

- 1: $1/6 \times -\$100 = -\16.67
- 2: $1/6 \times -\$100 = -\16.67
- 3: $1/6 \times -\$100 = -\16.67
- 4: $1/6 \times -\$100 = -\16.67
- 5: $1/6 \times -\$100 = -\16.67
- 6: $1/6 \times +\$1000 = +\166.67

[11] Adding these up, we see that the expected utility of taking the bet is +\$83.34. This means that this is what I can expect, as a sort of average, if I take the bet: a gain of about \$83. So this is a good bet, as far as expected utility goes.

[12] Now for a morally relevant example: we can either increase the number of students at UCSD, or keep the number of students constant. Each choice will have a number of certain and probable effects. A benefit of increasing the number of students is that a certain number of people who would otherwise not be able to attend UCSD would be able to attend. This would make them happy, and might also have beneficial effects for society in that it would make more people better educated, etc. On the other hand, it would lead to greater crowding on the campus and perhaps place larger demands on the facilities and staff. Taxes would have to be raised, which would make a great number of families slightly less well-off than they would have been, and it might also decrease the overall quality of education at UCSD if classes become overcrowded, etc. So what we would need to do is for each course of action (admit more students, or keep the number constant), come up with some idea of what all the costs and benefits would be and then compare the totals for each course of action.

[13] Now that the basics are done, on to some more details: what is the 'good' that we are trying to maximize? Some historical options have been: pleasure, happiness, preferences, and values. Pleasure (Bentham's position) is easy enough to understand. Some things bring people pleasure, such as eating and having sex. And we can also understand physical suffering, such as having toothaches or being beaten up. On this conception, we look for what sorts of pleasures and displeasures might arise from various choices, and maximize the pleasure. While this is easy enough to understand, it has some disadvantages. Most obviously, it seems to place bodily pleasure and enjoyment at too fundamental a place in ethical theory. It might, for example, justify just hooking everyone up to morphine I.V.s if we could get robots to run everything else in the world. This seems wrong -- it seems as though doing this would eliminate a number of things we value, and so perhaps mere pleasure is not the best thing to maximize.

[14] (Note that here we see the interplay between descriptive and prescriptive theories. On the basis of some moral intuitions about making the world a better place, etc., we come up with a tentative ethical proposal: the right thing to do is to maximize pleasure. If this were right, then it might be a principle we could appeal to in unclear cases. But we can see that the principle can't be right because it conflicts with some clear moral intuitions we have: most people would not think that a world run by robots full of morphine addicted humans experiencing great pleasure for their entire lives would be a good thing. So on descriptive grounds we know that this can't really be a principle that we in fact actually endorse, and perhaps nor should it be one we want to endorse. The hope is to find principles that accord with, and perhaps explain, our moral intuitions in all the clear cases, and can thus serve as guidelines in the unclear cases.)

[15] Another principle has been happiness (Mill's position), where happiness might include bodily pleasures, but also includes 'higher' pleasures such as appreciation of art, enjoying the company of family and friends; seeing one's children succeed; and so forth. While this seems better than pleasure, it has the problem that it is much more variable than pleasure: very different things make different people happy, and so determining what will lead to the greatest happiness may be no easy matter.

[16] A similar approach is to maximize preferences. We assume that each person has some set of preferences, and what we need to do is to maximize these preferences. An advantage of this is that in some contexts it might be possible to merge this with economic theorizing.

For example, assuming that people spend money as a function of their preferences, the free market will evolve to maximize preferences. Thus we don't have to figure out if people prefer McDonalds or Burger King: we just let the market evolve and it will, almost by definition, evolve to maximize preferences. (At least that is the hope.)

[17] A final option would be to maximize the prevalence of some sort of value, such as freedom or knowledge. This has obvious advantages, but it is subject to a number of problems, including the fact that different people and different cultures may have different ideas about what values are the right ones, and if this is the case, our ethical theory will be powerless to make any decisions.

[18] In addition to having different choices for the good that we might want to maximize, there are two versions of utilitarianism that differ over what we are calculating the utility of: acts or rules. *Act utilitarianism* says that for each individual action we try to assess its consequences and then perform the act with the best expected utility. On an act utilitarian view, it is actions rather than rules that we are assessing. According to *rule utilitarianism*, what we are interested in assessing are *rules*, not individual acts. The two approaches might give conflicting results. So for example, a rule utilitarian might come up with convincing data that show that a law prohibiting smoking in public buildings is a rule that will lead to the best overall outcome. And so we might adopt that as the rule, and on its basis kick someone out of a building for smoking on a given occasion. On the other hand, an act utilitarian might reason that on this particular occasion, since only the smoker is present and the ventilation system is such as to remove all smoke before anyone else arrives, the best thing would be for the smoker to light up.

[19] There are some common objections to utilitarianism. The first two are based on the problem of determining consequences. First, it is often very difficult if not impossible to determine what the expected utilities of a given set of acts or rules will be to any degree of certainty, even when we are using simple goods such as money and bodily harm. Things are only worse when we move to other more tenuous and variable things like happiness and values. To this the utilitarian might respond that in some cases we can either come up with a decent guess, and in others the relative goods and bads will be quite clear. The opponent will respond to this that this might be right, but we need ethical guidance exactly in a great many areas that are unclear, and it looks as though utilitarianism, either rule or act, may not be able to help us in many of these cases.

[20] A second objection is that because of the difficulty or impossibility of predicting all of the consequences of an act, we might end up doing acts that are, by utilitarian principles, quite bad, even though our intentions are good and we were as rational and as responsible as we could have been. The man who swerved his car in order to not hit the little 5 year old boy in the street might, in some sense, be morally culpable if that boy is Adolph Hitler. In such a case, the 'right' thing to do would have been to run the boy down. The utilitarian might respond by saying that they are not in the business of assigning moral responsibility to anyone other than the responsibility to do the best they can with the utilitarian principles. While they might agree that, as it happens, running a five-year-old Adolph Hitler down in a car might have been a morally better act than swerving to miss him, they will refrain from saying that the agent is morally culpable, because the agent could not have known the future consequences. (But the utilitarian, especially the act utilitarian, would say that if the person knew that this boy would grow up to do the things he was going to do, and there was no less harmful way to prevent him from doing them, then the driver should have run the boy down.)

[21] Another set of objections has to do with determining whose values and goods we are to count in the utility calculation. This issue has a number of aspects. First, whose values and goods do we appeal to? Should we force another culture to change because we think it will increase their happiness even if they do not think so? (Do we pressure cultures that maintain that women are subordinate to men to change, even in cases where all the people, including the women, claim that they like it that way?) Do we count the utility of ourselves, all humans, all adults, all animals? And do we include all future generations? Arguably, if we take all future human generations into account, tremendous utility could be gained by subjecting a few hundred thousand people now to a wide range of medical experimentation and tests that we would think now are unacceptable; but looking forward to the future, which might have many thousands of generations over perhaps millions of years, the medical gains made now might well outweigh the current suffering.

2. Deontological views

[22] The deontological orientation in ethics had its first major proponent in Immanuel Kant. This approach is broad, but to a large degree can be seen as based on the concepts of *duties* and *rights*. What is meant by duties and rights here must be understood correctly. We often think of duties as things that are imposed upon us by external powers, and rights as things granted by external powers. And surely there are many such duties and rights. I have the duty to pay taxes and to serve jury duty when called upon; and my license gives me the right to drive a car.

[23] But these are not the kinds of duties and rights that deontology is concerned with. When we speak of human rights, for example, we speak of rights that human beings have not because of some external power, this or that government, granted them this right. In such a case this power could take that right away. Rather, we mean rights that a human being has simply in virtue of being a human being, not because of any external license was granted to them for the purpose, but simply because they are people. And the duty to respect human rights is not derived from some law that we have to follow, but rather, the deontologist argues, is derived from within, from the nature of reason and morality itself. To some extent systems of laws written, adopted and enforced by governments are designed, in part, to protect such rights and enforce these kinds of duties. But the deontologist claims that even in these cases, the law is not *creating* the rights and duties. These were there all along. The law is simply codifying these rights and duties in an enforceable way.

[24] For Kant, one of the primary duties we have is to treat people, including oneself, always as ends, and never as mere means. An end is the final purpose for which one does something, and the means are how one achieves that purpose. So Kant is saying that we have the duty to always treat people as ends – that is, always as worthwhile in themselves – and never as merely having a use for achieving some other purpose. This ethical regulation simultaneously defines a duty all people have, and a right all people have. We might, very roughly, put it this way: we all have the duty to treat all people with respect. Another categorical imperative for Kant was to always tell the truth.

[25] Exactly what the rights and duties are is a separate question. But pretty much all versions of deontological theories will recognize the duty to respect human dignity, and the right to such dignity; and perhaps also a right to autonomy, and a duty to respect the autonomy of others. These core duties and rights are duties for all, and rights held by all. But the view also makes room for some special duties and rights that are not impartially distributed. For example, parents may have certain duties with respect to their children that

their children do not have for their parents. Parents have the duty to provide for the protection, health and education of their children, say, but children do not have the same duty towards their parents (at least not while they are very young).

[26] Thus while, as we saw, utilitarianism was impartial, treating everyone as on the same footing, deontological theories typically have an impartial, universal core (such as the right to human dignity), but can also accommodate special cases of rights and duties. (As a note, communitarian theories of ethics seek to show how one's position in a community, which might be a family, a team, a country, etc.) can impose various *prima facie* duties. We won't dwell on communitarianism in this course.)

[27] It is easy to see many cases in which utilitarian views and deontological principles give conflicting answers to ethical questions. For example in the movie *Minority Report*, the three siblings who could see the future were being used merely as means, their human dignity and autonomy was being sacrificed in order to achieve some purpose. Now it is quite arguable that the overall benefit, in terms of happiness, received to society was greater than the harm caused, in terms of unhappiness suffered by the siblings. In fact, probably far far greater. While a utilitarian does not like the fact that three people are being made to suffer in some sense, the fact that potentially many *thousands* of violent crimes were being prevented outweighed this fact. Why, the utilitarian will ask, should we allow *thousands* of people to be violently murdered, rapes, etc, just so three people can be spared a loss of freedom? And so using them in this way would be the right thing to do by utilitarian standards. A deontologist, by contrast, is much less concerned with overall happiness, and would state that in fact doing this is wrong, because the rights of these three people are being violated. They are being treated as means, and not as ends. Their dignity and autonomy are being violated.

[28] This leads to another difference between deontological and utilitarian views. Deontological views typically must claim that there is a very morally significant difference between causing something, and failing to prevent something. This is similar to the distinction between acts of commission and acts of omission. Utilitarians do not recognize this as a significant difference. Note that in the *Minority Report* case, one could argue that in order to treat the siblings with dignity, one would have to allow thousands of people to be victims of violent crimes such as rape and murder. The utilitarian sees the two options as (a) imposing on the dignity of three people while respecting the dignity of thousands; or (b) respecting the dignity of three while effectively sentencing thousands to be the victims of violent crimes (which is also an affront to their dignity, of course). For the utilitarian, *who* is causing the crimes or indignities is not the a relevant concern. But for the deontologist, this is a crucial concern, for if *I* am in the position of releasing the siblings or keeping them confined, then this is the issue that *my* duties concern. It is true that if I let them free, I will effectively be failing to prevent thousands of violent crimes. But on the deontological view, what actions I perform carries more moral significance than what things I fail to prevent. And so my duty would be to treat these three siblings as ends, respect their dignity, and free them.

3. Contractarianism/contractualism

[29] Finally, a brief mention of contractarianism (my brief discussion will more or less conflate contractarianism and contractualism). The contractualist is concerned to find a justification for specific ethical norms, a justification that doesn't *necessarily* come from expected utility calculations or appeal to rights and duties. For the contractarian, ethical

norms are those that are or would be agreed to by rational agents in some society. For example, Hobbes felt that the power of sovereign monarchs was justified because rational agents would realize that without some sort of power with various rights and duties, social life would dissolve back into a state of nature without order, and would be, as he put it, "solitary, poore, nasty, brutish and short." By agreeing to give up certain elements of one's own autonomy in many circumstances and give them to a sovereign, a group of people can thereby create an orderly, lawful and safe social setting. Notice that there are some similarities in this line to a utilitarian, but there are crucial differences. The similarities is that as Hobbes describes it, each agent reaches the conclusion that giving authority to a sovereign is a good choice based on utilitarian principles: doing that will lead to better consequences than not doing that. The difference is crucial, however, for the contractarian does not claim that the utilitarian calculus is what justifies the rules that are adopted. What justifies them is the explicit or implicit agreement of those in a society, their social contract. Why an agent would agree to such a contract is another matter. Hobbes felt it was by and large a matter of utilitarian reasoning.

[30] More recent versions of contractarianism are similar. Rawls, for example, asks us to imagine being behind what he calls 'the veil of ignorance'. Behind the veil, each agent knows more or less how the world is structured, but does not have any idea who one is, one's age, race, gender, cultural background: all particular information, is unknown. Rawls then asks what ethical principles would one agree to in those circumstances, knowing that once the agreement is made, one will then be placed in some particular situation in the world (particular gender, race, culture, etc.). Rawls claims that the ethical principles rational agents would agree to in such circumstances are then binding.

[31] Exactly what ethical norms would be agreed to by people in such a situation is not really clear. One might conclude that a system of rights and duties would be the centerpiece of a social contract one would want to endorse; or one might opt for a utilitarian ethics; or one might opt for some entirely different set of ethical principles. Various contractarians have of course not only defended the basic idea of what justifies a certain set of norms (the social contract), but have also argued about what specific set of norms rational agents in such a situation would agree to (as Hobbes argues that rational agents would agree to give power to a law-providing and law-enforcing monarch). But the main point is that contractarianism is not primarily an account of what specifically the correct ethical norms are, but it is rather an account of what gives some set of ethical rules their normative force. On this account, what gives a set of ethical rules normative force is the fact that a rational agent would agree to them in order to construct an acceptable social order.

VITALY TARASOFF ET AL. V. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA ET AL., DEFENDANTS AND RESPONDENTS

551 P.2d 334, 17 Cal.3d 425, Supreme Court of California, In Bank. July 1, 1976.

TOBRINER, Justice.

[1] On October 27, 1969, Prosenjit Poddar killed Tatiana Tarasoff. Plaintiffs, Tatiana's parents, allege that two months earlier Poddar confided his intention to kill Tatiana to Dr. Lawrence Moore, a psychologist employed by the Cowell Memorial Hospital at the University of California at Berkeley. They allege that on Moore's request, the campus police briefly detained Poddar, but released him when he appeared rational. They further claim that Dr. Harvey Powelson, Moore's superior, then directed that no further action be taken to detain Poddar. No one warned plaintiffs of Tatiana's peril.

[2] Plaintiffs can state a cause of action against defendant therapists for negligent failure to protect Tatiana.

[3] The second cause of action can be amended to allege that Tatiana's death proximately resulted from defendants' negligent failure to warn Tatiana or others likely to apprise her of her danger. Plaintiffs contend that as amended, such allegations of negligence and proximate causation, with resulting damages, establish a cause of action. Defendants, however, contend that in the circumstances of the present case they owed no duty of care to Tatiana or her parents and that, in the absence of such duty, they were free to act in careless disregard of Tatiana's life and safety.

[4] In analyzing this issue, we bear in mind that legal duties are not discoverable facts of nature, but merely conclusory expressions that, in cases of a particular type, liability should be imposed for damage done. As stated in *Dillon Legg*:

The assertion that liability must ... be denied because defendant bears no "duty" to plaintiff "begs the essential question-whether the plaintiff's interests are entitled to legal protection against the defendant's conduct [Duty] is not sacrosanct in itself, but only an expression of the sum total of those considerations of policy which lead the law to say that the particular plaintiff is entitled to protection."

[5] In the landmark case of *Rowland v. Christian*, Justice Peters recognized that liability should be imposed "for an injury occasioned to another by his want of ordinary care or skill" as expressed in section 1714 of the Civil Code. Thus, Justice Peters, quoting from *Heaven v. Pender* stated:

whenever one person is by circumstances placed in such a position with regard to another ... that if he did not use ordinary care and skill in his own conduct he would cause danger of injury to the person or property of the other, a duty arises to use ordinary care and skill to avoid such danger.

[6] We depart from "this fundamental principle" only upon the "balancing of a number of considerations"; major ones are the foreseeability of harm to the plaintiff, the degree of certainty that the plaintiff suffered injury, the closeness of the connection between the defendant's conduct and the injury suffered, the moral blame attached to the defendant's

conduct, the policy of preventing future harm, the extent of the burden to the defendant and consequences to the community of imposing a duty to exercise care with resulting liability for breach, and the availability, cost and prevalence of insurance for the risk involved.

[7] The most important of these considerations in establishing duty is foreseeability. As a general principle, a "defendant owes a duty of care to all persons who are foreseeably endangered by his conduct, with respect to all risks which make the conduct unreasonably dangerous." As we shall explain, however, when the avoidance of foreseeable harm requires a defendant to control the conduct of another person, or to warn of such conduct, the common law has traditionally imposed liability only if the defendant bears some special relationship to the dangerous person or to the potential victim. Since the relationship between a therapist and his patient satisfies this requirement, we need not here decide whether foreseeability alone is sufficient to create a duty to exercise reasonable care to protect a potential victim of another's conduct.

[8] Although, as we have stated above, under the common law, as a general rule, one person owed no duty to control the conduct of another, nor to warn those endangered by such conduct, the courts have carved out an exception to this rule in cases in which the defendant stands in some special relationship to either the person whose conduct needs to be controlled or in a relationship to the foreseeable victim of that conduct. Applying this exception to the present case, we note that a relationship of defendant therapists to either Tatiana or Poddar will suffice to establish a duty of care; as explained in section 315 of the Restatement Second of Torts, a duty of care may arise from either (a) a special relation... between the actor and the third person which imposes a duty upon the actor to control the third person's conduct, or (b) a special relation between the actor and the other which gives to the other a right of protection.

[9] Although plaintiffs' pleadings assert no special relation between Tatiana and defendant therapists, they establish as between Poddar and defendant therapists the special relation that arises between a patient and his doctor or psychotherapist. Such a relationship may support affirmative duties for the benefit of third persons. Thus, for example, a hospital must exercise reasonable care to control the behavior of a patient which may endanger other persons. A doctor must also warn a patient if the patient's condition or prescribed medication renders certain conduct, such as driving a car, dangerous to others.

[10] Although the California decisions that recognize this duty have involved cases in which the defendant stood in a special relationship both to the victim and to the person whose conduct created the danger, we do not think that the duty should logically be constricted to such situations. Decisions of other jurisdictions hold that the single relationship of a doctor to his patient is sufficient to support the duty to exercise reasonable care to protect others against dangers emanating from the patient's illness. The courts hold that a doctor is liable to persons infected by his patient if he negligently fails to diagnose a contagious disease or, having diagnosed the illness, fails to warn members of the patient's family. Since it involved a dangerous mental patient, the decision in *Merchants Nat. Bank & Trust Co. of Fargo v. United States* comes closer to the issue. The Veterans Administration arranged for the patient to work on a local farm, but did not inform the farmer of the man's background. The farmer consequently permitted the patient to come and go freely during nonworking hours; the patient borrowed a car, drove to his wife's residence and killed her. Notwithstanding the lack of any "special relationship" between the Veterans Administration and the wife, the court found the Veterans Administration liable for the wrongful death of the wife.

[11] In their summary of the relevant rulings Fleming and Maximov conclude that

case law should dispel any notion that to impose on the therapists a duty to take precautions for the safety of persons threatened by a patient, where due care so requires, is in any way opposed to contemporary ground rules on the duty relationship. On the contrary, there now seems to be sufficient authority to support the conclusion that by entering into a doctor-patient relationship the therapist becomes sufficiently involved to assume some responsibility for the safety, not only of the patient himself, but also of any third person whom the doctor knows to be threatened by the patient. [1]

[12] Defendants contend, however, that imposition of a duty to exercise reasonable care to protect third persons is unworkable because therapists cannot accurately predict whether or not a patient will resort to violence. In support of this argument amicus representing the American Psychiatric Association and other professional societies cites numerous articles which indicate that therapists, in the present state of the art, are unable reliably to predict violent acts; their forecasts, amicus claims, tend consistently to overpredict violence, and indeed are more often wrong than right. Since predictions of violence are often erroneous, amicus concludes, the courts should not render rulings that predicate the liability of therapists upon the validity of such predictions.

[13] The role of the psychiatrist, who is indeed a practitioner of medicine, and that of the psychologist who performs an allied function, are like that of the physician who must conform to the standards of the profession and who must often make diagnoses and predictions based upon such evaluations. Thus the judgment of the therapist in diagnosing emotional disorders and in predicting whether a patient presents a serious danger of violence is comparable to the judgment which doctors and professionals must regularly render under accepted rules of responsibility.

[14] We recognize the difficulty that a therapist encounters in attempting to forecast whether a patient presents a serious danger of violence. Obviously we do not require that the therapist, in making that determination, render a perfect performance; the therapist need only exercise "that reasonable degree of skill, knowledge, and care ordinarily possessed and exercised by members of [that professional specialty] under similar circumstances." Within the broad range of reasonable practice and treatment in which professional opinion and judgment may differ, the therapist is free to exercise his or her own best judgment without liability; proof, aided by hindsight, that he or she judged wrongly is insufficient to establish negligence.

[15] In the instant case, however, the pleadings do not raise any question as to failure of defendant therapists to predict that Poddar presented a serious danger of violence. On the contrary, the present complaints allege that defendant therapists did in fact predict that Poddar would kill, but were negligent in failing to warn.

[16] Amicus contends, however, that even when a therapist does in fact predict that a patient poses a serious danger of violence to others, the therapist should be absolved of any responsibility for failing to act to protect the potential victim. In our view, however, once a therapist does in fact determine, or under applicable professional standards reasonably should have determined, that a patient poses a serious danger of violence to others, he bears a duty to exercise reasonable care to protect the foreseeable victim of that danger. While the discharge of this duty of due care will necessarily vary with the facts of each case, in each instance the adequacy of the therapist's conduct must be measured against the traditional negligence standard of the rendition of reasonable care under the circumstances. As explained in Fleming and Maximov:

... the ultimate question of resolving the tension between the conflicting interests of patient and potential victim is one of social policy, not professional expertise. ... In sum, the therapist owes a legal duty not only to his patient, but also to his patient's would-be victim and is subject in both respects to scrutiny by judge and jury ...

[17] The risk that unnecessary warnings may be given is a reasonable price to pay for the lives of possible victims that may be saved. We would hesitate to hold that the therapist who is aware that his patient expects to attempt to assassinate the President of the United States would not be obligated to warn the authorities because the therapist cannot predict with accuracy that his patient will commit the crime.

[18] Defendants further argue that free and open communication is essential to psychotherapy; that "Unless a patient ... is assured that ... information [revealed by him] can and will be held in utmost confidence, he will be reluctant to make the full disclosure upon which diagnosis and treatment depends." The giving of a warning, defendants contend, constitutes a breach of trust which entails the revelation of confidential communications.

[19] We recognize the public interest in supporting effective treatment of mental illness and in protecting the rights of patients to privacy, and the consequent public importance of safeguarding the confidential character of psychotherapeutic communication. Against this interest, however, we must weigh the public interest in safety from violent assault. The Legislature has undertaken the difficult task of balancing the countervailing concerns. In Evidence Code section 1014, it established a broad rule of privilege to protect confidential communications between patient and psychotherapist. In Evidence Code section 1024, the Legislature created a specific and limited exception to the psychotherapist-patient privilege:

There is no privilege ... if the psychotherapist has reasonable cause to believe that the patient is in such mental or emotional condition as to be dangerous to himself or to the person or property of another and that disclosure of the communication is necessary to prevent the threatened danger.

[20] We realize that the open and confidential character of psychotherapeutic dialogue encourages patients to express threats of violence, few of which are ever executed. Certainly a therapist should not be encouraged routinely to reveal such threats; such disclosures could seriously disrupt the patient's relationship with his therapist and with the persons threatened. To the contrary the therapist's obligations to his patient require that he not disclose a confidence unless such disclosure is necessary to avert danger to others, and even then that he do so discreetly, and in a fashion that would preserve the privacy of his patient to the fullest extent compatible with the prevention of the threatened danger.

[21] The revelation of a communication under the above circumstances is not a breach of trust or a violation of professional ethics; as stated in the Principles of Medical Ethics of the American Medical Association (1957), section 9: "A physician may not reveal the confidence entrusted to him in the course of medical attendance ... *unless he is required to do so by law or unless it becomes necessary to protect the welfare of the individual or of the community.*" (Emphasis added.) We conclude that the public policy favoring protection of the confidential character of patient-psychotherapist communications must yield to the extent to which disclosure is essential to avert danger to others. The protective privilege ends where the public peril begins.

[22] Our current crowded and computerized society compels the interdependence of its members. In this risk-infested society we can hardly tolerate the further exposure to danger that would result from a concealed knowledge of the therapist that his patient was lethal. If the exercise of reasonable care to protect the threatened victim requires the therapist to warn the endangered party or those who can reasonably be expected to notify him, we see no sufficient societal interest that would protect and justify concealment. The containment of such risks lies in the public interest. For the foregoing reasons, we find that plaintiffs' complaints can be amended to state a cause of action against defendants Moore, Powelson, Cold, and Yandell and against the Regents as their employer, for breach of a duty to exercise reasonable care to protect Tatiana.

VITALY TARASOFF ET AL. V. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA ET AL., DEFENDANTS AND RESPONDENTS

551 P.2d 334, 17 Cal.3d 425, Supreme Court of California, In Bank. July 1, 1976.

CLARK, Justice, dissenting.

[1] Overwhelming policy considerations weigh against imposing a duty on psychotherapists to warn a potential victim against harm. While offering virtually no benefit to society, such a duty will frustrate psychiatric treatment, invade fundamental patient rights and increase violence.

[2] The importance of psychiatric treatment and its need for confidentiality have been recognized by this court Assurance of confidentiality is important for three reasons.

DETERRENCE FROM TREATMENT

[3] First, without substantial assurance of confidentiality, those requiring treatment will be deterred from seeking assistance. It remains an unfortunate fact in our society that people seeking psychiatric guidance often tend to become stigmatized. Apprehension of such stigma -- apparently increased by the propensity of people considering treatment to see themselves in the worst possible light -- creates a well-recognized reluctance to seek aid. This reluctance is alleviated by the psychiatrist's assurance of confidentiality.

FULL DISCLOSURE

[4] Second, the guarantee of confidentiality is essential in eliciting the full disclosure necessary for effective treatment. The psychiatric patient approaches treatment with conscious and unconscious inhibitions against revealing his innermost thoughts. "Every person, however well-motivated, has to overcome resistances to therapeutic exploration. These resistances seek support from every possible source and the possibility of disclosure would easily be employed in the service of resistance." Until a patient can trust his psychiatrist not to violate their confidential relationship, "the unconscious psychological control mechanism of repression will prevent the recall of past experiences." [2]

SUCCESSFUL TREATMENT

[5] Third, even if the patient fully discloses his thoughts, assurance that the confidential relationship will not be breached is necessary to maintain his trust in his psychiatrist -- the very means by which treatment is effected. "[T]he essence of much psychotherapy is the contribution of trust in the external world and ultimately in the self, modelled upon the trusting relationship established during therapy." [3] Patients will be helped only if they can form a trusting relationship with the psychiatrist. All authorities appear to agree that if the trust relationship cannot be developed because of collusive communication between the psychiatrist and others, treatment will be frustrated.

[6] Given the importance of confidentiality to the practice of psychiatry, it becomes clear the duty to warn imposed by the majority will cripple the use and effectiveness of psychiatry. Many people, potentially violent -- yet susceptible to treatment -- will be deterred from seeking it; those seeking it will be inhibited from making revelations necessary to effective treatment; and, forcing the psychiatrist to violate the patient's trust will destroy the interpersonal relationship by which treatment is effected.

VIOLENCE AND CIVIL COMMITMENT

[7] By imposing a duty to warn, the majority contributes to the danger to society of violence by the mentally ill and greatly increases the risk of civil commitment -- the total deprivation of liberty -- of those who should not be confined. The impairment of treatment and risk of improper commitment resulting from the new duty to warn will not be limited to a few patients but will extend to a large number of the mentally ill. Although under existing psychiatric procedures only a relatively few receiving treatment will ever present a risk of violence, the number making threats is huge, and it is the latter group -- not just the former -- whose treatment will be impaired and whose risk of commitment will be increased.

[8] Both the legal and psychiatric communities recognize that the process of determining potential violence in a patient is far from exact, being fraught with complexity and uncertainty. [4] In fact, precision has not even been attained in predicting who of those having already committed violent acts will again become violent, a task recognized to be of much simpler proportions.

[9] This predictive uncertainty means that the number of disclosures will necessarily be large. As noted above, psychiatric patients are encouraged to discuss all thoughts of violence, and they often express such thoughts. However, unlike this court, the psychiatrist does not enjoy the benefit of overwhelming hindsight in seeing which few, if any, of his patients will ultimately become violent. Now, confronted by the majority's new duty, the psychiatrist must instantaneously calculate potential violence from each patient on each visit. The difficulties researchers have encountered in accurately predicting violence will be heightened for the practicing psychiatrist dealing for brief periods in his office with heretofore nonviolent patients. And, given that the decision not to warn or commit must always be made at the psychiatrist's civil peril, one can expect most doubts will be resolved in favor of the psychiatrist protecting himself.

[10] Neither alternative open to the psychiatrist seeking to protect himself is in the public interest. The warning itself is an impairment of the psychiatrist's ability to treat, depriving many patients of adequate treatment. It is to be expected that after disclosing their threats, a significant number of patients, who would not become violent if treated according to existing practices, will engage in violent conduct as a result of unsuccessful treatment. In short, the majority's duty to warn will not only impair treatment of many who would never become violent, but worse, will result in a net increase in violence. [5]

NOTES

Note 1. Flemming and Maximov, *The Patient or His Victim: The Therapist's Dilemma* (1974) 62 Cal.L.Rev. 1025, 1030.

Note 2. Butler, *Psychotherapy and Griswold: Is Confidentiality a Privilege or a Right?* (1971) 3 Conn.L.Rev 599, 604.

Note 3. Dawidoff, *The Malpractice of Psychiatrists* (1966) Duke L.J. 696, 704.

Note 4. A shocking illustration of psychotherapists' inability to predict dangerousness, cited by this court in *People v. Burnick*, supra, 14 Cal.3d 306, 326-327, fn. 17, 121 Cal. Rptr. 488, 535 P.2d 352, is cited and discussed in Ennis, *Prisoners of Psychiatry: Mental Patients, Psychiatrists, and the Law* (1972): "In a well-known study, psychiatrists predicted that 989 persons were so dangerous that they

could not be kept even in civil mental hospitals, but would have to be kept in maximum security hospitals run by the Department of Corrections. Then, because of a United States Supreme Court decision, those persons were transferred to civil hospitals. After a year, the Department of Mental Hygiene reported that one-fifth of them had been discharged to the community, and over half had agreed to remain as voluntary patients. During the year, only 7 of the 989 committed or threatened any act that was sufficiently dangerous to require retransfer to the maximum security hospital. Seven correct predictions out of almost a thousand is not a very impressive record. Other studies, and there are many, have reached the same conclusion: psychiatrists simply cannot predict dangerous behavior." (*Id.* at p. 227.) Equally illustrative studies are collected in Rosenhan, *On Being Sane in Insane Places* (1973) 13 Santa Clara Law. 379, 384; Ennis & Litwack, *Psychiatry and the Pumption of Expertise: Flipping Coins in the Courtroom*, *supra*, 62 Cal.L.Rev. 693, 750-751.

Note 5. The majority concedes that psychotherapeutic dialogue often results in the patient expressing threats of violence that are rarely executed. (*Ante*, p. 441, p. 27 of 131 Cal.Rptr., p. 347 of 551 P2d.) The practical problem, of course, lies in ascertaining which threats from which patients will be carried out. As to this problem, the majority is silent. They do, however, caution that a therapist certainly "should not be encouraged routinely to reveal such threats; such disclosures could seriously disrupt the patient's relationships with his therapist and with the persons threatened." (*Id.*)

Thus, in effect, the majority informs the therapists that they must accurately predict dangerousness -- a task recognized as extremely difficult -- or face crushing civil liability. The majority's reliance on the traditional standard of care for professionals that "therapist need only exercise 'that reasonable degree of skill, knowledge, and care ordinarily possessed and exercised by members of [that professional specialty] under similar circumstances'" (*ante*, p. 438, p. 25 of 131 Cal. Rptr., p. 345 of 551 P.2d) is seriously misplaced. This standard of care assumes that, to a large extent, the subject matter of the specialty is ascertainable. One clearly ascertainable element in the psychiatric field is that the therapist cannot accurately predict dangerousness, which, in turn, means that the standard is inappropriate for lack of a relevant criterion by which to judge the therapist's decision. The inappropriateness of the standard the majority would have us use is made patent when consideration is given to studies, by several eminent authorities, indicating that "[t]he chances of a second psychiatrist agreeing with the diagnosis of a first psychiatrist 'are barely better than 50-50; or stated differently, there is about as much chance that a different expert would come to some different conclusion as there is that the other would agree.'" (Ennis & Litwack, *Psychiatry and the Prcsoniption of Expertise: Flipping Coins in the Courtroom*, *supra*, 62 Cal.L.Rev. 693, 701, quoting, Ziskin, *Coping With Psychiatric and Psychological Testimony*, 126.) The majority's attempt to apply a normative scheme to a profession which must be concerned with problems that balk at standardization is clearly erroneous.

In any event, an ascertainable standard would not serve to limit psychiatrist disclosure of threats with the resulting impairment of treatment. However compassionate, the psychiatrist hearing the threat remains faced with potential crushing civil liability for a mistaken evaluation of his patient and will be forced to resolve even the slightest doubt in favor of disclosure or commitment.

SHOULD ALCOHOLICS COMPETE EQUALLY FOR LIVER TRANSPLANTATION?

Alvin H. Moss and Mark Siegler

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[1] Until recently, liver transplantation for patients with alcohol-related end-stage liver disease (ARESLED) was not considered a treatment option. Most physicians in the transplant community did not recommend it because of initial poor results in this population and because of a predicted high recidivism rate that would preclude long-term survival. In 1988, however, Starzl and colleagues reported one-year survival rates for patients with ARESLED comparable to results in patients with other causes of end-stage liver disease (ESLD). Although the patients in the Pittsburgh series may represent a carefully selected population, the question is no longer, Can we perform transplants in patients with alcoholic liver disease and obtain acceptable results? But, Should we? This question is particularly timely since the Health Care Financing Administration (HCFA) has recommended that Medicare coverage for liver transplantation be offered to patients with alcoholic cirrhosis who are abstinent. The HCFA proposes that the same eligibility criteria be used for patients with ARESLED as are used for patients with other causes of ESLD, such as primary biliary cirrhosis and sclerosing cholangitis.

SHOULD PATIENTS WITH ARESLED RECEIVE TRANSPLANTS?

[2] At first glance, this question seems simple to answer. Generally, in medicine, a therapy is used if it works and saves lives. But the circumstances of liver transplantation differ from those of most other lifesaving therapies, including long-term mechanical ventilation and dialysis, in three important respects:

Nonrenewable Resource

[3] First, although most lifesaving therapies are expensive, liver transplantation uses a nonrenewable, absolutely scarce resource -- a donor liver. In contrast to patients with end-stage renal disease, who may receive either a transplant or dialysis therapy, every patient with FSLD who does not receive a liver transplant will die. This dire, absolute scarcity of donor livers would be greatly exacerbated by including patients with ARESLED as potential candidates for liver transplantation. In 1985, 63,737 deaths due to hepatic disease occurred in the United States, at least 36,000 of which were related to alcoholism, but fewer than 1000 liver transplants were performed. Although patients with ARESLED represent more than 50 percent of the patients with ESLD, patients with ARESLED account for less than 10 percent of those receiving transplants (*New York Times*, April 3, 1990:B6 [col 1]). If patients with ARESLED were accepted for liver transplantation on an equal basis, as suggested by the HCFA, there would potentially be more than 30,000 additional candidates each year. (No data exist to indicate how many patients in the late stages of ARESLED would meet transplantation eligibility criteria.) In 1987, only 1182 liver transplants were performed; in 1989, fewer than 2000 were done. Even if all donor livers available were given to patients with ARESLED, it would not be feasible to provide transplants for even a small fraction of them. Thus, the dire, absolute nature of donor liver scarcity mandates that distribution be based on unusually rigorous standards -- standards not required for the allocation of most other resources such as dialysis machines and ventilators, both of which are only *relatively* scarce.

Comparison with Cardiac Transplantation

[4] Second, although a similarly dire, absolute scarcity of donor hearts exists for cardiac transplantation, the allocational decisions for cardiac transplantation differ from those for liver transplantation. In liver transplantation, ARESLD causes more than 50 percent of the cases of ESLD; in cardiac transplantation, however, no one predominant disease or contributory factor is responsible. Even for patients with end-stage ischemic heart disease who smoked or who failed to adhere to dietary regimens, it is rarely clear that one particular behavior caused the disease. Also, unlike our proposed consideration for liver transplantation, a history of alcohol abuse is considered a contraindication and is a common reason for a patient with heart disease to be denied cardiac transplantation. Thus, the allocational decisions for heart transplantation differ from those for liver transplantation in two ways: determining a cause for end-stage heart disease is less certain, and patients with a history of alcoholism are usually rejected from heart transplant programs.

Expensive Technology

[5] Third, a unique aspect of liver transplantation is that it is an expensive technology that has become a target of cost containment in health care. It is, therefore, essential to maintain the approbation and support of the public so that organs continue to be donated under appropriate clinical circumstances -- even in spite of the high cost of transplantation.

General Guideline Proposed

[6] In view of the distinctive circumstances surrounding liver transplantation, we propose as a general guideline that patients with ARESLD should not compete equally with other candidates for liver transplantation. We are *not* suggesting that patients with ARESLD should *never* receive liver transplants. Rather, we propose that a priority ranking be established for the use of this dire, absolutely scarce societal resource and that patients with ARESLD be lower on the list than others with ESLD.

OBJECTIONS TO PROPOSAL

[7] We realize that our proposal may meet with two immediate objections: (1) Some may argue that since alcoholism is a disease, patients with ARESLD should be considered equally for liver transplantation. (2) Some will question why patients with ARESLD should be singled out for discrimination, when the medical profession treats many patients who engage in behavior that causes their diseases. We will discuss these objections in turn.

Alcoholism: How Is It Similar to and Different from Other Diseases?

[8] We do not dispute the reclassification of alcoholism as a disease. Both hereditary and environmental factors contribute to alcoholism, and physiological, biochemical, and genetic markers have been associated with increased susceptibility. Identifying alcoholism as a disease enables physicians to approach it as they do other medical problems and to differentiate it from bad habits, crimes, or moral weaknesses. More important, identifying alcoholism as a disease also legitimizes medical interventions to treat it.

[9] Alcoholism is a chronic disease, for which treatment is available and effective. More than 1.43 million patients were treated in 5586 alcohol treatment units in the 12-month period ending October 30, 1987. One comprehensive review concluded that more than two thirds of patients who accept therapy improve. Another cited four studies in which at least 54 percent of patients were abstinent a minimum of one year after treatment. A recent study

of alcohol-impaired physicians reported a 100 percent abstinence rate an average of 33.4 months after therapy was initiated. In this study, physician-patients rated Alcoholics Anonymous, the largest organization of recovering alcoholics in the world, as the most important component of their therapy.

[10] Like other chronic diseases -- such as type I diabetes mellitus, which requires the patient to administer insulin over a lifetime -- alcoholism requires the patient to assume responsibility for participating in continuous treatment. Two key elements are required to successfully treat alcoholism: the patient must accept his or her diagnosis and must assume responsibility for treatment. The high success rates of some alcoholism treatment programs indicate that many patients can accept responsibility for their treatment. ARESLD, one of the sequelae of alcoholism, results from 10 to 20 years of heavy alcohol consumption. The risk of ARESLD increases with the amount of alcohol consumed and with the duration of heavy consumption. In view of the quantity of alcohol consumed, the years, even decades, required to develop ARESLD, and the availability of effective alcohol treatment, attributing personal responsibility for ARESLD to the patient seems all the more justified. We believe, therefore, that even though alcoholism is a chronic disease, alcoholics should be held responsible for seeking and obtaining treatment that could prevent the development of late-stage complications such as ARESLD. Our view is consistent with that of Alcoholics Anonymous: alcoholics are responsible for undertaking a program for recovery that will keep their disease of alcoholism in remission.

Are We Discriminating Against Alcoholics?

[11] Why should patients with ARESLD be singled out when a large number of patients have health problems that can be attributed to so-called voluntary health-risk behavior? Such patients include smokers with chronic lung disease; obese people who develop type II diabetes; some individuals who test positive for the human immunodeficiency virus; individuals with multiple behavioral risk factors (inattention to blood pressure, cholesterol, diet, and exercise) who develop coronary artery disease; and people such as skiers, motorcyclists, and football players who sustain activity-related injuries. We believe that the health care system should respond based on the actual medical needs of patients rather than on the factors (e.g., genetic, infectious, or behavioral) that cause the problem. We also believe that individuals should bear some responsibility -- such as increased insurance premiums -- for medical problems associated with voluntary choices. The critical distinguishing factor for treatment of ARESLD is the scarcity of the resource needed to treat it. The resources needed to treat most of these other conditions are only moderately or relatively scarce, and patients with these diseases or injuries can receive a share of the resources (i.e., money, personnel, and medication) roughly equivalent to their need. In contrast, there are insufficient donor livers to sustain the lives of all with ESLD who are in need. This difference permits us to make some discriminating choices -- or to establish priorities -- in selecting candidates for liver transplantation based on notions of fairness. In addition, this reasoning enables us to offer patients with alcohol-related medical and surgical problems their fair share of relatively scarce resources, such as blood products, surgical care, and intensive care beds, while still maintaining that their claim on donor livers is less compelling than the claims of others.

REASONS PATIENTS WITH ARESLD SHOULD HAVE A LOWER PRIORITY ON TRANSPLANT WAITING LISTS

[12] Two arguments support our proposal. The first argument is a moral one based on considerations of fairness. The second one is based on policy considerations and examines whether public support of liver transplantation can be maintained if, as a result of a

first-come, first-served approach, patients with ARESLD receive more than half the available donor livers. Finally we will consider further research necessary to determine which patients with ARESLD should be candidates for transplantation, albeit with a lower priority.

Fairness

[13] Given a tragic shortage of donor livers, what is the fair or just way to allocate them? We suggest that patients who develop ESLD through no fault of their own (e.g., those with congenital biliary atresia or primary biliary cirrhosis) should have a higher priority in receiving a liver transplant than those whose liver disease results from failure to obtain treatment for alcoholism. In view of the dire, absolute scarcity of donor livers, we believe it is fair to hold people responsible for their choices, including decisions to refuse alcoholism treatment, and to allocate organs on this basis.

[14] It is unfortunate but not unfair to make this distinction. When not enough donor livers are available for all who need one, choices have to be made, and they should be founded on one or more proposed principles of fairness for distributing scarce resources. We shall consider four that are particularly relevant:

- To each, an equal share of treatment.
- To each, similar treatment for similar cases.
- To each, treatment according to personal effort.
- To each, treatment according to ability to pay.

It is not possible to give each patient with ESLD an *equal share*, or, in this case, a functioning liver. The problem created by the absolute scarcity of donor livers is that of inequality; some receive livers while others do not. But what is fair need not be equal. Although a first-come, first-served approach has been suggested to provide each patient with an equal chance, we believe it is fairer to give a child dying of biliary atresia an opportunity for a *first* normal liver than it is to give a patient with ARESLD who was born with a normal liver a *second* one.

[15] Because the goal of providing each person with an equal share of health care sometimes collides with the realities of finite medical resources, the principle of *similar treatment for similar cases* has been found to be helpful. Outka stated it this way: "If we accept the case for equal access, but if we simply cannot, physically cannot, treat all who are in need, it seems more just to discriminate by virtue of categories of illness, rather than between rich ill and poor ill." This principle is derived from the principle of formal justice, which, roughly stated, says that people who are equal in relevant respects should be treated equally and that people who are unequal in relevant respects should be treated differently. We believe that patients with ARESLD are unequal in a relevant respect to others with ESLD, since their liver failure was preventable; therefore, it is acceptable to treat them differently.

[16] Our view also relies on the principle of, *To each, treatment according to personal effort*. Although alcoholics cannot be held responsible for their disease, once their condition has been diagnosed they can be held responsible for seeking treatment and for preventing the complication of ARESLD. The standard of personal effort and responsibility we propose for alcoholics is the same as that held by Alcoholics Anonymous. We are not suggesting that some lives and behaviors have greater value than others -- an approach used and

appropriately repudiated when dialysis machines were in short supply. But we are holding people responsible for their personal effort.

[17] Health policymakers have predicted that this principle will assume greater importance in the future. In the context of scarce health care resources, Blank foresees a reevaluation of our health care priorities, with a shift toward individual responsibility and a renewed emphasis on the individual's obligation to society to maximize one's health. Similarly, more than a decade ago, Knowles observed that prevention of disease requires effort. He envisioned that the next major advances in the health of the American people would be determined by what individuals are willing to do for themselves.

[18] To each, treatment according to ability to pay has also been used as a principle of distributive justice. Since alcoholism is prevalent in all socioeconomic strata, it is not discrimination against the poor to deny liver transplantation to patients with alcoholic liver disease. In fact, we believe that poor patients with ARESLD have a stronger claim for a donor liver than rich patients, precisely because many alcohol treatment programs are not available to patients lacking in substantial private resources or health insurance. Ironically, it is precisely this group of poor and uninsured patients who are most likely not to be eligible to receive a liver transplant because of their inability to pay. We agree with Outka's view of fairness that would discriminate according to categories of illness rather than according to wealth.

Policy Considerations Regarding Public Support for Liver Transplantation

[19] Today, the main health policy concerns involve issues of financing, distributive justice, and rationing medical care. Because of the many deficiencies in the U.S. health care system -- in maternal and child health, in the unmet needs of the elderly, and in the millions of Americans without health insurance -- an increasing number of commentators are drawing attention to the trade-offs between basic health care for the many and expensive, albeit lifesaving, care for the few.

[20] Because of its high unit cost, liver transplantation is often at the center of these discussions, as it has been in Oregon, where the legislature voted to eliminate Medicaid reimbursement for all transplants except kidneys and corneas. In this era of health care cost containment, a sense of limits is emerging and allocational choices are being made. Oregon has already shown that elected officials and the public are prepared to face these issues.

[21] In our democracy, it is appropriate that community mores and values be regarded seriously when deciding the most appropriate use of a scarce and nonrenewable organ symbolized as a "Gift of Life."

[22] As if to underscore this point, the report of the Task Force on Organ Transplantation recommended that each donated organ be considered a national resource for the public good and that the public must participate in decisions on how to use this resource to best serve the public's interests.

[23] Much of the initial success in securing public and political approval for liver transplantation was achieved by focusing media and political attention not on adults but on children dying of ESLD. The public may not support transplantation for patients with ARESLD in the same way that they have endorsed this procedure for babies born with biliary atresia. This assertion is bolstered not only by the events in Oregon but also by the results of a Louis Harris and Associates national survey, which showed that lifesaving therapy for premature infants or for patients with cancer was given the highest health care priority by

the public and that lifesaving therapy for patients with alcoholic liver disease was given the lowest. In this poll, the public's view of health care priorities was shared by leadership groups also polled: physicians, nurses, employers, and politicians.

[24] Just because a majority of the public holds these views does not mean that they are right, but the moral intuition of the public, which is also shared by its leaders, reflects community values that must be seriously considered. Also indicative of community values are organizations such as Mothers Against Drunk Driving, Students Against Drunk Driving, corporate employee assistance programs, and school student assistance programs. Their existence signals that many believe that a person's behavior can be modified so that the consequences of behavior such as alcoholism can be prevented. Thus, giving donor livers to patients with ARESLD on an equal basis with other patients who have ESLD might lead to a decline in public support for liver transplantation.

SHOULD ANY ALCOHOLICS BE CONSIDERED FOR TRANSPLANTATION? NEED FOR FURTHER RESEARCH

[25] Our proposal for giving lower priority for liver transplantation to patients with ARESLD does not completely rule out transplantation for this group. Patients with ARESLD who had not previously been offered therapy and who are now abstinent could be acceptable candidates. In addition, patients lower on the waiting list, such as patients with ARESLD who have been treated and are now abstinent, might be eligible for a donor liver in some regions because of the increased availability of donor organs there. Even if only because of these possible conditions for transplantation, further research is needed to determine which patients with ARESLD would have the best outcomes after liver transplantation.

[26] Transplant programs have been reluctant to provide transplants to alcoholics because of concern about one unfavorable outcome: a high recidivism rate. Although the overall recidivism rate for the Pittsburgh patients was only 11.5 percent, in the group of patients who had been abstinent less than 6 months it was 43 percent. Also, compared with the entire group in which one-year survival was 74 percent, the survival rate in this subgroup was lower, at 64 percent.

[27] In the recently proposed Medicare criteria for coverage of liver transplantation, the HCFA acknowledged that the decision to insure patients with alcoholic cirrhosis "may be considered controversial by some." As if to counter possible objections, the HCFA listed requirements for patients with alcoholic cirrhosis: patients must meet the transplant center's requirement for abstinence prior to liver transplantation and have documented evidence of sufficient social support to ensure both recovery from alcoholism and compliance with the regimen of immunosuppressive medication.

[28] Further research should answer lingering questions about liver transplantation for ARESLD patients: Which characteristics of a patient with ARESLD can predict a successful outcome? How long is abstinence necessary to qualify for transplantation? What type of a social support system must a patient have to ensure good results? These questions are being addressed. Until the answers are known, we propose that further transplantation for patients with ARESLD be limited to abstinent patients who had not previously been offered alcoholism treatment and to abstinent treated patients in regions of increased donor liver availability, and that it be carried out as part of prospective research protocols at a few centers skilled in transplantation and alcohol research.

COMMENT

[29] Should patients with ARESLD compete equally for liver transplants? In a setting in which there is a dire, absolute scarcity of donor livers, we believe the answer is no. Considerations of fairness suggest that a first-come, first-served approach for liver transplantation is not the most just approach. Although this decision is difficult, it is only fair that patients who have not assumed equal responsibility for maintaining their health or for accepting treatment for a chronic disease should be treated differently. Considerations of public values and mores suggest that the public may not support liver transplantation if patients with ARESLD routinely receive more than half of the available donor livers. We conclude that since not all can live, priorities must be established and that patients with ARESLD should be given a lower priority for liver transplantation than others with ESLD.

ALCOHOLICS AND LIVER TRANSPLANTATION

Carl Cohen, Martin Benjamin, and the Ethics and Social Impact Committee of the Transplant and Health Policy Center, Ann Arbor, Michigan.

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[1] Alcoholic cirrhosis of the liver -- severe scarring due to the heavy use of alcohol -- is by far the major cause of end-stage liver disease. For persons so afflicted, life may depend on receiving a new transplanted liver. The number of alcoholics in the United States needing new livers is great, but the supply of available livers for transplantation is small. *Should those whose end-stage liver disease was caused by alcohol abuse be categorically excluded from candidacy for liver transplantation?* This question, partly medical and partly moral, must now be confronted forthrightly. Many lives are at stake.

[2] Reasons of two kinds underlie a widespread unwillingness to transplant livers into alcoholics: First, there is a common conviction -- explicit or tacit -- that alcoholics are morally blameworthy, their condition the result of their own misconduct, and that such blameworthiness disqualifies alcoholics in unavoidable competition for organs with others equally sick but blameless. Second, there is a common belief that because of their habits, alcoholics will not exhibit satisfactory survival rates after transplantation, and that, therefore, good stewardship of a scarce lifesaving resource requires that alcoholics not be considered for liver transplantation. We examine both of these arguments.

THE MORAL ARGUMENT

[3] A widespread condemnation of drunkenness and a revulsion for drunks lie at the heart of this public policy issue. Alcoholic cirrhosis -- unlike other causes of end-stage liver disease -- is brought on by a person's conduct, by heavy drinking. Yet if the dispute here were only about whether to treat someone who is seriously ill because of personal conduct, we would not say -- as we do not in cases of other serious diseases resulting from personal conduct -- that such conduct disqualifies a person from receiving desperately needed medical attention. Accident victims injured because they were not wearing seat belts are treated without hesitation; reformed smokers who become coronary bypass candidates partly because they disregarded their physicians' advice about tobacco, diet, and exercise are not turned away because of their bad habits. But new livers are a scarce resource, and transplanting a liver into an alcoholic may, therefore, result in death for a competing candidate whose liver disease was wholly beyond his or her control. Thus we seem driven, in this case unlike in others, to reflect on the weight given to the patient's personal conduct. And heavy drinking -- unlike smoking, or overeating, or failing to wear a seat belt -- is widely regarded as morally wrong.

[4] Many contend that alcoholism is not a moral failing but a disease. Some authorities have recently reaffirmed this position, asserting that alcoholism is "best regarded as a chronic disease." But this claim cannot be firmly established and is far from universally believed. Whether alcoholism is indeed a disease, or a moral failing, or both, remains a disputed matter surrounded by intense controversy.

[5] Even if it is true that alcoholics suffer from a somatic disorder, many people will argue that this disorder results in deadly liver disease only when coupled with a weakness of will - - a weakness for which part of the blame must fall on the alcoholic. This consideration underlies the conviction that the alcoholic needing a transplanted liver, unlike a nonalcoholic

competing for the same liver, is at least partly responsible for his or her need. Therefore, some conclude, the alcoholic's personal failing is rightly considered in deciding upon his or her entitlement to this very scarce resource.

[6] Is this argument sound? We think it is not. Whether alcoholism is a moral failing, in whole or in part, remains uncertain. But even if we suppose that it is, it does not follow that we are justified in categorically denying liver transplants to those alcoholics suffering from endstage cirrhosis. We could rightly preclude alcoholics from transplantation only if we assume that qualification for a new organ requires some level of moral virtue or is canceled by some level of moral vice. But there is absolutely no agreement -- and there is likely to be none -- about what constitutes moral virtue and vice and what rewards and penalties they deserve. The assumption that undergirds the moral argument for precluding alcoholics is thus unacceptable. Moreover; even if we could agree (which, in fact, we cannot) upon the kind of misconduct we would be looking for, the fair weighting of such a consideration would entail highly intrusive investigations into patients' moral habits -- investigations universally thought repugnant. Moral evaluation is wisely and rightly excluded from all deliberations of who should be treated and how.

[7] Indeed, we do exclude it. We do not seek to determine whether a particular transplant candidate is an abusive parent or a dutiful daughter; whether candidates cheat on their income taxes or their spouses; or whether potential recipients pay their parking tickets or routinely lie when they think it is in their best interests. We refrain from considering such judgments for several good reasons: (1) We have genuine and well-grounded doubts about comparative degrees of voluntariness and, therefore, cannot pass *judgment fairly*. (2) Even if we could assess degrees of voluntariness reliably, we *cannot know what penalties different degrees of misconduct deserve*. (3) *Judgments of this kind could not be made consistently in our medical system* -- and a fundamental requirement of a fair system in allocating scarce resources is that it treat all in need of certain goods on the same standard, without unfair discrimination by group.

[8] If alcoholics should be penalized because of their moral fault, then all others who are equally at fault in causing their own medical needs should be similarly penalized. To accomplish this, we would have to make vigorous and sustained efforts to find out whose conduct has been morally weak or sinful and to what degree. That inquiry, as a condition for medical care or for the receipt of goods in short supply, we certainly will not and should not undertake.

[9] The unfairness of such moral judgments is compounded by other accidental factors that render moral assessment especially difficult in connection with alcoholism and liver disease. Some drinkers have a greater predisposition for alcohol abuse than others. And for some who drink to excess, the predisposition to cirrhosis is also greater; many grossly intemperate drinkers do not suffer grievously from liver disease. On the other hand, alcohol consumption that might be considered moderate for some may cause serious liver disease in others. It turns out, in fact, that the disastrous consequences of even low levels of alcohol consumption may be much more common in women than in men. Therefore, penalizing cirrhotics by denying them transplant candidacy would have the effect of holding some groups arbitrarily to a higher standard than others and would probably hold women to a higher standard of conduct than men.

[10] Moral judgments that eliminate alcoholics from candidacy thus prove unfair and unacceptable. The alleged (but disputed) moral misconduct of alcoholics with end-stage liver disease does not justify categorically excluding them as candidates for liver transplantation.

MEDICAL ARGUMENT

[11] Reluctance to use available livers in treating alcoholics is due in some part to the conviction that, because alcoholics would do poorly after transplant as a result of their bad habits, good stewardship of organs in short supply requires that alcoholics be excluded from consideration.

[12] This argument also fails, for two reasons: First, it fails because the premise -- that the outcome for alcoholics will invariably be poor relative to other groups -- is at least doubtful and probably false. Second, it fails because, even if the premise were true, it could serve as a good reason to exclude alcoholics only if it were an equally good reason to exclude other groups having a prognosis equally bad or worse. But equally low survival rates have not excluded other groups; fairness therefore requires that this group not be categorically excluded either.

[13] In fact, the data regarding the post-transplant histories of alcoholics are not yet reliable. Evidence gathered in 1984 indicated that the 1-year survival rate for patients with alcoholic cirrhosis was well below the survival rate for other recipients of liver transplants, excluding those with cancer. But a 1988 report, with a larger (but still small) sample number, shows remarkably good results in alcoholics receiving transplants: 1-year survival is 73.2% -- and of 35 carefully selected (and possibly non-representative) alcoholics who received transplants and lived 6 months or longer, only two relapsed into alcohol abuse. Liver transplantation, it would appear, can be a very sobering experience. Whether this group continues to do as well as a comparable group of non-alcoholic liver recipients remains uncertain. But the data, although not supporting the broad inclusion of alcoholics, do suggest that medical considerations do not now justify categorically excluding alcoholics from liver transplantation.

[14] A history of alcoholism is of great concern when considering liver transplantation, not only because of the impact of alcohol abuse upon the entire system of the recipient, but also because the life of an alcoholic tends to be beset by general disorder. Returning to heavy drinking could ruin a new liver, although probably not for years. But relapse into heavy drinking would quite likely entail the inability to maintain the routine of multiple medication, daily or twice-daily, essential for immunosuppression and survival. As a class, alcoholic cirrhotics may therefore prove to have substantially lower survival rates after receiving transplants. All such matters should be weighed, of course. But none of them gives any solid reason to exclude alcoholics from consideration categorically.

[15] Moreover, even if survival rates for alcoholics selected were much lower than normal -- a supposition now in substantial doubt -- what could fairly be concluded from such data? Do we exclude from transplant candidacy members of other groups known to have low survival rates? In fact we do not. Other things being equal, we may prefer not to transplant organs in short supply into patients afflicted, say, with liver cell cancer, knowing that such cancer recurs not long after a new liver is implanted. Yet in some individual cases we do it. Similarly, some transplant recipients have other malignant neoplasms or other conditions that suggest low survival probability. Such matters are weighed in selecting recipients, but they are insufficient grounds to categorically exclude an entire group. This shows that the argument for excluding alcoholics based on survival probability rates alone is simply not just.

THE ARGUMENTS DISTINGUISHED

[16] In fact, the exclusion of alcoholics from transplant candidacy probably results from an intermingling, perhaps at times a confusion, of the moral and medical arguments. But if the moral argument indeed does not apply, no combination of it with probable survival rates can make it applicable. Survival data, carefully collected and analyzed, deserve to be weighed in selecting candidates. These data do not come close to precluding alcoholics from consideration. Judgments of blameworthiness, which ought to be excluded generally, certainly should be excluded when weighing the impact of those survival rates. Some people with a strong antipathy to alcohol abuse and abusers may without realizing it, be relying on assumed unfavorable data to support a fixed moral judgment. The arguments must be untangled. Actual results with transplanted alcoholics must be considered without regard to moral antipathies.

[17] The upshot is inescapable: there are no good grounds at present -- moral or medical -- to disqualify a patient with end-stage liver disease from consideration for liver transplantation simply because of a history of heavy drinking.

SCREENING AND SELECTION OF LIVER TRANSPLANT CANDIDATES

[18] In the initial evaluation of candidates for any form of transplantation, the central questions are whether patients (1) are sick enough to need a new organ and (2) enjoy a high enough probability of benefiting from this limited resource. At this stage the criteria should be non-comparative. Even the initial screening of patients must, however, be done individually and with great care.

[19] The screening process for those suffering from alcoholic cirrhosis must be especially rigorous -- not for moral reasons, but because of factors affecting survival, which are themselves influenced by a history of heavy drinking -- and even more by its resumption. Responsible stewardship of scarce organs requires that the screening for candidacy take into consideration the manifold impact of heavy drinking on long-term transplant success. Cardiovascular problems brought on by alcoholism and other systematic contraindications must be looked for. Psychiatric and social evaluation is also in order, to determine whether patients understand and have come to terms with their condition and whether they have the social support essential for continuing immunosuppression and follow-up care.

[20] Precisely which factors should be weighed in this screening process have not been firmly established. Some physicians have proposed a specified period of alcohol abstinence as an "objective" criterion for selection -- but the data supporting such a criterion are far from conclusive, and the use of this criterion to exclude a prospective recipient is at present medically and morally arbitrary.

[21] Indeed, one important consequence of overcoming the strong presumption against considering alcoholics for liver transplantation is the research opportunity it presents and the encouragement it gives to the quest for more reliable predictors of medical success. As that search continues, some defensible guidelines for case-by-case determination have been devised, based on factors associated with sustained recovery from alcoholism and other considerations related to liver transplantation success in general. Such guidelines appropriately include (1) refined diagnosis by those trained in the treatment of alcoholism, (2) acknowledgment by the patient of a serious drinking problem, (3) social and familial stability, and (4) other factors experimentally associated with long-term sobriety.

[22] The experimental use of guidelines like these, and their gradual refinement over time, may lead to more reliable and more generally applicable predictors. But those more refined predictors will never be developed until prejudices against considering alcoholics for liver transplantation are overcome.

[23] Patients who are sick because of alleged self-abuse ought not be grouped for discriminatory treatment -- unless we are prepared to develop a detailed calculus of just deserts for health care based on good conduct. Lack of sympathy for those who bring serious disease upon themselves is understandable, but the temptation to institutionalize that emotional response must be tempered by our inability to apply such considerations justly and by our duty not to apply them unjustly. In the end, some patients with alcoholic cirrhosis may be judged, after careful evaluation, as good risks for a liver transplant.

OBJECTION AND REPLY

[24] Providing alcoholics with transplants may present a special "political" problem for transplant centers. The public perception of alcoholics is generally negative. The already low rate of organ donation, it may be argued, will fall even lower when it becomes known that donated organs are going to alcoholics. Financial support from legislatures may also suffer. One can imagine the effect on transplantation if the public were to learn that the liver of a teenager killed by a drunken driver had been transplanted into an alcoholic patient. If selecting even a few alcoholics as transplant candidates reduces the number of lives saved overall, might that not be good reason to preclude alcoholics categorically?

[25] No. The fear is understandable, but excluding alcoholics cannot be rationally defended on that basis. Irresponsible conduct attributable to alcohol abuse should not be defended. No excuses should be made for the deplorable consequences of drunken behavior, from highway slaughter to familial neglect and abuse. But alcoholism must be distinguished from those consequences; not all alcoholics are morally irresponsible, vicious, or neglectful drunks. If there is a general failure to make this distinction, we must strive to overcome that failure, not pander to it.

[26] Public confidence in medical practice in general, and in organ transplantation in particular, depends on the scientific validity and moral integrity of the policies adopted. Sound policies will prove publicly defensible. Shaping present health care policy on the basis of distorted public perceptions or prejudices will, in the long run, do more harm than good to the process and to the reputation of all concerned.

[27] Approximately one in every 10 Americans is a heavy drinker, and approximately one family in every three has at least one member at risk for alcoholic cirrhosis. The care of alcoholics and the just treatment of them when their lives are at stake are matters a democratic polity may therefore be expected to act on with concern and reasonable judgment over the long run. The allocation of organs in short supply does present vexing moral problems; if thoughtless or shallow moralizing would cause some to respond very negatively to transplanting livers into alcoholic cirrhotics, that cannot serve as good reason to make such moralizing the measure of public policy.

[28] We have argued that there is now no good reason, either moral or medical, to preclude alcoholics categorically from consideration for liver transplantation. We further conclude that it would therefore be unjust to implement that categorical preclusion simply because others might respond negatively if we do not.

The Tuskegee Syphilis Study

[1] The Tuskegee study of untreated syphilis in hundreds of poor African-American men is one of the most condemned experiments in American medicine. A true understanding of the issues involved requires some historical perspective; but because the study was investigated behind closed doors, its details never became widely known, and it is usually discussed in only simplistic, emotional terms.

BACKGROUND: JOSEF MENGELE, THE NUREMBERG CODE, AMERICAN MILITARY RESEARCH

[2] For centuries, the craft of medicine used trial-and-error methods to develop drugs and remedies, but it was not until the *science* of medicine actually began that experimentation became a major part of it.

[3] In the nineteenth century, some "gentleman physicians" experimented in their leisure time, and some of them became famous. One was William Beaumont, whose experimental subject was a patient named Alexis St. Martin. In 1822, Beaumont treated St. Martin for a bullet wound in the stomach; the patient survived, but the wound healed strangely, leaving a hole. Beaumont then employed St. Martin as a servant in order to observe him, and was able to prove that stomach juices digest food. Even this very early relationship between researcher and subject had its problems: Eventually St. Martin refused to continue and ran away, and Beaumont had him sought by the police.

[4] During the early twentieth century, the work of Koch and Pasteur inspired other physicians to experiment. The germ theory of disease opened a new door in medicine, and some physicians eagerly went through.

[5] In the middle of the century, during World War II, some medical experimentation took disturbing or even horrifying forms. Japanese physicians carried out deadly experiments on Chinese prisoners of war, killing over 3,000 of them, mostly at unit 731 in Harbin. These Chinese prisoners were injected with dozens of diseases to study the natural course of anthrax, syphilis, plague, cholera, and so on; in one study of plague, 700 Chinese died. It was Nazi Germany, though, which became -- and remained -- a symbol of the perversion of medical research.

The Nazis and Mengele: Symbols of Medical Evil

[6] Indeed, medicine in Nazi Germany has come to be almost synonymous with evil-doing in the name of science. Physicians sympathetic to Nazi ideology participated in programs in which disabled, insane, and comatose patients were involuntarily killed; and even some of the most prestigious German professors of medicine supported extermination of racially "inferior" people. In addition to "euthanasia," there was also a great deal of experimentation on human subjects, much of which was at least irregular and at worst almost unimaginably savage and brutal.

[7] Research on typhus is one example. From 1943 to 1945, experimental vaccines against typhus were given to prisoners on ward 46 of the concentration camp at Buchenwald: gay men, convicted criminals, Russian officers, Polish dissidents, Jews, and Gypsies. In one experiment, a medical professor from the Robert Koch Institute injected blood infected with

typhus into 40 involuntary subjects, who then served as a treatment group. All in all, about 1,000 prisoners were used, and 158 died (high morbidity occurred in unimmunized controls, almost all of whom died). No thresholds of infection were established.

[8] Deliberate harm to subjects also took place in other studies. In experiments at Buchenwald, hormones were implanted to "cure" homosexuality, inmates were shot to study gunshot wounds, inmates were starved to study the physiology of nutrition, and women's bones and limbs were surgically removed to study regeneration. In research on malaria, anopheles mosquitoes were flown in from swamps across the world to transmit malaria to subjects. Ernst Grawitz, Reich Physician of the SS (Schutzsteiffel, or secret police), infected the lower legs of women subjects with staphylococci, gas, and tetanus bacilli. In some subjects, particles of glass and stone were rubbed into wounds to test the efficacy of sulfa drugs.

[9] Experiments at Ravensbrück by Sigmund Rascher -- "the Captain" -- a doctor for the Luftwaffe (the German air force), were described later by a ward clerk named Eugene Kogon. To study human survival during rapid changes of altitude, Rascher devised something called a "sky ride wagon" which purportedly simulated such changes: an enclosed box on wheels with monitoring equipment inside. He reported that "the blood does not yet boil at an altitude of 70,000 feet." Rascher also experimented with revival after freezing; in this research, he killed about 70 of 200 involuntary subjects -- Jewish and Russian prisoners. These subjects were forced to strip and were then exposed to icy water or blizzards. Kogon wrote, "When their screams created too much of a disturbance, Rascher finally used anesthesia." In the next phase of the experiment, nude Jewish women were used to revive the subjects, and Rascher reported "in detail how revived subjects practiced sexual intercourse at 86 to 90 degrees Fahrenheit." The rationale of this study was supposed to be its application to Luftwaffe pilots downed in icy seas; but since nude women would hardly be available to revive such pilots, the actual point seems to have been little more than degradation of the subjects.

[10] At the concentration camp at Auschwitz, Josef Mengele, a physician who came to be known as the "angel of death," participated in the death of 400,000 victims. Since Mengele is the most infamous of the Nazi physicians, we should consider his career briefly here.

[11] Mengele was the oldest of three sons of a successful manufacturer of farm equipment and was raised as a conservative Catholic. He was above average in intelligence but seems to have achieved success in school more by hard work than by intellectual facility. Because he considered the family business too limiting, he chose medicine. Like many pioneering physicians, the young Josef Mengele was ambitious and sought fame. He studied in Munich between 1930 and 1936, with a special concentration in anthropological genetics; in the 1930s, this was a fashionable field and was part of a eugenics movement that had become influential in Germany and in the United States.

[12] In 1931, Munich was the center of the Nazi party and, as such, a center of the Nazi program of "racial purity." To advance himself with his politically conservative medical professors (in the German context, these were professors who simply accepted whatever power controlled political life), Mengele became a Brownshirt, that is, a Nazi storm trooper. Academically, he cultivated professors favored by the Nazis and oriented his own research to their interests; his doctoral thesis, which was published, was on racial jaw morphologies. His aim in research was to secure a full professorship -- a rare, highly prestigious appointment. In 1934, Mengele made another astute move by marrying a professor's daughter. Two of his biographers say, "They made a dashing young pair: Irene -- tall,

blonde, and good-looking; Mengele -- handsome in a Mediterranean way, dapper, and with a passion for fast cars."

[13] In May 1943, Mengele began a 20-month appointment as women's physician at Birkenau. His appalling experiments were conducted at nearby Auschwitz, though he was never officially assigned there. He began by clearing the camp of typhus, an accomplishment he achieved by "triaging" sick prisoners and gassing about 1,000 Gypsies; his superiors admired his methodical efficiency and unsentimental attitude toward the sick. Thereafter, he was able to focus on research that was part of his plan for his future professorship. This work was meant to find a way to overcome the effects of genetics by modifying the environment: more technically, to influence a phenotype to obtain a desired genotype. He wanted to find ways to produce traits such as blue eyes, blonde hair, and a healthy body free of genetic disease. As subjects, he needed identical twins, who would be "natural controls" for environmental differences.

[14] Eventually, Mengele would greet incoming trains of boxcars filled with Jews destined for execution. He would examine them, looking for twins and other usable subjects and signaling his choices by a flick of the wrist. The people he chose would live while they participated in his experiments; the rest would be killed at once.

[15] Mengele's experiments are painful even to describe. He experimented with six children to see if blue eyes could be obtained by injecting blue dye; when this study was finished, he cut out the twelve eyes and hung them on a wall of his laboratory, along with some other human organs. He forced female twins to engage in coitus with male twins to see if twin children would be produced. He interchanged blood of identical twins, to see what would happen; then he interchanged blood between pairs of twins. One pair of fraternal (nonidentical) twins -- children -- consisted of a hunchback and a normal child; Mengele surgically grafted the hunchback to the other child's back, creating the effect of conjoined twins, and accentuated this effect by also sewing their wrists back to back. A witness, Vera Alexander, reported that when the children came back to the barracks: "There was a terrible smell of gangrene. The cuts were dirty and the children cried every night." Mengele had many of his twins (between 150 and 200) killed; some of them he killed himself. Here is a description by another physician who was present at a series of executions:

After that, the first twin was brought in, a fourteen-year old girl. Dr. Mengele ordered me to undress the girl and put her head on the dissecting table. Then he injected the Epival into her right arm intravenously. After the child had fallen asleep, he felt for the left ventricle of the heart and injected 10 cc of chloroform. After one little twitch the child was dead, whereupon Dr. Mengele had her taken to the corpse chamber. In this manner, all fourteen twins were killed during the night.

[16] In other research, Mengele tried to establish limits of human endurance by subjecting 75 male and female prisoners to electric shock; 25 of them died immediately. To study sterility, he subjected a group of Polish nuns to high dosages of radiation, burning them severely. At one time, he found a hunchback and the hunchback's son; he had both of them killed, their bodies boiled, their flesh stripped, and their skeletons dipped in gasoline for preservation for his anthropological studies of body types. When he came upon seven dwarfs from a Romanian circus family, however, he kept them alive in order to exhibit them to visiting German physicians. Although his temper occasionally flared when anyone subverted his plans, Mengele was noted for being cool, impersonal, and detached. When, because of an oversight, 300 Jewish children managed to escape a gas chamber and fled to a nearby field, Mengele had them recaptured, then had a gasoline fire set in a large pit and had the children thrown in. Some of the children, on fire and screaming for their lives,

clawed their way over dead bodies to the top, where Mengele and SS men kicked them back in.

[17] As the Russian army approached Auschwitz in 1945, Mengele fled. Almost immediately, he was listed as a major war criminal; but even though he used his real name, he managed to escape to Brazil and Paraguay, where he lived in relative freedom for 40 years, several times eluding Simon Wiesenthal and other Israelis who tried to catch him. Later, in conversations with his grown son Rolf, Mengele never expressed any regret for his actions or even any consciousness of having done wrong. He reasoned that it was not his fault that Jews were to be killed at Auschwitz, and since they were to die anyway, why not use them first to advance medical knowledge, Nazi programs, and his own chance of a professorship? Mengele died in Brazil in the summer of 1985 (the identity of his body was confirmed by matching his DNA with DNA donated by his son).

[18] Mengele's actions are often attributed to a pathological personality, but it must be noted that he did not appear to be a psychopath. Of course, we could define his behavior as pathological: That is, we could say that anyone who behaves this way must be a psychopath. However, this would probably be simplistic, and it would fail to allow for what the philosopher Hannah Arendt calls the "banality of evil" -- the possibility that ordinary people, in relatively normal circumstances, can do terrible things. That the "banality of evil" may indeed be a reality seems to be strongly indicated by Stanley Milgram's research on obedience to authority.

The Nuremberg Code

[19] After World War II, at the Nuremberg trials in 1946, German physicians defended themselves against charges of war crimes by saying that they had merely been following orders, that their experiments had been properly related to solving medical problems of war, and that what they had done was not substantially different from research done on captives by American physicians.

[20] Although such a defense would be ludicrous for anyone like Mengele, it might have some credence for minor figures who may have conducted morally dubious research or mistreated their subjects without committing actual atrocities. However, a problem faced by the judges at Nuremberg in evaluating defenses, charges, and evidence was lack of a code of ethics for experimentation on captive populations. The judges therefore referred to 10 principles for permissible experimentation, which afterward came to be known as the *Nuremberg code*. The most important principle of the Nuremberg code was that captives should freely consent to participation in any experiment.

[21] It is noteworthy that one of the observers at the Nuremberg trials was a young physician named Leo Alexander. Later, in an article in *New England Journal of Medicine*, Alexander gave shocking details of Nazi experimentation and "euthanasia" and advanced a now famous "slippery slope" explanation.

American Military Research in World War II

[22] As noted above, some research in the United States during World War II was ethically questionable. In 1941, for example, American researchers experimented on orphans at the Ohio Soldiers and Sailors Orphanage, on retarded inmates at New Jersey State Colony for the Feeble-Minded, and on patients at a mental institution in Dixon, Illinois. One purpose of

this research was to develop a vaccine against shigella (a bacterial disease causing dysentery), and researchers injected deadened forms of shigella bacteria into their subjects. No one died as a direct result, but many of the subjects got very sick.

[23] Some questionable research used military personnel as subjects. Cornelius ("Dusty") Rhoads, director of the leading American cancer hospital -- Memorial Sloan Kettering in New York City -- became head of the military's secret chemical warfare service. As Robert Bazell, a science reporter for NBC, writes, Rhoads:

... supervised the long secret and now infamous tests where thousands of American troops were intentionally exposed to mustard and other poisonous gases. Rhoads discovered that the mustard gas killed white blood cells and other cells that divided rapidly. After the war he and others began to experiment with mustard gas as a cancer treatment and also to search for other systemic poisons that kill dividing cells.
[15]

[24] In 1966, in *New England Journal of Medicine*, Henry Beecher -- a medical professor at Harvard -- criticized 22 specific medical experiments involving human subjects. All of these studies had been published in medical journals, but none of them had obtained informed consent from subjects, and several of them bordered on abuse. Beecher claimed that these 22 studies were not exceptions but rather represented the norm of medical experimentation. At about the same time, another physician, Henry Pappworth, criticized 500 medical experiments on similar grounds.

[25] In considering such criticism, we need to keep a sense of proportion about abuse of subjects in American research, which of course is nothing like what went on in Nazi Germany. Moreover, the Nazi atrocities stemmed from systematic contempt for "undesirables," whereas abuses in American studies have arisen in a basically different way. In American medical research, mistreatment of subjects has tended to arise from conflicts of three types of goals: helping future patients, advancing the researchers' careers, and protecting the interests of subjects. That is, abuses typically arise when researchers fail to keep their subjects' welfare in balance with their other goals.

THE TUSKEGEE STUDY

[25] The Tuskegee study of syphilis began during the great depression -- around 1930 -- and lasted for 42 years. Because of its long time span, some historical background is important for understanding the many issues raised by the Tuskegee research.

The Medical Environment: Syphilis

[26] Syphilis is a chronic, contagious bacterial disease, often venereal and sometimes congenital. Its first symptom is a chancre; after this chancre subsides, the disease spreads silently for a time but then produces an outbreak of secondary symptoms such as fever, rash, and swollen lymph glands. Then the disease becomes latent for many years, after which it may reappear with a variety of symptoms in the nervous or circulatory systems. Today, syphilis is treated with penicillin or other antibiotics; but this treatment has been possible only since about 1946, when penicillin first became widely available.

[27] Until relatively recently, then, the common fate of victims of syphilis -- kings and queens, peasants and slaves -- was simply to suffer the sequelae once the first symptoms

had appeared. Victims who suffered this inevitable progress included Cleopatra, King Herod of Judea, Charlemagne, Henry VIII of England, Napoleon Bonaparte, Frederick the Great, Pope Sixtus IV, Pope Alexander VI, Pope Julius II, Catherine the Great, Christopher Columbus, Paul Gauguin, Franz Schubert, Albrecht Dürer, Johann Wolfgang von Goethe, Friedrich Nietzsche, John Keats, and James Joyce.

[28] It is generally believed that syphilis was brought to Europe from the new world during the 1490s by Christopher Columbus's crews, but the disease may have appeared in Europe before that time. In any case, advances in transportation contributed greatly to the spread of syphilis (similarly, much later, transportation would be a factor in the spread of AIDS). For hundreds of years, syphilis was attributed to sin and was associated with prostitutes, though attempts to check its spread by expelling prostitutes failed because their customers were disregarded. Efforts to eradicate it by quarantine also failed.

[29] In the eighteenth century, standing professional armies began to be established, and with them came a general acceptance of high rates of venereal disease. It is estimated, for instance, that around the year 1900, one-fifth of the British army had syphilis or gonorrhea.

[30] Between 1900 and 1948, and especially during the two world wars, American reformers mounted what was called a *syphilophobia* campaign: the Social Hygiene Movement or Purity Crusade. Members of the campaign emphasized that syphilis was spread by prostitutes, and held that it was rapidly fatal; as an alternative to visiting a prostitute, they advocated clean, active sports (also called "muscular Christianity"). According to the medical historian Alan Brandt, there were two splits resulting from disagreements within this reform movement: once during World War I, when giving out condoms was controversial; and later during World War II, when giving out penicillin was at issue. In each of these conflicts, reformers whose basic intention was to reduce the physical harm of syphilis were on one side, whereas those who wanted to reduce illicit behavior were on the other side.

[31] The armed services during the world wars took a pragmatic position. Commanders who needed healthy troops overruled the moralists and ordered the release of condoms in the first war and penicillin in the second -- and these continued to be used by returning troops after each war.

[32] The spirochete (bacterium) which causes syphilis was discovered by Fritz Schaudinn in 1906. Syphilis is, classically, described in three stages:

- *Primary syphilis*. In this first stage, spirochetes mass and produce a primary lesion causing a *chancre* (pronounced "SHANK-er"). During the primary stage, syphilis is highly infectious.
- *Secondary syphilis*. In the second stage, spirochetes disseminate from the primary lesion throughout the body, producing systemic and widespread lesions, usually in internal organs and other internal sites. Externally, however -- after the initial chancre subsides -- syphilis spreads silently during a "latent" period lasting from 1 to 30 years, although secondary symptoms such as fever, rash, and swollen glands may appear. During the secondary stage, the symptoms of syphilis vary so widely that it is known as the "great imitator."
- *Tertiary syphilis*. In the third stage, chronic destructive lesions cause major damage to the cardiac system, the neurological system, or both, partly because immune responses decrease with age. During the tertiary stage, syphilis may produce paresis (slight or

incomplete paralysis), gummas (gummy or rubbery tumors), altered gait, blindness, or lethal narrowing of the aorta.

[33] Beginning in the sixteenth century, mercury -- a heavy metal -- was the common treatment for syphilis; it was applied to the back as a paste and absorbed through the skin. During the nineteenth century, this treatment alternated with bismuth, another heavy metal administered the same way. Neither mercury nor bismuth killed the spirochetes, though either could ameliorate symptoms.

[34] In 1909, after the spirochete of syphilis had been identified, two researchers -- a German, Paul Erlich, and a Japanese, S. Hata -- tried 605 forms of arsenic and finally discovered what seemed to be a "magic bullet" against it: combination 606 of heavy metals including arsenic. Erlich called this salvarsan and patented it; the generic name is arsphenamine. Salvarsan was administered as an intramuscular injection. After finding that it cured syphilis in rabbits, Erlich injected it into men with syphilis. (According to common practice, none of the men was asked to consent.)

[35] At first, salvarsan seemed to work wonders, and during 1910 Erlich was receiving standing ovations at medical meetings. Later, however, syphilis recurred, fatally, in some patients who had been treated with salvarsan; furthermore, salvarsan itself apparently killed some patients. Erlich maintained that the drug had not been given correctly, but he also developed another form, neosalvarsan, which was less toxic and could be given more easily. Neosalvarsan also was injected intramuscularly -- ideally, in 20 to 40 dosages given over 1 year.

[36] Though better than salvarsan, neosalvarsan was (as described by a physician of the time) used erratically, and "generally without rhyme or reason -- an injection now and then, possibly for a symptom, [for] some skin lesion, or when the patient had a ten-dollar bill." It was also expensive. Moreover, neither salvarsan nor neosalvarsan was a "magic bullet" for patients with tertiary syphilis.

[37] Another researcher, Caesar Boeck in Norway, took a different approach: From 1891 to 1910, he studied the natural course of untreated syphilis in 1,978 subjects. Boeck, a professor of dermatology at the University of Oslo, believed that heavy metals removed only the symptoms of syphilis rather than its underlying cause; he also thought that these metals suppressed what is today recognized as the immune system. He therefore decided that not treating patients at all might be an improvement over treatment with heavy metals.

[38] In 1929, Boeck's student and successor, J. E. Bruusgaard, selected 473 of Boeck's subjects for further evaluation, in many cases examining their hospital charts. This method had an obvious bias, since the more severely affected of Boeck's subjects would be most likely to have hospital records. Despite this bias, however, Bruusgaard was surprised to find that in 65 percent of these cases, either the subjects were externally symptom free or there was no mention in their charts of the classic symptoms of syphilis. Of the subjects who had had syphilis for more than 20 years, 73 percent were asymptomatic.

[39] Bruusgaard's findings contradicted the message of the syphilophobia campaign: They indicated that syphilis was not universally fatal, much less rapidly so. These results also suggested the possibility that some people with syphilis spirochetes would never develop any symptoms of the disease.

[40] When the Tuskegee study began in 1932, Boeck's and Bruusgaard's work was the only existing study of the natural course of untreated syphilis.

The Racial Environment

[41] In the 1930s, American medicine was, and had long been, widely racist -- certainly by our present standards and to some extent even by the standards of the time. For at least a century before the Tuskegee study began, most physicians condescended to African-American patients, held stereotypes about them, and sometimes used them as subjects of nontherapeutic experiments.

[42] In the decades of slavery before the U.S. Civil War, southern physicians and white slave-owners only treated medical conditions necessary to protect their investment in human "property." John Brown, a former slave who wrote a book about his life under slavery, described how a physician in Georgia kept him in an open-pit oven to produce sunburns and to try out different remedies.

[43] The best-known account of the racial background of the Tuskegee study is James Jones's *Bad Blood* (the significance of the title will become apparent later in this chapter). In the late nineteenth century, the United States was swept by social Darwinism, a popular corruption of Darwin's theory of evolution by natural selection. Some whites predicted on this basis that the Negro race (to use the term then current) would be extinct by 1900: Their idea was that Darwin's "survival of the fittest" implied a competition which Negroes would lose. (It bears repeating that this is a misconception and misapplication of Darwin's actual theory.) According to Jones, this popular belief was shared by white physicians, who thought that it was confirmed by defects in African-Americans' anatomy and therefore became obsessed with the details of such presumed defects. Although comparable defects in white patients went unreported, defects in black patients were described in great detail in medical journals and became the basis for sweeping conclusions; to take one example, genital development and brain development were said to vary inversely.

[44] In addition to social Darwinism, physicians shared many of the popular stereotypes of African-Americans; well into the twentieth century, physicians often simply advanced such stereotypes as "facts." The following example appeared in *Journal of the American Medical Association* in 1914:

The negro springs from a southern race, and as such his sexual appetite is strong: all of his environments stimulate this appetite, and as a general rule his emotional type of religion certainly does not decrease it.

[45] African-Americans were also seen as dirty, shiftless, promiscuous, and incapable of practicing personal hygiene. Around the turn of the century, a physician in rural Georgia wrote, "Virtue in the negro race is like 'angels' visits -- few and far between. In a practice of sixteen years in the South, I have never examined a virgin over fourteen years of age." In 1919, a medical professor in Chicago wrote that African American men were like bulls or elephants in furor scxualis, unable to refrain from copulation when in the presence of females.

[46] Ideas about syphilis reflected this racial environment. For white physicians at the time when the Tuskegee study began, syphilis was a natural consequence of the innately low character of African-Americans, who were described by one white physician as a

"notoriously syphilis-soaked race." Moreover, it was simply assumed that African-American men would not seek treatment for venereal disease.

[47] The historian Alan Brandt has suggested that in the United States during the early 1900s, it was a rare white physician who was not a racist -- and that this would have remained the case throughout many years of the Tuskegee study. He writes, "There can be little doubt that the Tuskegee researchers regarded their subjects as less than human."

Development of the Tuskegee Case

[48] **A. "Study in Nature" Begins** Studies in nature were distinguished from experiments in 1865 by a famous experimenter and physiologist, Claude Bernard: In an experiment, some factor is manipulated, whereas a study in nature merely observes what would happen anyway. For a century before the Tuskegee study, medicine considered it crucially important to discover the natural history of a disease and therefore relied extensively on studies in nature.

[49] The great physician William Osler had said, "Know syphilis in all its manifestations and relations, and all other things clinical will be added unto you." As late as 1932, however, the natural history of syphilis had not been conclusively documented (the only existing study, as noted above, was that of Boeck and Bruusgaard), and there was uncertainty about the inexorability of its course. The United States Public Health Service (USPHS) believed that a study in nature of syphilis was necessary because physicians needed to know its natural sequence of symptoms and final outcomes in order to recognize key changes during its course. This perceived need was one factor in the Tuskegee research.

[50] A second factor was simply that USPHS found what it considered an opportunity for such a study. Around 1929, there were several counties in the United States where venereal disease was extraordinarily prevalent, and a philanthropic organization -- the Julius Rosenwald Foundation in Philadelphia -- started a project to eradicate it. With help from USPHS, the foundation originally intended to treat with neosalvarsan all syphilitics in six counties with rates of syphilis above 20 percent. In 1930, the foundation surveyed African-American men in Macon County, Alabama, which was then 82 percent black; this was the home of the famous Tuskegee Institute. The survey found the highest rate of syphilis in the nation: 36 percent. The foundation planned a demonstration study in which these African-American syphilitics would be treated with neosalvarsan, and it did treat or partially treat some of the 3,694 men who had been identified as having syphilis (estimates of how many received treatment or partial treatment range from less than half to 95 percent). However, 1929 was the year when the great Depression began; as it ground on, funds for philanthropy plummeted, and the Rosenwald Foundation pulled out of Tuskegee, hoping that USPHS would continue the treatment program. (Funds available for public health were also dropping, though: USPHS would soon see its budget lowered from over \$1 million before the depression to less than \$60,000 in 1935.)

[51] In 1931, USPHS repeated the foundation's survey in Macon County, testing 4,400 African-American residents; USPHS found a 22 percent rate of syphilis in men, and a 62 percent rate of congenital syphilis. In this survey, 399 African-American men were identified who had syphilis of several years' duration but had never been treated by the Rosenwald Foundation or in any other way. It was the identification of these 399 untreated men that USPHS saw as an ideal opportunity for a study in the nature of syphilis. The surgeon general suggested that they should be merely observed rather than treated: This decision would become a moral crux of the study.

[52] It is important to reemphasize that the USPHS research -- it was undertaken in cooperation with the Tuskegee Institute and is called the *Tuskegee study* for that reason -- was a study in nature. The Tuskegee physicians saw themselves as ecological biologists, simply observing what occurred regularly and naturally. In 1936, a paper in *Journal of the American Medical Association* by the surgeon general and his top assistants described the 1932-1933 phase of the Tuskegee study as "an unusual opportunity to study the untreated syphilitic patient from the beginning of the disease to the death of the infected person." It noted specifically that the study consisted of "399 syphilitic Negro males who had never received treatment."

[53] There are also two important points to emphasize about the subjects of the Tuskegee study. First, at the outset the 399 syphilitic subjects had *latent syphilis*, that is, secondary syphilis; most of them were probably in the early latent stage. During this stage, syphilis is largely noninfectious during sexual intercourse, although it can be passed easily through a blood transfusion (or, in a pregnant woman, through the placenta). However, latent or secondary syphilis (as noted above) has extremely variable symptoms and outcomes; and external lesions, which can be a source of infection during sex, do sometimes appear.

[54] Second, these 399 syphilitic subjects were not divided into the typical experimental and control or "treatment" and "no treatment" groups: They were all simply to be observed. There was, however, another group of "controls," consisting of about 200 age-matched men who did not have syphilis. (Originally, there was also a third group, consisting of 275 syphilitic men who had been treated with small amounts of arsphenamine; these subjects were followed for a while but were dropped from the study in 1936 -- perhaps because funds were lacking, or perhaps because the researchers were by then interested only in the "study in nature" group.)

[55] **The Middle Phase: "Bad Blood"** The Tuskegee study was hardly a model of scientific research or scientific method; and even on its own terms, as a study in nature, it was carried out rather haphazardly. Except for an African-American nurse, Eunice Rivers, who was permanently assigned to the study, there was no continuity of medical personnel. There was no central supervision; there were no written protocols; no physician was in charge. Names of the subjects in the study group of 399 were often mixed up with the "controls." The subjects were not housed at any one location or facility. Most worked as sharecroppers or as small farmers and simply came into the town of Tuskegee when Eunice Rivers told them to do so (she would drive them into town in her car, a ride that several subjects described as making them feel important).

[56] There were large gaps in the study. The "federal doctors," as the subjects called them, returned only every few years. Visits are documented in 1939 and then not again until 1948; 7 years passed between visits in 1963 and 1970. Only the nurse, Eunice Rivers, remained to hold the shaky study together. When the physicians did return to Tuskegee after a gap, they found it difficult to answer their own questions because the records were so poor.

[57] Still, there were some rudimentary procedures. The physicians wanted to know, first, if they had a subject in the study group; and second, if so, how far his syphilis had progressed. To determine the progress of the disease, spinal punctures (called taps) were given to 271 of the 399 syphilitic subjects. In a spinal tap, a 10-inch needle is inserted between two vertebrae into the cerebrospinal fluid and a small amount of fluid is withdrawn

-- a delicate and uncomfortable process. The subjects were warned to lie very still, lest the needle swerve and puncture the fluid sac, causing infection and other complications.

[58] Subjects were understandably reluctant to leave their farms, travel for miles over back roads to meet the physicians, and then undergo these painful taps, especially when they had no pressing medical problem. For this reason, the physicians offered inducements: free transportation, free hot lunches, free medicine for any disease other than syphilis, and free burials. (The free burials were important to poor subjects, who often died without enough money for even a pauper's grave; but USPHS couldn't keep this promise itself after its budget was reduced and had to be rescued by the Milbank Memorial Fund.) In return for these "benefits," the physicians got not only the spinal taps but, later, autopsies to see what damage syphilis had or had not done.

[59] There seems no doubt that the researchers also resorted to deception. Subjects were told that they had "bad blood" and that the spinal taps were "treatment" for it; moreover, the researchers sensationalized the effects of untreated "bad blood." USPHS sent the subjects the following letter, under the imposing letterhead "Macon County Health Department," with the subheading "Alabama State Board of Health and U.S. Public Health Service Cooperating with Tuskegee Institute" (all of which participated in the study):

Dear Sir: Some time ago you were given a thorough examination and since that time we hope you have gotten a great deal of treatment for bad blood. You will now be given your last chance to get a second examination. This examination is a very special one and after it is finished you will be given a special treatment if it is believed you are in a condition to stand it.

[60] The "special treatment" mentioned was simply the spinal tap for neurosyphilis, a diagnostic test. The subjects were instructed to meet the public health nurse for transportation to "Tuskegee Institute Hospital for this free treatment." The letter closed, in capitals:

REMEMBER THIS IS YOUR LAST CHANCE FOR SPECIAL FREE TREATMENT. SURE TO MEET THE NURSE.

[61] To repeat, the researchers never treated the subjects for syphilis. In fact, during World War II, the researchers contacted the local draft board and prevented any eligible subject from being drafted -- and hence from being treated for syphilis by the armed services. Although penicillin was developed around 1941-1943 and was widely available by 1946, the subjects in the Tuskegee study never received it, even during the 1960s or 1970s. However, as will be discussed below, it is not clear how much the subjects with late noninfectious syphilis were harmed by not getting penicillin.

[62] **The First Investigations** In 1966, Peter Buxtun, a recent college graduate, had just been hired by USPHS as a venereal disease investigator in San Francisco. After a few months, he learned of the Tuskegee study and began to question and criticize the USPHS officials who were still running it. 33 By this time, the physicians supervising the study and its data collection had been moved to the newly created Centers for Disease Control (CDC) in Atlanta. CDC officials were annoyed by Buxtun's questions about the morality of the study; later in 1966, having invited him to Atlanta for a conference on syphilis, they harangued him and tried to get him to be silent. He expected to be fired from USPHS; he was not, though, and he continued to press CDC for 2 more years.

[63] By 1969, Buxtun's inquiries and protests led to a meeting of a small group of physicians at CDC to consider the Tuskegee study. The group consisted of William J. Brown (Director of Venereal Diseases at CDC), David Sencer (Director of CDC), Ira Meyers (Alabama's State Health Officer from 1951 to 1986), Sidney Olansky (a physician at Emory Hospital who was knowledgeable about the early years of the study and had been in charge of it in 1951), Lawton Smith (an ophthalmologist from the University of Miami), and Gene Stollerman (chairman of medicine at the University of Tennessee). In general, this group avoided Buxtun's questions about the morality of the study and focused on whether continuing the study would harm the subjects. Meyers said of the Tuskegee subjects, "I haven't seen this group, but I don't think they would submit to treatment" if they were told what was going on. Smith (the ophthalmologist) pressed hardest for continuing the study; only Stollerman repeatedly opposed continuing it, on both moral and therapeutic grounds. At the end, the committee overrode Stollerman and voted to continue the study.

[64] Also in 1969, Ira Meyers told the physicians in the Macon County Medical Society about the Tuskegee study. These physicians did not object to the study; in fact, they were given a list of all the subjects and agreed not to give antibiotics to any subject for any condition, if a subject came to one of their offices. It should be noted that although this medical society had been all white in the 1930s, during the 1960s its membership was almost entirely African-American.

[65] In 1970, a monograph on syphilis was published, sponsored by the American Public Health Association, to give useful information to public health officers and venereal disease (VD) control officers. This monograph stated that treatment for late benign syphilis should consist of "6.0 to 9.0 million units of benzathine penicillin G given 3.0 million units at sessions seven days apart." The first author listed on the monograph is William J. Brown, head of CDC's Tuskegee section from 1957 to 1971. Brown had been on the CDC panel in 1969 (when the monograph was probably written) and had argued for continuing the Tuskegee study, in which, of course, subjects with late benign syphilis received no penicillin.

[66] **The Story Breaks** In July of 1972, Peter Buxtun, who had then been criticizing the Tuskegee research for 6 years and was disappointed by CDC's refusal to stop it, mentioned the Tuskegee study to a friend who was a reporter for the Associated Press (AP) on the west coast. Another AP reporter -- Jean Heller, on the east coast -- was assigned to the story, and on the morning of July 26, 1972, her report appeared on front pages of newspapers nationwide.

[67] Heller's story described a medical study run by the federal government in Tuskegee, Alabama, in which poor, uneducated African-American men had been used as "guinea pigs." After noting the terrible effects of tertiary syphilis, the story said that in 1969 a CDC study of 276 of the untreated subjects had proved that at least 7 subjects died "as a direct result of syphilis."

[68] Heller's story had an immediate effect. (it might have made even more of an impact, but it was competing with a political story which broke the same day -- a report that the Democratic candidate for vice president, Thomas Eagleton, had received shock therapy for depression.) Some members of Congress were amazed to learn of the Tuskegee study, and Senator William Proxmire called it a "moral and ethical nightmare."

[69] CDC, of course, responded. J. D. Millar, chief of Venereal Disease Control, said that the study "was never clandestine," pointing to 15 published articles in medical and scientific journals over a 30-year span. Millar also maintained that the subjects had been informed

that they could get treatment for syphilis at any time. "Patients were not denied drugs," he said; "rather, they were not offered drugs." He also tried to emphasize that "the study began when attitudes were much different on treatment and experimentation."

[70] The public and the press, however, scorned Millar's explanations. One political cartoon, for instance, showed a frail African-American man being studied under a huge microscope by a white man in a white coat with a sign in the background: "This is a NO-TREATMENT study by your Public Health Service." Another cartoon showed ragged African-American men walking past tombstones; the caption read: "Secret Tuskegee Study-free autopsy, free burial, plus \$100 bonus." Another showed a white physician standing near the body of an African-American man, partially covered by a sheet; the chart at the foot of the hospital bed on which the body lay read "ignore this syphilis patient (experiment in progress)"; in the background, a skeptical nurse holding a syringe asked, "Now can we give him penicillin?"

[71] CDC and USPHS had always feared a "public relations problem" if the Tuskegee study became generally known, and now they had one. So did the Macon County Medical Society: When its president told the *Montgomery Advertiser* that the members had voted to identify remaining subjects and give them "appropriate therapy," USPHS in Atlanta flatly contradicted him, retorting that the local physicians -- African-American physicians -- had accepted the Tuskegee study. The society then acknowledged that it had agreed to continuation of the study but had not agreed to withhold treatment from subjects who came to the offices of its members, whereupon USPHS documented the physicians' agreement to do exactly that.

[72] **The Aftermath** Almost immediately after Heller's story appeared, Congress commissioned a special panel to investigate the Tuskegee study and issue a report. (The report was supposed to be ready by December 31, 1972; as we will see, however, it was late.)

[73] Also almost at once, senators Sparkman and Allen of Alabama (both Democrats) sponsored a federal bill to give each of the Tuskegee subjects \$25,000 in compensation. The southern African-American electorate had been instrumental in electing these two senators and many southern members of Congress in the 1960s and 1970s, as well as presidents Kennedy and Johnson.

[74] On November 16, 1972, Casper Weinberger, Secretary of Health, Education, and Welfare (HEW), officially terminated the Tuskegee study. At that time, CDC estimated that 28 of the original syphilitic group had died of syphilis during the study; after the study was ended, the remaining syphilitic subjects received penicillin.

[75] In February and March 1973, Senator Edward Kennedy's Subcommittee on Health of the Committee on Labor and Public Welfare held hearings on the Tuskegee study. Two of the Tuskegee subjects, Charles Pollard and Lester Scott, testified; one of them appeared to have been blinded by late-stage syphilis. These two men revealed more about the study: Pollard said they had not been told that they had syphilis; both said they thought "bad blood" meant something like low energy. Kennedy strongly condemned the study and proposed new regulations for medical experimentation.

[76] In April 1973, the investigatory panel that had been commissioned when the Tuskegee story broke finally issued its report, which did not prove to be very useful. Moreover, for some reason this panel had met behind closed doors, and thus reporters had not been able to cover it.

[77] On July 23, 1973, Fred Gray, representing some of the Tuskegee subjects, filed a class-action suit against the federal government. Gray, a former Alabama legislator (in 1970, he had become the first African-American Democrat elected in Alabama since Reconstruction), had been threatening to sue for compensation since Heller's story first broke, hoping for a settlement. He presented the suit as an issue of race, suing only the federal government and omitting the Tuskegee Institute, Rivers, the Tuskegee hospitals, and the Macon County Medical Society.

[78] Eventually, the Justice Department decided that it couldn't win the suit in federal court, since the trial would have been held in nearby Montgomery, in the court of Frank Johnson, a liberal Alabama judge who had desegregated southern schools and upgraded mental institutions. Therefore, in December 1974 the government settled out of court.

[79] According to the settlement, "living syphilitics" (subjects alive on July 23, 1973) received \$37,500 each; "heirs of deceased syphilitics," \$15,000 (since some children might have congenital syphilis); "living controls," \$16,000; heirs of "deceased controls," \$5,000. (Controls and their descendants were compensated because they had been prevented from getting antibiotics during the years of the study.) Also, the federal government agreed to provide free lifetime medical care for Tuskegee subjects, their wives, and their children. By September 1988, the government had paid \$7.5 million for medical care for the Tuskegee subjects. At that time, 21 of the original syphilitic subjects were still alive -- each of whom had had syphilis for at least 57 years. In addition, 41 wives and 19 children had evidence of syphilis and were receiving free medical care.

[80] By the time this settlement was reached, more than 18 months had passed since Jean Heller's first story, and the Tuskegee issue was no longer front-page news: even the *New York Times* was giving it only an occasional short paragraph or two on inside pages. The issue was, after all, complicated; ethical standards had changed over the long course of the Tuskegee research; and, as noted above, the special panel commissioned to evaluate the study had met in secret. The public, therefore, had more or less forgotten about the Tuskegee study.

THE NUREMBERG CODE

[From "Permissible Medical Experiments," *Trials of War Criminals before the Nuernberg Militant Tribunals under Control Council Law No. 10: Nuernnberg, October 1946-April 1949* (Washington: U.S. Government Printing Office, vol., 2), 181-182.]

(1) The voluntary consent of the human subject is absolutely essential.

This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an affirmative decision by the experimental subject there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonably to be expected; and the effects upon his health or person which may possibly come from his participation in the experiment.

The duty and responsibility for ascertaining the quality of the consent rests upon each individual who initiates, directs or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity.

(2) The experiment should be such as to yield fruitful results for the good of society, unprocurable by other methods or means of study, and not random and unnecessary in nature.

(3) The experiment should be so designed and based on the results of animal experimentation and a knowledge of the natural history of the disease or other problem under study that the anticipated results will justify the performance of the experiment.

(4) The experiment should be so conducted as to avoid all unnecessary physical and mental suffering and injury.

(5) No experiment should be conducted where there is an *a priori* reason to believe that death or disabling injury will occur; except, perhaps, in those experiments where the experimental physicians also serve as subjects.

(6) The degree of risk to be taken should never exceed that determined by the humanitarian importance of the problem to be solved by the experiment.

(7) Proper preparations should be made and adequate facilities provided to protect the experimental subject against even remote possibilities of injury, disability, or death.

(8) The experiment should be conducted only by scientifically qualified persons. The highest degree of skill and care should be required through all stages of the experiment of those who conduct or engage in the experiment.

(9) During the course of the experiment the human subject should be at liberty to bring the experiment to an end if he has reached the physical or mental state where continuation of the experiment seems to him to be impossible.

(10) During the course of the experiment the scientist in charge must be prepared to terminate the experiment at any stage, if he has probable cause to believe, in the exercise of the good faith, superior skill and careful judgment required of him that a continuation of the experiment is likely to result in injury, disability, or death to the experimental subject.

Children and "minimal risk" research: The Kennedy -Krieger lead paint study

Alex John London

[1] In 1993 the Kennedy Krieger Institute (KKI), a Johns Hopkins affiliated children's hospital and research center, received a \$200,000 grant from the U.S. Environmental Protection Agency to study the short and long-term efficacy of several different strategies for removing or containing lead-paint in residential housing units in Baltimore City. For researchers at the prestigious research center, the grant represented an important step in the KKI's ongoing fight to encourage a more proactive approach to preventing lead poisoning in children. In August of 2001, however, less than a decade after the study's inception, the Maryland Court of Appeals would compare the study to some of the darkest and most troubling abuses of human subjects in history, including the Tuskegee Syphilis Study and the typhus experiments at Buchenwald concentration camp during World War II.

[2] Unlike many industrialized nations that banned the use of lead paint for interior use at the dawn of the twentieth century, it was not until 1978 that the U.S. outlawed its use. As a result, even in early 1990's it was estimated that 35-40% of children from low-income inner-city neighborhoods nationwide had dangerous levels of lead in their blood, compared to only 5% of non-Hispanic white children living outside of city centers. In some urban areas the prevalence of lead paint in low-income housing was particularly high. Researchers from the KKI estimated that as many as 95% of the low-income housing units in Baltimore's inner city neighborhoods were contaminated with lead paint and the number of children from those neighborhoods with elevated blood lead levels was estimated to be as high as two thirds. Children are at special risk for lead poisoning because their high rate of hand-to-mouth activity increases the likelihood that they will ingest the lead-contaminated dust generated by deteriorating paints. When lead is absorbed into their bodies it can adversely affect their cognitive development, behavior, and growth. In fact, extremely high levels of lead can precipitate seizures, coma, and even death.

[3] Safely removing lead paint from home interiors poses special challenges. In the late 1980's researchers at the KKI helped to show that traditional methods of removing lead paint -- burning or scraping it off -- actually generated large amounts of contaminated dust, thereby exacerbating the hazard for the children who would occupy those homes. New methods of abatement would have to be developed that would provide safer methods of removing or containing the hazard posed by the poisonous paint. In addition, in urban settings where affordable low-income housing is at a premium, the cost of removing lead from rental units frequently exceeds the value of the properties themselves. When faced with the financial burdens of abating what are often only marginally profitable properties in the first place, many landlords chose simply to close their properties and leave them unoccupied. In 1990 the Department of Housing and Urban Development estimated the cost of complete lead abatement nationwide at roughly \$500 billion.

[4] Prior to the 1993 study, researchers at the KKI had shown that several more economical strategies for removing or controlling lead paint could effectively reduce the amount of lead-contaminated dust in empty houses. In order to know whether these strategies would translate into a similar reduction of lead poisoning in children, researchers wanted to measure the effectiveness of these strategies in terms of their impact on the blood lead levels of children who would occupy such units. The 1993 study would therefore measure

lead levels in household dust and in the blood of children residing in housing units involved in the study.

[5] The study included 75 housing units that were divided into five groups. Group I houses received a minimal level of repair and maintenance costing approximately \$1,650. Group II houses received a greater level of repair and maintenance costing approximately \$3,500. Repair and maintenance in Group III houses was more extensive and cost between \$6,000 and \$7,000. The study also included two control groups. Group IV properties consisted of houses that had been fully abated by the city under a local government program. Because of the extent of this previous abatement, these properties received no additional repair or maintenance. Finally, Group V properties were modern units constructed after 1980 in which it could reasonably be assumed that no lead paints had been used.

[6] Researchers from the KKI worked with landlords to obtain grants and loans to fund these repairs. In many cases the properties were already occupied by families prior to the inception of the study, but when properties were vacant, landlords were encouraged to rent to families with small children. In all cases, researchers were looking for families with healthy children between 5 and 48 months old who did not have plans to leave the properties before the study was completed. Parents were asked to sign consent forms in which they were informed that the purpose of the study was to measure the effectiveness of repairs that were intended to reduce, but not to completely remove, the lead exposure in their home. In return for their participation they received small payments of \$5 and \$15 and they were told that the KKI would provide them with the results of the periodic blood lead testing.

[7] To the researchers conducting the study, this was a win-win situation. Every property in the study had received what they believed was a significant level of lead abatement and, as a result, the families residing in those properties faced lower risks than they would have experienced if they had lived in comparable properties that had not been so repaired. Additionally, the data generated by this study would provide valuable information about the efficacy of more affordable measures of reducing and controlling lead exposure for reducing child lead poisoning. If successful, these measures would offer significant and affordable means of reducing a widespread public health hazard that disproportionately affects the poorest and most vulnerable populations of children in the U.S.

[8] Some of the families that participated in the study had different views. Two families in particular brought law suits against the KKI alleging that their respective children were poisoned, or were at least exposed to the risk of being poisoned, by lead dust due to the negligence of the KKI researchers. They also alleged that they were not fully informed of the risks of the research and that the KM failed to warn them in a timely manner of the children's exposure to the known presence of lead. In August of 2001 the Maryland Court of Appeals unanimously overturned a lower court decision that would have barred the suits from going forward. Six of the seven judges signed on to an opinion that offered a sweeping indictment of the lead paint study.

[9] Writing for these six judges, Judge Dale R. Cathell criticized the basic design of the study:

Otherwise healthy children, in our view, should not be enticed into living in, or remaining in, potentially leadtainted housing and intentionally subjected to a research program, which contemplates the probability, or even the possibility, of lead poisoning or even the accumulation of lower levels of lead in blood, in order for

the extent of the contamination of the children's blood to be used by scientific researchers to assess the success of lead paint or lead dust abatement measures.

[10] To the court, the language of the consent form did not provide a clear and complete explanation that the purpose of the study was to measure the efficacy of the abatement procedures by measuring the extent to which the children's blood was being contaminated. As a result, it was not clear that the parents understood that the very design of the research presupposed the accumulation of lead in their children's blood.

[11] The extent to which the families that participated in this study understood its design and purpose is a question that was disputed before the court. Judge Cathell was clear, however, that in the court's view "parents, whether improperly enticed by trinkets, food stamps, money or other items, have no more right to intentionally and unnecessarily place children in potentially hazardous nontherapeutic research surroundings, than do researchers. In such cases, parental consent, no matter how informed, is insufficient" (p. 7). In fact, the majority went even further, stating that, "We hold that in Maryland a parent, appropriate relative, or other applicable surrogate, cannot consent to the participation of a child or other person under legal disability in nontherapeutic research or studies in which there is any risk of injury or damage to the health of the subject" (pp. 89-90).

[11] As a result of this decision, the substantive legal issues raised by these lawsuits will be argued before a trial court. But many observers were surprised by the scope and severity of the Appeals Court opinion. In the estimation of the court, the KKI lead paint study was similar to research abuses of the past in which vulnerable populations were knowingly subjected to harmful or poisonous substances, not for some direct benefit to themselves, but in order to generate generalizable scientific data. Those who agree with the court will argue that children from low-income inner city families are already disadvantaged in ways that their more affluent middle and upper class counterparts are not. The high prevalence of lead in their living quarters, and the significant threat it poses to their mental and physical health, is simply one particularly visible way in which the opportunity range of these children is unfairly limited by their poverty. Why should the fact that poverty consigns many of these children to toxic housing conditions justify providing them with less stringent research protections than would be extended to children from more affluent and socially mobile families? Does their poverty and lower-income social status make the lead to which they were exposed in this study less toxic, or the risks to their health less profound or important?

[12] In defense of this study, the KKI has argued that the methods they employed "were then believed to be the best practices within high-risk housing" and that the interventions and follow up provided by the study "were greater than those children would have received without the Study and likely would not have occurred without the Study." They estimate that the lead reduction measures implemented in these properties improved them by approximately 80% over all other existing housing alternatives in these neighborhoods. They also note that "The Court was silent with respect to the obligations of various levels of government that tolerated the evidence of lead paint for decades, and a society that does not offer realistic options for low income families to move out of high risk neighborhoods." Relative to the thousands of families living in nonabated houses, the subjects of this study could reasonably be said to have benefited by their participation. Furthermore, one reason for the inaction of the public and private sectors in the face of this pervasive public health hazard is a reluctance to pay the high cost of lead abatement procedures whose relative merits over less expensive alternatives have not been clearly quantified. From this point of view, the KKI can be seen as a well-intentioned agent of social reform seeking to provide

clear data on effective means of curbing a public health problem that will otherwise persist and continue to damage the lives of innocent lower-income inner-city children.

[13] In ruling that parents and guardians cannot consent to the participation of children in research that poses any degree of risk, the Maryland Court of Appeals enunciated an ideal for research protections that could threaten the permissibility of important pediatric research. Is this standard too high? The current federal regulations permit research on children that is a minor increment over minimal risk, where minimal risk is defined as "the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests." Would the KKI lead paint study be permissible in high-risk neighborhoods of Baltimore City, but not in newer, wealthier suburbs, because the inner city children are exposed to higher risks of lead poisoning in their daily lives whereas their suburban counterparts are not?

[14] Even after the legal questions raised by this case are settled, other ethical issues will likely remain. In particular, this case raises troubling questions about the role of research into health problems that are due, in large part, to social and economic inequalities between populations. When the ultimate goal is to get local and federal agencies to spend the money it will take to alleviate the lead hazards in low-income neighborhoods, is it permissible to conduct research in which the protections afforded to subjects fall below standards that are enjoyed by wealthier members of society? Should the way a trial is designed be determined by whether or not the social will exists to spend significant amounts of money to improve the housing conditions of largely low-income inner city populations? Is there a guarantee that the social will exists to spend smaller, but still significant amounts of money to reduce, but not eliminate such hazards? Should it be required before such research can begin that there be an agreement in place guaranteeing that some money will be spent to implement an effective lead abatement strategy in the places where research is conducted? In criticizing the design of this study are critics washing their hands of the larger public health and social justice issues that the researchers were hoping this study would address?

[15] While the Court of Appeals compared the KKI study to the infamous Tuskegee Syphilis Study, the above questions suggest that a more instructive comparison might be the internationally sponsored short course AZT trials that were conducted in developing countries in collaboration with entities from the developed world. In both cases the proposed research was designed to be responsive to a health problem that disproportionately affects one population, but not some others. Furthermore, in both cases a major reason for this difference is economic. Many developing countries cannot afford the full course of AZT -- known as the 076 protocol -- that is the current standard of care in the developed world. In response, researchers designed a study to find a shorter and more economical regimen of AZT that would offer some significant, but not optimal, protection against mother-to-child transmission of HIV. Similarly, many low-income inner city families cannot afford to pay for complete lead abatement or to move to safer, but more expensive, housing. In response, researchers from the KKI designed a study to quantify the efficacy of several affordable methods of removing or controlling lead paint exposure in low-income housing units without removing the hazard completely. Is this a fair comparison? Does it make a difference to the moral evaluation of these studies that many of the countries that hosted the shortcourse AZT trials are themselves technologically and economically underdeveloped whereas the U.S. is one of, if not the, wealthiest and most technologically advanced nation in the world?

[16] As medical research is deployed to alleviate health problems that are rooted in economic disparities between populations, the line between studying an illness or disease

and exploiting economic deprivations is blurred. As more is learned about the social determinants of health and the impact of social inequalities on health status, the more pressing these issues will become. One of the challenges posed by the Kennedy Krieger lead paint study, and the short course AZT studies, is to find a framework for evaluating clinical research that is responsive to these realities, and to the important moral principles they bring into conflict.

GENETICS AND HUMAN MALLEABILITY

W French Anderson

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[1] Just how much can, and should we change human nature by genetic engineering? Our response to that hinges on the answers to three further questions: (1) What can we do now? Or more precisely, what are we doing now in the area of human genetic engineering? (2) What will we be able to do? In other words, what technical advances are we likely to achieve over the next five to ten years? (3) What *should* we do? I will argue that a line can be drawn and should be drawn to use gene transfer only for the treatment of serious disease, and not for any other purpose. Gene transfer should never be undertaken in an attempt to enhance or "improve" human beings.

WHAT CAN WE DO?

[2] In 1980 John Fletcher and I published a paper in the *New England Journal of Medicine* in which we delineated what would be necessary before it would be ethical to carry out human gene therapy. As with any other new therapeutic procedure, the fundamental principle is that it should be determined in advance that the probable benefits outweigh the probable risks. We analyzed the risk/benefit determination for somatic cell gene therapy and proposed three questions that need to have been answered from prior animal experimentation: Can the new gene be inserted stably into the correct target cells? Will the new gene be expressed (that is, function) in the cells at an appropriate level? Will the new gene harm the cell or the animal? These criteria are very similar to those required before use of any new therapeutic procedure, surgical operation, or drug. They simply require that the new treatment should get to the area of disease, correct it, and do more good than harm.

[3] A great deal of scientific progress has occurred in the nine years since that paper was published. The technology does now exist for inserting genes into some types of target cells. The procedure being used is called "retroviral-mediated gene transfer." In brief, a disabled murine retrovirus serves as a delivery vehicle for transporting a gene into a population of cells that have been removed from a patient. The gene-engineered cells are then returned to the patient.

WHAT WILL WE BE ABLE TO DO?

[4] Many genetic diseases that are caused by a defect in a single gene should be treatable, such as ADA deficiency (a severe immune deficiency disease of children), sickle cell anemia, hemophilia, and Gaucher disease. Some types of cancer, viral diseases such as AIDS, and some forms of cardiovascular disease are targets for treatment by gene therapy. In addition, germ-line gene therapy, that is, the insertion of a gene into the reproductive cells of a patient, will probably be technically possible in the foreseeable future.

[5] But successful somatic cell gene therapy also opens the door for enhancement genetic engineering, that is, for supplying a specific characteristic that individuals might want for themselves (somatic cell engineering) or their children (germ-line engineering) which would not involve the treatment of a disease. The most obvious example at the moment would be the insertion of a growth hormone gene into a normal child in the hope that this would make the child grow larger. Should parents be allowed to choose (if the science should ever make it possible) whatever useful characteristics they wish for their children?

WHAT SHOULD WE DO?

[6] A line can and should be drawn between somatic cell gene therapy and enhancement genetic engineering. Our society has repeatedly demonstrated that it can draw a line in biomedical research when necessary. The Belmont Report illustrates how guidelines were formulated to delineate ethical from unethical clinical research and to distinguish clinical research from clinical practice. Our responsibility is to determine how and where to draw lines with respect to genetic engineering.

[7] Somatic cell gene therapy for the treatment of severe disease is considered ethical because it can be supported by the fundamental moral principle of beneficence: It would relieve human suffering. Gene therapy would be, therefore, a moral good. Under what circumstances would human genetic engineering not be a moral good? In the broadest sense, when it detracts from, rather than contributes to, the dignity of man. Whether viewed from a theological perspective or a secular humanist one, the justification for drawing a line is founded on the argument that, beyond the line, human values that our society considers important for the dignity of man would be significantly threatened.

[8] Somatic cell enhancement engineering would threaten important human values in two ways: It could be medically hazardous, in that the risks could exceed the potential benefits and the procedure therefore cause harm. And it would be morally precarious, in that it would require moral decisions our society is not now prepared to make, and it could lead to an increase in inequality and discriminatory practices.

[9] Medicine is a very inexact science. We understand roughly how a simple gene works and that there are many thousands of housekeeping genes, that is, genes that do the job of running a cell. We predict that there are genes which make regulatory messages that are involved in the overall control and regulation of the many housekeeping genes. Yet we have only limited understanding of how a body organ develops into the size and shape it does. We know many things about how the central nervous system works -- for example, we are beginning to comprehend how molecules are involved in electric circuits, in memory storage, in transmission of signals. But we are a long way from understanding thought and consciousness. And we are even further from understanding the spiritual side of our existence.

[10] Even though we do not understand how a thinking, loving, interacting organism can be derived from its molecules, we are approaching the time when we can change some of those molecules. Might there be genes that influence the brain's organization or structure or metabolism or circuitry in some way so as to allow abstract thinking, contemplation of good and evil, fear of death, awe of a 'God'? What if in our innocent attempts to improve our genetic make-up we alter one or more of those genes? Could we test for the alteration? Certainly not at present. If we caused a problem that would affect the individual or his or her offspring, could we repair the damage? Certainly not at present. Every parent who has several children knows that some babies accept and give more affection than others, in the same environment. Do genes control this? What if these genes were accidentally altered? How would we even know if such a gene were altered?

[11] My concern is that, at this point in the development of our culture's scientific expertise, we might be like the young boy who loves to take things apart. He is bright enough to disassemble a watch, and maybe even bright enough to get it back together again so that it works. But what if he tries to "improve" it? Maybe put on bigger hands so that the time can be read more easily. But if the hands are too heavy for the mechanism, the watch will run slowly, erratically, or not at all. The boy can understand what is visible, but he cannot

comprehend the precise engineering calculations that determined exactly how strong each spring should be, why the gears interact in the ways that they do, etc. Attempts on his part to improve the watch will probably only harm it. We are now able to provide a new gene so that a property involved in a human life would be changed, for example, a growth hormone gene. If we were to do so simply because we could, I fear we would be like that young boy who changed the watch's hands. We, too, do not really understand what makes the object we are tinkering with tick.

[12] In summary, it could be harmful to insert a gene into humans. In somatic cell gene therapy for an already existing disease the potential benefits could outweigh the risks. In enhancement engineering, however, the risks would be greater while the benefits would be considerably less clear.

[13] Yet even aside from the medical risks, somatic cell enhancement engineering should not be performed because it would be morally precarious. Let us assume that there were no medical risks at all from somatic cell enhancement engineering. There would still be reasons for objecting to this procedure. To illustrate, let us consider some examples. What if a human gene were cloned that could produce a brain chemical resulting in markedly increased memory capacity in monkeys after gene transfer? Should a person be allowed to receive such a gene on request? Should a pubescent adolescent whose parents are both five feet tall be provided with a growth hormone gene on request? Should a worker who is continually exposed to an industrial toxin receive a gene to give him resistance on his, or his employer's request?

[14] These scenarios suggest three problems that would be difficult to resolve: What genes should be provided; who should receive a gene; and, how to prevent discrimination against individuals who do or do not receive a gene.

[15] We allow that it would be ethically appropriate to use somatic cell gene therapy for treatment of serious disease. But what distinguishes a serious disease from a "minor" disease from cultural "discomfort"? What is suffering? What is significant suffering? Does the absence of growth hormone that results in a growth limitation to two feet in height represent a genetic disease? What about a limitation to a height of four feet, to five feet? Each observer might draw the lines between serious disease, minor disease, and genetic variation differently. But all can agree that there are extreme cases that produce significant suffering and premature death. Here then is where an initial line should be drawn for determining what genes should be provided: treatment of serious disease.

[16] If the position is established that only patients suffering from serious diseases are candidates for gene insertion, then the issues of patient selection are no different than in other medical situations: the determination is based on medical need within a supply and demand framework. But if the use of gene transfer extends to allow a normal individual to acquire, for example, a memory-enhancing gene, profound problems would result. On what basis is the decision made to allow one individual to receive the gene but not another: Should it go to those best able to benefit society (the smartest already)? To those most in need (those with low intelligence? But how low? Will enhancing memory help a mentally retarded child?)? To those chosen by a lottery? To those who can afford to pay? As long as our society lacks a significant consensus about these answers, the best way to make equitable decisions in this case should be to base them on the seriousness of the objective medical need, rather than on the personal wishes or resources of an individual.

[17] Discrimination can occur in many forms. If individuals are carriers of a disease (for example, sickle cell anemia), would they be pressured to be treated? Would they have

difficulty in obtaining health insurance unless they agreed to be treated? These are ethical issues raised also by genetic screening and by the Human Genome project. But the concerns would become even more troublesome if there were the possibility for "correction" by the use of human genetic engineering.

[18] Finally, we must face the issue of eugenics, the attempt to make hereditary "improvements." The abuse of power that societies have historically demonstrated in the pursuit of eugenic goals is well documented. Might we slide into a new age of eugenic thinking by starting with small "improvements"? It would be difficult, if not impossible, to determine where to draw a line once enhancement engineering had begun. Therefore, gene transfer should be used only for the treatment of serious disease and not for putative improvements.

[19] Our society is comfortable with the use of genetic engineering to treat individuals with serious disease. On medical and ethical grounds we should draw a line excluding any form of enhancement engineering. We should not step over the line that delineates treatment from enhancement.

Questions About Some Uses of Genetic Engineering

JONATHAN GLOVER

[1] There is a widespread view that any project for the genetic improvement of the human race ought to be ruled out: that there are fundamental objections of principle. The aim of this discussion is to sort out some of the main objections. It will be argued that our resistance is based on a complex of different values and reasons, none of which is, when examined, adequate to rule out in principle this use of genetic engineering. The debate on human genetic engineering should become like the debate on nuclear power: one in which large possible benefits have to be weighed against big problems and the risk of great disasters. The discussion has not reached this point, partly because the techniques have not yet been developed. But it is also partly because of the blurred vision which fuses together many separate risks and doubts into a fuzzy-outlined opposition in principle.

1. AVOIDING THE DEBATE ABOUT GENES AND THE ENVIRONMENT

[2] In discussing the question of genetic engineering, there is everything to be said for not muddling the issue up with the debate over the relative importance of genes and environment in the development of such characteristics as intelligence. One reason for avoiding that debate is that it arouses even stronger passions than genetic engineering, and so is filled with as much acrimony as argument. But, apart from this fastidiousness, there are other reasons.

[3] The nature-nurture dispute is generally seen as an argument about the relative weight the two factors have in causing differences within the human species: 'IQ is 80 percent hereditary and 20 per cent environmental' versus 'IQ is 80 percent environmental and 20 percent hereditary'. No doubt there is some approximate truth of this type to be found if we consider variations within a given population at a particular time. But it is highly unlikely that there is any such statement which is simply true of human nature regardless of context. To take the extreme case, if we could iron out all environmental differences, any residual variations would be 100 per cent genetic. It is only if we make the highly artificial assumption that different groups at different times all have an identical spread of relevant environmental differences that we can expect to find statements of this kind applying to human nature in general. To say this is not to argue that studies on the question should not be conducted, or are bound to fail. It may well be possible, and useful, to find out the relative weights of the two kinds of factor for a given characteristic among a certain group at a particular time. The point is that any such conclusions lose relevance, not only when environmental differences are stretched out or compressed, but also when genetic differences are. And this last case is what we are considering.

[4] We can avoid this dispute because of its irrelevance. Suppose the genetic engineering proposal were to try to make people less aggressive. On a superficial view, the proposal might be shown to be unrealistic if there were evidence to show that variation in aggressiveness is hardly genetic at all: that it is 95 per cent environmental. (Let us grant, most implausibly, that such a figure turned out to be true for the whole of humanity, regardless of social context.) But all this would show is that, within our species, the distribution of genes relevant to aggression is very uniform. It would show nothing about the likely effects on aggression if we use genetic engineering to give people a different set of genes from those they now have.

[5] In other words, to take genetic engineering seriously, we need take no stand on the relative importance or unimportance of genetic factors in the explanation of the present range of individual differences found in people. We need only the minimal assumption that different genes could give us different characteristics. To deny that assumption you need to be the sort of person who thinks it is only living in kennels which makes dogs different from cats.

2. METHODS OF CHANGING THE GENETIC COMPOSITION OF FUTURE GENERATIONS

[6] There are essentially three ways of altering the genetic composition of future generations. The first is by environmental changes. Discoveries in medicine, the institution of a National Health Service, schemes for poverty relief, agricultural changes, or alterations in the tax position of large families, all alter the selective pressure on genes. It is hard to think of any social change which does not make some difference to who survives or who is born.

[7] The second method is to use eugenic policies aimed at altering breeding patterns or patterns of survival of people with different genes. Eugenic methods are 'environmental' too: the difference is only that the genetic impact is intended. Possible strategies range from various kinds of compulsion (to have more children, fewer children, or no children, or even compulsion over the choice of sexual partner) to the completely voluntary (our present genetic counselling practice of giving prospective parents information about probabilities of their children having various abnormalities).

[8] The third method is genetic engineering: using enzymes to add to or subtract from a stretch of DNA.

[9] Most people are unworried by the fact that a side-effect of an environmental change is to alter the gene pool, at least where the alteration is not for the worse. And even in cases where environmental factors increase the proportion of undesirable genes in the pool, we often accept this. Few people oppose the National Health Service, although setting it up meant that some people with genetic defects, who would have died, have had treatment enabling them to survive and reproduce. On the whole, we accept without qualms that much of what we do has genetic impact. Controversy starts when we think of aiming deliberately at genetic changes, by eugenics or genetic engineering. I want to make some brief remarks about eugenic policies, before suggesting that policies of deliberate intervention are best considered in the context of genetic engineering.

[10] Scepticism has been expressed about whether eugenic policies have any practical chance of success. Medawar has pointed out the importance of genetic polymorphism: the persistence of genetically different types in a population. (Our different blood groups are a familiar example.) For many characteristics, people get a different gene from each parent. So children do not simply repeat parental characteristics. Any simple picture of producing an improved type of person, and then letting the improvement be passed on unchanged, collapses.

[11] But, although polymorphism is a problem for this crudely utopian form of eugenics, it does not show that more modest schemes of improvement must fail. Suppose the best individuals for some quality (say, colour vision) are heterozygous, so that they inherit a gene A from one parent, and a gene B from the other. These ABs will have AAs and BBs among their children, who will be less good than they are. But AAs and BBs may still be

better than ACs or ADs, and perhaps much better than CCs or CDs. If this were so, overall improvement could still be brought about by encouraging people whose genes included an A or a B to have more children than those who had only Cs or Ds. The point of taking a quality like colour vision is that it may be genetically fairly simple. Qualities like kindness or intelligence are more likely to depend on the interaction of many genes, but a similar point can be made at a higher level of complexity.

[12] Polymorphism raises a doubt about whether the offspring of the three 'exceptionally intelligent women' fertilized by Dr Shockley or other Nobel prize-winners will have the same IQ as the parents, even apart from environmental variation. But it does not show the inevitable failure of any large-scale attempts to alter human characteristics by varying the relative numbers of children different kinds of people have. Yet any attempt, say, to raise the level of intelligence, would be a very slow affair, taking many generations to make much of an impact. This is one reason for preferring to discuss genetic engineering. For the genetic engineering of human improvements, if it becomes possible, will have an immediate effect, so we will not be guessing which qualities will be desirable dozens of generations later.

[13] There is the view that the genetic engineering techniques required will not become a practical possibility. Sir MacFarlane Burnet, writing in 1971 about using genetic engineering to cure disorders in people already born, dismissed the possibility of using a virus to carry a new gene to replace a faulty one in cells throughout the body: 'I should be willing to state in any company that the chance of doing this will remain infinitely small to the last syllable of recorded time.' Unless engineering at the stage of sperm cell and egg is easier, this seems a confident dismissal of the topic to be discussed here. More recent work casts doubt on this confidence. So, having mentioned this scepticism, I shall disregard it. We will assume that genetic engineering of people may become possible, and that it is worth discussing. (Sir MacFarlane Burnet's view has not yet been falsified as totally as Rutherford's view about atomic energy. But I hope that the last syllable of recorded time is still some way off.)

[14] The main reason for casting the discussion in terms of genetic engineering rather than eugenics is not a practical one. Many eugenic policies are open to fairly straightforward moral objections, which hide the deeper theoretical issues. Such policies as compulsory sterilization, compulsory abortion, compelling people to pair off in certain ways, or compelling people to have more or fewer children than they would otherwise have, are all open to objection on grounds of overriding people's autonomy. Some are open to objection on grounds of damage to the institution of the family. And the use of discriminatory tax- and child-benefit policies is an intolerable step towards a society of different genetic castes.

[15] Genetic engineering need not involve overriding anyone's autonomy. It need not be forced on parents against their wishes, and the future person being engineered has no views to be overridden. (The view that despite this, it is still objectionable to have one's genetic characteristics decided by others, will be considered later.) Genetic engineering will not damage the family in the obvious ways that compulsory eugenic policies would. Nor need it be encouraged by incentives which create inequalities. Because it avoids these highly visible moral objections, genetic engineering allows us to focus more clearly on other values that are involved.

[16] (To avoid a possible misunderstanding, one point should be added before leaving the topic of eugenics. Saying that some eugenic policies are open to obvious moral objections does not commit me to disapproval of all eugenic policies. In particular, I do not want to be taken to be opposing two kinds of policy. One is genetic counselling: warning people of risks in having children, and perhaps advising them against having them. The other is the

introduction of screening-programmes to detect foetal abnormalities, followed by giving the mother the option of abortion where serious defects emerge.)

[17] Let us now turn to the question of what, if anything, we should do in the field of human genetic engineering.

3. THE POSITIVE-NEGATIVE DISTINCTION

[18] We are not yet able to cure disorders by genetic engineering. But we do sometimes respond to disorders by adopting eugenic policies, at least in voluntary form. Genetic counselling is one instance, as applied to those thought likely to have such disorders as Huntington's chorea. This is a particularly appalling inherited disorder, involving brain degeneration, leading to mental decline and lack of control over movement. It does not normally come on until middle age, by which time many of its victims would in the normal course of things have had children. Huntington's chorea is caused by a dominant gene, so those who find that one of their parents has it have themselves a 50 per cent chance of developing it. If they do have it, each of their children will in turn have a 50 per cent chance of the disease. The risks are so high and the disorder so bad that the potential parents often decide not to have children, and are often given advice to this effect by doctors and others.

[19] Another eugenic response to disorders is involved in screening-programmes for pregnant women. When tests pick up such defects as Down's syndrome (mongolism) or spina bifida, the mother is given the possibility of an abortion. The screening-programmes are eugenic because part of their point is to reduce the incidence of severe genetic abnormality in the population.

[20] These two eugenic policies come in at different stages: before conception and during pregnancy. For this reason the screening-programme is more controversial, because it raises the issue of abortion. Those who are sympathetic to abortion, and who think it would be good to eliminate these disorders will be sympathetic to the programme. Those who think abortion is no different from killing a fully developed human are obviously likely to oppose the programme. But they are likely to feel that elimination of the disorders would be a good thing, even if not an adequate justification for killing. Unless they also disapprove of contraception, they are likely to support the genetic-counselling policy in the case of Huntington's chorea.

[21] Few people object to the use of eugenic policies to eliminate disorders, unless those policies have additional features which are objectionable. Most of us are resistant to the use of compulsion, and those who oppose abortion will object to screening-programmes. But apart from these other moral objections, we do not object to the use of eugenic policies against disease. We do not object to advising those likely to have Huntington's chorea not to have children, as neither compulsion nor killing is involved. Those of us who take this view have no objection to altering the genetic composition of the next generation, where this alteration consists in reducing the incidence of defects.

[22] If it were possible to use genetic engineering to correct defects, say at the foetal stage, it is hard to see how those of us who are prepared to use the eugenic measures just mentioned could object. In both cases, it would be pure gain. The couple, one of whom may develop Huntington's chorea, can have a child if they want, knowing that any abnormality will be eliminated. Those sympathetic to abortion will agree that cure is preferable. And those opposed to abortion prefer babies to be born without handicap. It is hard to think of

any objection to using genetic engineering to eliminate defects, and there is a clear and strong case for its use.

[23] But accepting the case for eliminating genetic mistakes does not entail accepting other uses of genetic engineering. The elimination of defects is often called 'negative' genetic engineering. Going beyond this, to bring about improvements in normal people, is by contrast 'positive' engineering. (The same distinction can be made for eugenics.)

[24] The positive-negative distinction is not in all cases completely sharp. Some conditions are genetic disorders whose identification raises little problem. Huntington's chorea or spina bifida are genetic 'mistakes' in a way that cannot seriously be disputed. But with other conditions, the boundary between a defective state and normality may be more blurred. If there is a genetic disposition towards depressive illness, this seems a defect, whose elimination would be part of negative genetic engineering. Suppose the genetic disposition to depression involves the production of lower levels of an enzyme than are produced in normal people. The negative programme is to correct the genetic fault so that the enzyme level is within the range found in normal people. But suppose that within 'normal' people also, there are variations in the enzyme level, which correlate with ordinary differences in tendency to be cheerful or depressed. Is there a sharp boundary between 'clinical' depression and the depression sometimes felt by those diagnosed as 'normal'? Is it clear that a sharp distinction can be drawn between raising someone's enzyme level so that it falls within the normal range and raising someone else's level from the bottom of the normal range to the top?

[25] The positive-negative distinction is sometimes a blurred one, but often we can at least roughly see where it should be drawn. If there is a rough and ready distinction, the question is: how important is it? Should we go on from accepting negative engineering to accepting positive programmes, or should we say that the line between the two is the limit of what is morally acceptable?

[26] There is no doubt that positive programmes arouse the strongest feelings on both sides. On the one hand, many respond to positive genetic engineering or positive eugenics with Professor Tinbergen's thought: 'I find it morally reprehensible and presumptuous for anybody to put himself forward as a judge of the qualities for which we should breed.'

[27] But other people have held just as strongly that positive policies are the way to make the future of mankind better than the past. Many years ago H. J. Muller expressed this hope:

And so we foresee the history of life divided into three main phases. In the long preparatory phase it was the helpless creature of its environment, and natural selection gradually ground it into human shape. In the second -- our own short transitional phase -- it reaches out at the immediate environment, shaking, shaping and grinding to suit the form, the requirements, the wishes, and the whims of man. And in the long third phase, it will reach down into the secret places of the great universe of its own nature, and by aid of its ever growing intelligence and cooperation, shape itself into an increasingly sublime creation -- a being beside which the mythical divinities of the past will seem more and more ridiculous, and which setting its own marvellous inner powers against the brute Goliath of the suns and the planets, challenges them to contest.

[28] The case for positive engineering is not helped by adopting the tones of the mad scientist in a horror film. But behind the rhetoric is a serious point. If we decide on a

positive programme to change our nature, this will be a central moment in our history, and the transformation might be beneficial to a degree we can now scarcely imagine. The question is: how are we to weigh this possibility against Tinbergen's objection, and against other objections and doubts?

[29] For the rest of this discussion, I shall assume that, subject to adequate safeguards against things going wrong, negative genetic engineering is acceptable. The issue is positive engineering. I shall also assume that we can ignore problems about whether positive engineering will be technically possible. Suppose we have the power to choose people's genetic characteristics. Once we have eliminated genetic defects, what, if anything, should we do with this power?.

4. THE VIEW THAT OVERALL IMPROVEMENT IS UNLIKELY OR IMPOSSIBLE

[30] There is one doubt about the workability of schemes of genetic improvement which is so widespread that it would be perverse to ignore it. This is the view that, in any genetic alteration, there are no gains without compensating losses. On this view, if we bring about a genetically based improvement, such as higher intelligence, we are bound to pay a price somewhere else: perhaps the more intelligent people will have less resistance to disease, or will be less physically agile. If correct, this might so undermine the practicability of applying eugenics or genetic engineering that it would be hardly worth discussing the values involved in such programmes.

[31] This view perhaps depends on some idea that natural selection is so efficient that, in terms of gene survival, we must already be as efficient as it is possible to be. If it were possible to push up intelligence without weakening some other part of the system, natural selection would already have done so. But this is a naive version of evolutionary theory. In real evolutionary theory, far from the genetic status quo always being the best possible for a given environment, some mutations turn out to be advantageous, and this is the origin of evolutionary progress. If natural mutations can be beneficial without a compensating loss, why should artificially induced ones not be so too?

[32] It should also be noticed that there are two different ideas of what counts as a gain or a loss. From the point of view of evolutionary progress, gains and losses are simply advantages and disadvantages from the point of view of gene survival. But we are not compelled to take this view. If we could engineer a genetic change in some people which would have the effect of making them musical prodigies but also sterile, this would be a hopeless gene in terms of survival, but this need not force us, or the musical prodigies themselves, to think of the change as for the worse. It depends on how we rate musical ability as against having children, and evolutionary survival does not dictate priorities here.

[33] The view that gains and losses are tied up with each other need not depend on the dogma that natural selection must have created the best of all possible sets of genes. A more cautiously empirical version of the claim says there is a tendency for gains to be accompanied by losses. John Maynard Smith, in his paper on 'Eugenics and Utopia', takes this kind of 'broad balance' view and runs it the other way, suggesting, as an argument in defence of medicine, that any loss of genetic resistance to disease is likely to be a good thing: 'The reason for this is that in evolution, as in other fields, one seldom gets something for nothing. Genes which confer disease-resistance are likely to have harmful effects in other ways: this is certainly true of the gene for sickle-cell anaemia and may be a general rule. If so, absence of selection in favour of disease resistance may be eugenic.'

[34] It is important that different characteristics may turn out to be genetically linked in ways we do not yet realize. In our present state of knowledge, engineering for some improvement might easily bring some unpredicted but genetically linked disadvantage. But we do not have to accept that there will in general be a broad balance, so that there is a presumption that any gain will be accompanied by a compensating loss (or Maynard Smith's version that we can expect a compensating gain for any loss). The reason is that what counts as a gain or loss varies in different contexts. Take Maynard Smith's example of sickle-cell anaemia. The reason why sickle-cell anaemia is widespread in Africa is that it is genetically linked with resistance to malaria. Those who are heterozygous (who inherit one sickle-cell gene and one normal gene) are resistant to malaria, while those who are homozygous (whose genes are both sickle-cell) get sickle-cell anaemia. If we use genetic engineering to knock out sickle-cell anaemia where malaria is common, we will pay the price of having more malaria. But when we eradicate malaria, the gain will not involve this loss. Because losses are relative to context, any generalization about the impossibility of overall improvements is dubious.

5. THE FAMILY AND OUR DESCENDANTS

[35] Unlike various compulsory eugenic policies, genetic engineering need not involve any interference with decisions by couples to have children together, or with their decisions about how many children to have. And let us suppose that genetically engineered babies grow in the mother's womb in the normal way, so that her relationship to the child is not threatened in the way it might be if the laboratory or the hospital were substituted for the womb. The cruder threats to family relationships are eliminated.

[36] It may be suggested that there is a more subtle threat. Parents like to identify with their children. We are often pleased to see some of our own characteristics in our children. Perhaps this is partly a kind of vanity, and no doubt sometimes we project on to our children similarities that are not really there. But, when the similarities do exist, they help the parents and children to understand and sympathize with each other. If genetic engineering resulted in children fairly different from their parents, this might make their relationship have problems.

[37] There is something to this objection, but it is easy to exaggerate. Obviously, children who were like Midwich cuckoos, or comic-book Martians, would not be easy to identify with. But genetic engineering need not move in such sudden jerks. The changes would have to be detectable to be worth bringing about, but there seems no reason why large changes in appearance, or an unbridgeable psychological gulf, should be created in any one generation. We bring about environmental changes which make children different from their parents, as when the first generation of children in a remote place are given schooling and made literate. This may cause some problems in families, but it is not usually thought a decisive objection. It is not clear that genetically induced changes of similar magnitude are any more objectionable.

[38] A related objection concerns our attitude to our remoter descendants. We like to think of our descendants stretching on for many generations. Perhaps this is in part an immortality substitute. We hope they will to some extent be like us, and that, if they think of us, they will do so with sympathy and approval. Perhaps these hopes about the future of mankind are relatively unimportant to us. But, even if we mind about them a lot, they are unrealistic in the very long term. Genetic engineering would make our descendants less like us, but this would only speed up the natural rate of change. Natural mutations and selective pressures make it unlikely that in a few million years our descendants will be physically or

mentally much like us. So what genetic engineering threatens here is probably doomed anyway.

6. RISKS AND MISTAKES

[39] Although mixing different species and cloning are often prominent in people's thoughts about genetic engineering, they are relatively marginal issues. This is partly because there may be no strong reasons in favour of either. Our purposes might be realized more readily by improvements to a single species, whether another or our own, or by the creation of quite new types of organism, than by mixing different species. And it is not clear what advantage cloning batches of people might have, to outweigh the drawbacks. This is not to be dogmatic that species mixing and cloning could never be useful, but to say that the likelihood of other techniques being much more prominent makes it a pity to become fixated on the issues raised by these ones. And some of the most serious objections to positive genetic engineering have wider application than to these rather special cases. One of these wider objections is that serious risks may be involved.

[40] Some of the risks are already part of the public debate because of current work on recombinant DNA. The danger is of producing harmful organisms that would escape from our control. The work obviously should take place, if at all, only with adequate safe-guards against such a disaster. The problem is deciding what we should count as adequate safeguards. I have nothing to contribute to this problem here. If it can be dealt with satisfactorily, we will perhaps move on to genetic engineering of people. And this introduces another dimension of risk. We may produce unintended results, either because our techniques turn out to be less finely tuned than we thought, or because different characteristics are found to be genetically linked in unexpected ways.

[41] If we produce a group of people who turn out worse than expected, we will have to live with them. Perhaps we would aim for producing people who were especially imaginative and creative, and only too late find we had produced people who were also very violent and aggressive. This kind of mistake might not only be disastrous, but also very hard to 'correct' in subsequent generations. For when we suggested sterilization to the people we had produced, or else corrective genetic engineering for their offspring, we might find them hard to persuade. They might like the way they were, and reject, in characteristically violent fashion, our explanation that they were a mistake.

[42] The possibility of an irreversible disaster is a strong deterrent. It is enough to make some people think we should rule out genetic engineering altogether, and to make others think that, while negative engineering is perhaps acceptable, we should rule out positive engineering. The thought behind this second position is that the benefits from negative engineering are clearer, and that, because its aims are more modest, disastrous mistakes are less likely.

[43] The risk of disasters provides at least a reason for saying that, if we do adopt a policy of human genetic engineering, we ought to do so with extreme caution. We should alter genes only where we have strong reasons for thinking the risk of disaster is very small, and where the benefit is great enough to justify the risk. (The problems of deciding when this is so are familiar from the nuclear power debate.) This 'principle of caution' is less strong than one ruling out all positive engineering, and allows room for the possibility that the dangers may turn out to be very remote, or that greater risks of a different kind are involved in not using positive engineering. These possibilities correspond to one view of the facts in the nuclear power debate. Unless with genetic engineering we think we can already rule out

such possibilities, the argument from risk provides more justification for the principle of caution than for the stronger ban on all positive engineering.

DECISIONS

[44] Some of the strongest objections to positive engineering are not about specialized applications or about risks. They are about the decisions involved. The central line of thought is that we should not start playing God by redesigning the human race. The suggestion is that there is no group (such as scientists, doctors, public officials, or politicians) who can be entrusted with decisions about what sort of people there should be. And it is also doubted whether we could have any adequate grounds for basing such decisions on one set of values rather than another.

NOT PLAYING GOD

[45] Suppose we could use genetic engineering to raise the average IQ by fifteen points. (I mention, only to ignore, the boring objection that the average IQ is always by definition 100.) Should we do this? Objectors to positive engineering say we should not. This is not because the present average is preferable to a higher one. We do not think that, if it were naturally fifteen points higher, we ought to bring it down to the present level. The objection is to our playing God by deciding what the level should be.

[46] On one view of the world, the objection is relatively straightforward. On this view, there really is a God, who has a plan for the world which will be disrupted if we stray outside the boundaries assigned to us. (It is *relatively* straightforward: there would still be the problem of knowing where the boundaries came. If genetic engineering disrupts the programme, how do we know that medicine and education do not?)

[47] The objection to playing God has a much wider appeal than to those who literally believe in a divine plan. But, outside such a context, it is unclear what the objection comes to. If we have a Darwinian view, according to which features of our nature have been selected for their contribution to gene survival, it is not blasphemous, or obviously disastrous, to start to control the process in the light of our own values. We may value other qualities in people, in preference to those which have been most conducive to gene survival.

[48] The prohibition on playing God is obscure. If it tells us not to interfere with natural selection at all, this rules out medicine, and most other environmental and social changes. If it only forbids interference with natural selection by the direct alteration of genes, this rules out negative as well as positive genetic engineering. If these interpretations are too restrictive, the ban on positive engineering seems to need some explanation. If we can make positive changes at the environmental level, and negative changes at the genetic level, why should we not make positive changes at the genetic level? What makes this policy, but not the others, objectionably God-like?

[49] Perhaps the most plausible reply to these questions rests on a general objection to any group of people trying to plan too closely what human life should be like. Even if it is hard to distinguish in principle between the use of genetic and environmental means, genetic changes are likely to differ in degree from most environmental ones. Genetic alterations may be more drastic or less reversible, and so they can be seen as the extreme case of an objectionably God-like policy by which some people set out to plan the lives of others.

[50] This objection can be reinforced by imagining the possible results of a programme of positive engineering, where the decisions about the desired improvements were taken by scientists. Judging by the literature written by scientists on this topic, great prominence would be given to intelligence. But can we be sure that enough weight would be given to other desirable qualities? And do things seem better if for scientists we substitute doctors, politicians or civil servants? Or some committee containing businessmen, trade unionists, academics, lawyers and a clergyman?

[51] What seems worrying here is the circumscribing of potential human development. The present genetic lottery throws up a vast range of characteristics, good and bad, in all sorts of combinations. The group of people controlling a positive engineering policy would inevitably have limited horizons, and we are right to worry that the limitations of their outlook might become the boundaries of human variety. The drawbacks would be like those of town-planning or dog-breeding, but with more important consequences.

[52] When the objection to playing God is separated from the idea that intervening in this aspect of the natural world is a kind of blasphemy, it is a protest against a particular group of people, necessarily fallible and limited, taking decisions so important to our future. This protest may be on grounds of the bad consequences, such as loss of variety of people, that would come from the imaginative limits of those taking the decisions. Or it may be an expression of opposition to such concentration of power, perhaps with the thought: 'What right have they to decide what kinds of people there should be?' Can these problems be side-stepped?

[53] Robert Nozick is critical of the assumption that positive engineering has to involve any centralized decision about desirable qualities: 'Many biologists tend to think the problem is one of design, of specifying the best types of persons so that biologists can proceed to produce them. Thus they worry over what sort(s) of person there is to be and who will control this process. They do not tend to think, perhaps because it diminishes the importance of their role, of a system in which they run a "genetic supermarket", meeting the individual specifications (within certain moral limits) of prospective parents. Nor do they think of seeing what limited number of types of persons people's choices would converge upon, if indeed there would be any such convergence. This supermarket system has the great virtue that it involves no centralized decision fixing the future human type(s).'

[54] This idea of letting parents choose their children's characteristics is in many ways an improvement on decisions being taken by some centralized body. It seems less likely to reduce human variety, and could even increase it, if genetic engineering makes new combinations of characteristics available. (But we should be cautious here. Parental choice is not a guarantee of genetic variety, as the influence of fashion or of shared values might make for a small number of types on which choices would converge.)

[55] To those sympathetic to one kind of liberalism, Nozick's proposal will seem more attractive than centralized decisions. On this approach to politics, it is wrong for the authorities to institutionalize any religious or other outlook as the official one of the society. To a liberal of this kind, a good society is one which tolerates and encourages a wide diversity of ideals of the good life. Anyone with these sympathies will be suspicious of centralized decisions about what sort of people should form the next generation. But some parental decisions would be disturbing. If parents chose characteristics likely to make their children unhappy, or likely to reduce their abilities, we might feel that the children should be protected against this. (Imagine parents belonging to some extreme religious sect, who wanted their children to have a religious symbol as a physical mark on their face, and who wanted them to be unable to read, as a protection against their faith being corrupted.)

Those of us who support restrictions protecting children from parental harm after birth (laws against cruelty, and compulsion on parents to allow their children to be educated and to have necessary medical treatment) are likely to support protecting children from being harmed by their parents' genetic choices.

[56] No doubt the boundaries here will be difficult to draw. We already find it difficult to strike a satisfactory balance between protection of children and parental freedom to choose the kind of upbringing their children should have. But it is hard to accept that society should set no limits to the genetic choices parents can make for their children. Nozick recognizes this when he says the genetic supermarket should meet the specifications of parents 'within certain moral limits'. So, if the supermarket came into existence, some centralized policy, even if only the restrictive one of ruling out certain choices harmful to the children, should exist. It would be a political decision where the limits should be set.

[57] There may also be a case for other centralized restrictions on parental choice, as well as those aimed at preventing harm to the individual people being designed. The genetic supermarket might have more oblique bad effects. An imbalance in the ratio between the sexes could result. Or parents might think their children would be more successful if they were more thrusting, competitive and selfish. If enough parents acted on this thought, other parents with different values might feel forced into making similar choices to prevent their own children being too greatly disadvantaged. Unregulated individual decisions could lead to shifts of this kind, with outcomes unwanted by most of those who contribute to them. If a majority favour a roughly equal ratio between the sexes, or a population of relatively uncompetitive people, they may feel justified in supporting restrictions on what parents can choose. (This is an application to the case of genetic engineering of a point familiar in other contexts, that unrestricted individual choices can add up to a total outcome which most people think worse than what would result from some regulation.)

[58] Nozick recognizes that there may be cases of this sort. He considers the case of avoiding a sexual imbalance and says that 'a government could require that genetic manipulation be carried on so as to fit a certain ratio'. He clearly prefers to avoid governmental intervention of this kind, and, while admitting that the desired result would be harder to obtain in a purely libertarian system, suggests possible strategies for doing so. He says: 'Either parents would subscribe to an information service monitoring the recent births and so know which sex was in shorter supply (and hence would be more in demand in later life), thus adjusting their activities, or interested individuals would contribute to a charity that offers bonuses to maintain the ratios, or the ratio would leave 1:1, with new family and social patterns developing. The proposals for avoiding the sexual imbalance without central regulation are not reassuring. Information about likely prospects for marriage or sexual partnership might not be decisive for parents' choices. And, since those most likely to be 'interested individuals' would be in the age group being genetically engineered, it is not clear that the charity would be given donations adequate for its job.

[59] If the libertarian methods failed, we would have the choice between allowing a sexual imbalance or imposing some system of social regulation. Those who dislike central decisions favouring one sort of person over others might accept regulation here, on the grounds that neither sex is being given preference: the aim is rough equality of numbers.

[60] But what about the other sort of case, where the working of the genetic supermarket leads to a general change unwelcome to those who contribute to it? Can we defend regulation to prevent a shift towards a more selfish and competitive population as merely being the preservation of a certain ratio between characteristics? Or have we crossed the boundary, and allowed a centralized decision favouring some characteristics over others?

The location of the boundary is obscure. One view would be that the sex-ratio case is acceptable because the desired ratio is equality of numbers. On another view, the acceptability derives from the fact that the present ratio is to be preserved. (In this second view, preserving altruism would be acceptable, so long as no attempt was made to raise the proportion of altruistic people in the population. But is this boundary an easy one to defend?)

[61] If positive genetic engineering does become a reality, we may be unable to avoid some of the decisions being taken at a social level. Or rather, we could avoid this, but only at what seems an unacceptable cost, either to the particular people being designed, or to their generation as a whole. And, even if the social decisions are only restrictive, it is implausible to claim that they are all quite free of any taint of preference for some characteristics over others. But, although this suggests that we should not be doctrinaire in our support of the liberal view, it does not show that the view has to be abandoned altogether. We may still think that social decisions in favour of one type of person rather than another should be few, even if the consequences of excluding them altogether are unacceptable. A genetic supermarket, modified by some central regulation, may still be better than a system of purely central decisions. The liberal value is not obliterated because it may sometimes be compromised for the sake of other things we care about.

A MIXED SYSTEM

[62] The genetic supermarket provides a partial answer to the objection about the limited outlook of those who would take the decisions. The choices need not be concentrated in the hands of a small number of people. The genetic supermarket should not operate in a completely unregulated way, and so some centralized decisions would have to be taken about the restrictions that should be imposed. One system that would answer many of the anxieties about centralized decision-making would be to limit the power of the decision-makers to one of veto. They would then only check departures from the natural genetic lottery, and so the power to bring about changes would not be given to them, but spread through the whole population of potential parents. Let us call this combination of parental initiative and central veto a 'mixed system'. If positive genetic engineering does come about, we can imagine the argument between supporters of a mixed system and supporters of other decision-making systems being central to the political theory of the twenty-first century, parallel to the place occupied in the nineteenth and twentieth centuries by the debate over control of the economy.

[63] My own sympathies are with the view that, if positive genetic engineering is introduced, this mixed system is in general likely to be the best one for taking decisions. I do not want to argue for an absolutely inviolable commitment to this, as it could be that some centralized decision for genetic change was the only way of securing a huge benefit or avoiding a great catastrophe. But, subject to this reservation, the dangers of concentrating the decision-making create a strong presumption in favour of a mixed system rather than one in which initiatives come from the centre. And, if a mixed system was introduced, there would have to be a great deal of political argument over what kinds of restrictions on the supermarket should be imposed. Twenty-first-century elections may be about issues rather deeper than economics.

[64] If this mixed system eliminates the anxiety about genetic changes being introduced by a few powerful people with limited horizons, there is a more general unease which it does not remove. May not the limitations of one generation of parents also prove disastrous? And, underlying this, is the problem of what values parents should appeal to in making their

choices. How can we be confident that it is better for one sort of person to be born than another?

VALUES

[65] The dangers of such decisions, even spread through all prospective parents, seem to me very real. We are swayed by fashion. We do not know the limitations of our own outlook. There are human qualities whose value we may not appreciate. A generation of parents might opt heavily for their children having physical or intellectual abilities and skills. We might leave out a sense of humour. Or we might not notice how important to us is some other quality, such as emotional warmth. So we might not be disturbed in advance by the possible impact of the genetic changes on such a quality. And, without really wanting to do so, we might stumble into producing people with a deep coldness. This possibility seems one of the worst imaginable. It is just one of the many horrors that could be blundered into by our lack of foresight in operating the mixed system. Because such disasters are a real danger, there is a case against positive genetic engineering, even when the changes do not result from centralized decisions. But this case, resting as it does on the risk of disaster, supports a principle of caution rather than a total ban. We have to ask the question whether there are benefits sufficiently great and sufficiently probable to outweigh the risks.

[66] But perhaps the deepest resistance, even to a mixed system, is not based on risks, but on a more general problem about values. Could the parents ever be justified in choosing, according to some set of values, to create one sort of person rather than another?

[67] Is it sometimes better for us to create one sort of person rather than another? We say 'yes' when it is a question of eliminating genetic defects. And we say 'yes' if we think that encouraging some qualities rather than others should be an aim of the upbringing and education we give our children. Any inclination to say 'no' in the context of positive genetic engineering must lay great stress on the two relevant boundaries.

[68] The positive-negative boundary is needed to mark off the supposedly unacceptable positive policies from the acceptable elimination of defects. And the genes-environment boundary is needed to mark off positive engineering from acceptable positive aims of educational policies. But it is not clear that confidence in the importance of these boundaries is justified.

CHANGING HUMAN NATURE

[69] Positive genetic engineering raises two issues. Could we be justified in trying to change human nature? And, if so, is genetic change an acceptable method? Most of us feel resistance to genetic engineering, and these two questions are often blurred together in our thinking. One aim of the discussion has been to separate the different sources of our resistance. Another has been to try to isolate the justifiable doubts. These have to do with risks of disasters, or with the drawbacks of imposed, centralized decisions. They need not justify total rejection of positive engineering. The risks are good reasons for extreme caution. The other drawbacks are good reasons for decentralized decisions, and for resisting positive genetic engineering in authoritarian societies. But these good reasons are quite separable from any opposition in principle to changing human nature.

[70] The idea of 'human nature' is a vague one, whose boundaries are not easy to draw. And, given our history, the idea that we must preserve all the characteristics that are natural to us is not obvious without argument. Some deep changes in human nature may

only be possible if we do accept positive genetic engineering. It is true that our nature is not determined entirely by our genes, but they do set limits to the sorts of people we can be. And the evolutionary competition to survive has set limits to the sorts of genes we have. Perhaps changes in society will transform our nature. But there is the pessimistic thought that perhaps they will not. Or, if they do, the resulting better people may lose to unreconstructed people in the evolutionary struggle. On either of these pessimistic views, to renounce positive genetic engineering would be to renounce any hope of fundamental improvement in what we are like. And we cannot yet be sure that these pessimistic views are both false.

[71] Given the risks that positive genetic engineering is likely to involve, many people will think that we should reject it, even if that means putting up with human nature as it is. And many others will think that, quite apart from risks and dangers, we ought not to tamper with our nature. I have some sympathy with the first view. The decision involves balancing risks and gains, and perhaps the dangers will outweigh the benefits. We can only tell when the details are clearer than they are now, both about the genetic techniques and about the sort of society that is in existence at the time.

[72] It is less easy to sympathize with opposition to the principle of changing our nature. Preserving the human race as it is will seem an acceptable option to all those who can watch the news on television and feel satisfied with the world. It will appeal to those who can talk to their children about the history of the twentieth century without wishing they could leave some things out.

Active and Passive Euthanasia

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[1] The distinction between active and passive euthanasia is thought to be crucial for medical ethics. The idea is that it is permissible, at least in some cases, to withhold treatment and allow a patient to die, but it is never permissible to take any direct action designed to kill the patient. This doctrine seems to be accepted by most doctors, and it was endorsed in a statement adopted by the House of Delegates of the American Medical Association on December 4, 1973:

The intentional termination of the life of one human being by another -- mercy killing -- is contrary to that for which the medical profession stands and is contrary to the policy of the American Medical Association.

The cessation of the employment of extraordinary means to prolong the life of the body when there is irrefutable evidence that biological death is imminent is the decision of the patient and/or his immediate family. The advice and judgment of the physician should be freely available to the patient and/or his immediate family.

[2] However, a strong case can be made against this doctrine. In what follows I will set out some of the relevant arguments, and urge doctors to reconsider their views on this matter.

[3] To begin with a familiar type of situation, a patient who is dying of incurable cancer of the throat is in terrible pain, which can no longer be satisfactorily alleviated. He is certain to die within a few days, even if present treatment is continued, but he does not want to go on living for those days since the pain is unbearable. So he asks the doctor for an end to it, and his family joins in the request.

[4] Suppose the doctor agrees to withhold treatment, as the conventional doctrine says he may. The justification for his doing so is that the patient is in terrible agony, and since he is going to die anyway, it would be wrong to prolong his suffering needlessly. But now notice this. If one simply withholds treatment, it may take the patient longer to die, and so he may suffer more than he would if more direct action were taken and a lethal injection given. This fact provides strong reason for thinking that, once the initial decision not to prolong his agony has been made, active euthanasia is actually preferable to passive euthanasia, rather than the reverse. To say otherwise is to endorse the option that leads to more suffering rather than less, and is contrary to the humanitarian impulse that prompts the decision not to prolong his life in the first place.

[5] Part of my point is that the process of being "allowed to die" can be relatively slow and painful, whereas being given a lethal injection is relatively quick and painless. Let me give a different sort of example. In the United States about one in 600 babies is born with Down's syndrome. Most of these babies are otherwise healthy -- that is, with only the usual pediatric care, they will proceed to an otherwise normal infancy. Some, however, are born with congenital defects such as intestinal obstructions that require operations if they are to live. Sometimes, the parents and the doctor will decide not to operate, and let the infant die. Anthony Shaw describes what happens then.

[6] When surgery is denied [the doctor] must try to keep the infant from suffering while natural forces sap the baby's life away. As a surgeon whose natural inclination

is to use the scalpel to fight off death, standing by and watching a salvageable baby die is the most emotionally exhausting experience I know. It is easy at a conference, in a theoretical discussion, to decide that such infants should be allowed to die. It is altogether different to stand by in the nursery and watch as dehydration and infection wither a tiny being over hours and days. This is a terrible ordeal for me and the hospital staff -- much more so than for the parents who never set foot in the nursery. [A. Shaw, "Doctor, Do We Have a Choice?" *The New York Times Magazine*, January 30, 1972, p. 54.]

[7] I can understand why some people are opposed to all euthanasia, and insist that such infants must be allowed to live. I think I can also understand why other people favor destroying these babies quickly and painlessly. But why should anyone favor letting "dehydration and infection wither a tiny being over hours and days"? The doctrine that says that a baby may be allowed to dehydrate and wither, but may not be given an injection that would end its life without suffering, seems so patently cruel as to require no further refutation. The strong language is not intended to offend, but only to put the point in the clearest possible way.

[8] My second argument is that the conventional doctrine leads to decisions concerning life and death made on irrelevant grounds.

[9] Consider again the case of the infants with Down's syndrome who need operations for congenital defects unrelated to the syndrome to live. Sometimes there is no operation, and the baby dies, but when there is no such defect, the baby lives on. Now, an operation such as that to remove an intestinal obstruction is not prohibitively difficult. The reason why such operations are not performed in these cases is, clearly, that the child has Down's syndrome and the parents and doctor judge that because of that fact it is better for the child to die.

[10] But notice that this situation is absurd, no matter what view one takes of the lives and potentials of such babies. If the life of such an infant is worth preserving, what does it matter if it needs a simple operation? Or, if one thinks it better that such a baby should not live on, what difference does it make that it happens to have an unobstructed intestinal tract? In either case, the matter of life and death is being decided on irrelevant grounds. It is the Down's syndrome, and not the intestines, that is the issue. The matter should be decided, if at all, on that basis, and not be allowed to depend on the essentially irrelevant question of whether the intestinal tract is blocked.

[11] What makes this situation possible, of course, is the idea that when there is an intestinal blockage, one can "let the baby die," but when there is no such defect there is nothing that can be done, for one must not "kill" it. The fact that this idea leads to such results as deciding life or death on irrelevant grounds is another good reason why the doctrine should be rejected.

[12] One reason why so many people think that there is an important moral difference between active and passive euthanasia is that they think killing someone is morally worse than letting someone die. But is it? Is killing, in itself, worse than letting die? To investigate this issue, two cases may be considered that are exactly alike except that one involves killing whereas the other involves letting someone die. Then, it can be asked whether this difference makes any difference to the moral assessments. It is important that the cases be exactly alike, except for this one difference, since otherwise one cannot be confident that it is this difference and not some other that accounts for any variation in the assessments of the two cases. So, let us consider this pair of cases:

[13] In the first, Smith stands to gain a large inheritance if anything should happen to his six-year-old cousin. One evening while the child is taking his bath, Smith sneaks into the bathroom and drowns the child, and then arranges things so that it will look like an accident.

[14] In the second, Jones also stands to gain if anything should happen to his six-year-old cousin. Like Smith, Jones sneaks in planning to drown the child in his bath. However, just as he enters the bathroom Jones sees the child slip and hit his head, and fall face down in the water. Jones is delighted; he stands by, ready to push the child's head back under if it is necessary, but it is not necessary. With only a little thrashing about, the child drowns all by himself, "accidentally," as Jones watches and does nothing.

[15] Now Smith killed the child, whereas Jones "merely" let the child die. That is the only difference between them. Did either man behave better, from a moral point of view? If the difference between killing and letting die were in itself a morally important matter, one should say that Jones's behavior was less reprehensible than Smith's. But does one really want to say that? I think not. In the first place, both men acted from the same motive, personal gain, and both had exactly the same end in view when they acted. It may be inferred from Smith's conduct that he is a bad man, although that judgment may be withdrawn or modified if certain further facts are learned about him -- for example, that he is mentally deranged. But would not the very same thing be inferred about Jones from his conduct? And would not the same further considerations also be relevant to any modification of this judgment? Moreover, suppose Jones pleaded, in his own defense, "After all, I didn't do anything except just stand there and watch the child drown. I didn't kill him; I only let him die." Again, if letting die were in itself less bad than killing, this defense should have at least some weight. But it does not. Such a "defense" can only be regarded as a grotesque perversion of moral reasoning. Morally speaking, it is no defense at all.

[16] Now it may be pointed out, quite properly, that the cases of euthanasia with which doctors are concerned are not like this at all. They do not involve personal gain or the destruction of normal healthy children. Doctors are concerned only with cases in which the patient's life is of no further use to him, or in which the patient's life has become or will soon become a terrible burden. However, the point is the same in these cases: the bare difference between killing and letting die does not, in itself, make a moral difference. If a doctor lets a patient die, for humane reasons, he is in the same moral position as if he had given the patient a lethal injection for humane reasons. If his decision was wrong -- if, for example, the patient's illness was in fact curable -- the decision would be equally regrettable no matter which method was used to carry it out. And if the doctor's decision was the right one, the method used is not in itself important.

[17] The AMA policy statement isolates the crucial issue very well; the crucial issue is "the intentional termination of the life of one human being by another." But after identifying this issue, and forbidding "mercy killing," the statement goes on to deny that the cessation of treatment is the intentional termination of a life. This is where the mistake comes in, for what is the cessation of treatment, in these circumstances, if it is not "the intentional termination of the life of one human being by another?" Of course it is exactly that, and if it were not, there would be no point to it.

[18] Many people will find this judgment hard to accept. One reason, I think, is that it is very easy to conflate the question of whether killing is, in itself, worse than letting die, with the very different question of whether most actual cases of killing are more reprehensible than most actual cases of letting die. Most actual cases of killing are clearly terrible (think, for example, of all the murders reported in the newspapers), and one hears of such cases

every day. On the other hand, one hardly ever hears of a case of letting die, except for the actions of doctors who are motivated by humanitarian reasons. So one learns to think of killing in a much worse light than of letting die. But this does not mean that there is something about killing that makes it in itself worse than letting die, for it is not the bare difference between killing and letting die that makes the difference in these cases. Rather, the other factors -- the murderer's motive of personal gain, for example, contrasted with the doctor's humanitarian motivation -- account for different reactions to the different cases.

[19] I have argued that killing is not in itself any worse than letting die; if my contention is right, it follows that active euthanasia is not any worse than passive euthanasia. What arguments can be given on the other side? The most common, I believe, is the following:

"The important difference between active and passive euthanasia is that, in passive euthanasia, the doctor does not do anything to bring about the patient's death. The doctor does nothing, and the patient dies of whatever ills already afflict him. In active euthanasia, however, the doctor does something to bring about the patient's death: he kills him. The doctor who gives the patient with cancer a lethal injection has himself caused his patient's death; whereas if he merely ceases treatment, the cancer is the cause of the death."

[20] A number of points need to be made here. The first is that it is not exactly correct to say that in passive euthanasia the doctor does nothing, for he does do one thing that is very important: he lets the patient die. "Letting someone die" is certainly different, in some respects, from other types of action -- mainly in that it is a kind of action that one may perform by way of not performing certain other actions. For example, one may let a patient die by way of not giving medication, just as one may insult someone by way of not shaking his hand. But for any purpose of moral assessment, it is a type of action nonetheless. The decision to let a patient die is subject to moral appraisal in the same way that a decision to kill him would be subject to moral appraisal: it may be assessed as wise or unwise, compassionate or sadistic, right or wrong. If a doctor deliberately let a patient die who was suffering from a routinely curable illness, the doctor would certainly be to blame for what he had done, just as he would be to blame if he had needlessly killed the patient. Charges against him would then be appropriate. If so, it would be no defense at all for him to insist that he didn't "do anything." He would have done something very serious indeed, for he let his patient die.

[21] Fixing the cause of death may be very important from a legal point of view, for it may determine whether criminal charges are brought against the doctor. But I do not think that this notion can be used to show a moral difference between active and passive euthanasia. The reason why it is considered bad to be the cause of someone's death is that death is regarded as a great evil -- and so it is. However, if it has been decided that euthanasia -- even passive euthanasia -- is desirable in a given case, it has also been decided that in this instance death is no greater an evil than the patient's continued existence. And if this is true, the usual reason for not wanting to be the cause of someone's death simply does not apply.

[22] Finally, doctors may think that all of this is only of academic interest -- the sort of thing that philosophers may worry about but that has no practical bearing on their own work. After all, doctors must be concerned about the legal consequences of what they do, and active euthanasia is clearly forbidden by the law. But even so, doctors should also be concerned with the fact that the law is forcing upon them a moral doctrine that may well be indefensible, and has a considerable effect on their practices. Of course, most doctors are

not now in the position of being coerced in this matter, for they do not regard themselves as merely going along with what the law requires. Rather, in statements such as the AMA policy statement that I have quoted, they are endorsing this doctrine as a central point of medical ethics. In that statement, active euthanasia is condemned not merely as illegal but as "contrary to that for which the medical profession stands," whereas passive euthanasia is approved. However, the preceding considerations suggest that there is really no moral difference between the two, considered in themselves (there may be important moral differences in some cases in their consequences, but, as I pointed out, these differences may make active euthanasia, and not passive euthanasia, the morally preferable option). So, whereas doctors may have to discriminate between active and passive euthanasia to satisfy the law, they should not do any more than that. In particular, they should not give the distinction any added authority and weight by writing it into official statements of medical ethics.

A Reply to Rachels on Active and Passive Euthanasia

TOM L. BEAUCHAMP

[1] James Rachels has recently argued that the distinction between active and passive euthanasia is neither appropriately used by the American Medical Association nor generally used for the resolution of moral problems of euthanasia. Indeed he believes this distinction - which he equates with the killing/letting die distinction -- does not in itself have any moral importance. The chief object of his attack is the following statement adopted by the House of Delegates of the American Medical Association in 1973:

The intentional termination of the life of one human being by another -- mercy killing -- is contrary to that for which the medical profession stands and is contrary to the policy of the American Medical Association.

The cessation of the employment of extraordinary means to prolong the life of the body when there is irrefutable evidence that biological death is imminent is the decision of the patient and/or his immediate family. The advice and judgment of the physician should be freely available to the patient and/or his immediate family.

[2] Rachels constructs a powerful and interesting set of arguments against this statement. In this paper I attempt the following: (1) to challenge his views on the grounds that he does not appreciate the moral reasons which give weight to the active/passive distinction; (2) to provide a constructive account of the moral relevance of the active/passive distinction; and (3) to offer reasons showing that Rachels may nonetheless be correct in urging that we ought to abandon the active/passive distinction for purposes of moral reasoning.

I

[3] I would concede that the active/passive distinction is sometimes morally irrelevant. Of this Rachels convinces me. But it does not follow that it is always morally irrelevant. What we need, then, is a case where the distinction is a morally relevant one and an explanation why it is so. Rachels himself uses the method of examining two cases which are exactly alike except that "one involves killing whereas the other involves letting die". We may profitably begin by comparing the kinds of cases governed by the AMA's doctrine with the kinds of cases adduced by Rachels in order to assess the adequacy and fairness of his cases.

[4] The second paragraph of the AMA statement is confined to a narrowly restricted range of passive euthanasia cases, viz., those (a) where the patients are on extraordinary means, (b) where irrefutable evidence of imminent death is available, and (c) where patient or family consent is available. Rachels' two cases involve conditions notably different from these:

[5] In the first, Smith stands to gain a large inheritance if anything should happen to his six-year-old cousin. One evening while the child is taking his bath, Smith sneaks into the bathroom and drowns the child, and then arranges things so that it will look like an accident.

[6] In the second, Jones also stands to gain if anything should happen to his six-year-old cousin. Like Smith, Jones sneaks in planning to drown the child in his bath. However, just as he enters the bathroom Jones sees the child slip and hit his head, and fall face down in the water. Jones is delighted; he stands by, ready to push the child's head back under if it is necessary, but it is not necessary. With only a little thrashing about, the child drowns all by himself, "accidentally," as Jones watches and does nothing.

[7] Now Smith killed the child, whereas Jones "merely" let the child die. That is the only difference between them.

[8] Rachels says there is no moral difference between the cases in terms of our moral assessments of Smith and Jones' behavior. This assessment seems fair enough, but what can Rachels' cases be said to prove, as they are so markedly disanalogous to the sorts of cases envisioned by the AMA proposal? Rachels concedes important disanalogies, but thinks them irrelevant:

[9] The point is the same in these cases: the bare difference between killing and letting die does not, in itself, make a moral difference. If a doctor lets a patient die, for humane reasons, he is in the same moral position as if he had given the patient a lethal injection for humane reasons.

[10] Three observations are immediately in order. First, Rachels seems to infer that from such cases we can conclude that the distinction between killing and letting die is always morally irrelevant. This conclusion is fallaciously derived. What the argument in fact shows, being an analogical argument, is only that in all relevantly similar cases the distinction does not in itself make a moral difference. Since Rachels concedes that other cases are disanalogous, he seems thereby to concede that his argument is as weak as the analogy itself. Second, Rachels' cases involve two unjustified actions, one of killing and the other of letting die. The AMA statement distinguishes one set of cases of unjustified killing and another of justified cases of allowing to die. Nowhere is it claimed by the AMA that what makes the difference in these cases is the active/passive distinction itself. It is only implied that one set of cases, the justified set, involves (passive) letting die while the unjustified set involves (active) killing. While it is said that justified euthanasia cases are passive ones and unjustified ones active, it is not said either that what makes some acts justified is the fact of their being passive or that what makes others unjustified is the fact of their being active. This fact will prove to be of vital importance.

[11] The third point is that in both of Rachels' cases the respective moral agents -- Smith and Jones -- are morally responsible for the death of the child and are morally blameworthy -- even though Jones is presumably not causally responsible. In the first case death is caused by the agent, while in the second it is not; yet the second agent is no less morally responsible. While the law might find only the first homicidal, morality condemns the motives in each case as equally wrong, and it holds that the duty to save life in such cases is as compelling as the duty not to take life. I suggest that it is largely because of this equal degree of moral responsibility that there is no morally relevant difference in Rachels' cases. In the cases envisioned by the AMA, however, an agent is held to be responsible for taking life by actively killing but is not held to be morally required to preserve life, and so not responsible for death, when removing the patient from extraordinary means (under conditions a-c above). I shall elaborate this latter point momentarily. My only conclusion thus far is the negative one that Rachels' arguments rest on weak foundations. His cases are not relevantly similar to euthanasia cases and do not support his apparent conclusion that the active/passive distinction is always morally irrelevant.

II

[12] I wish first to consider an argument that I believe has powerful intuitive appeal and probably is widely accepted as stating the main reason for rejecting Rachels' views. I will maintain that this argument fails, and so leaves Rachels' contentions untouched.

[13] I begin with an actual case, the celebrated Quinlan case. Karen Quinlan was in a coma, and was on a mechanical respirator which artificially sustained her vital processes and which her parents wished to cease. At least some physicians believed there was irrefutable evidence that biological death was imminent and the coma irreversible. This case, under this description, closely conforms to the passive cases envisioned by the AMA. During an interview the father, Mr. Quinlan, asserted that he did not wish to kill his daughter, but only to remove her from the machines in order to see whether she would live or would die a natural death. Suppose he had said -- to envision now a second and hypothetical, but parallel case -- that he wished only to see her die painlessly and therefore wished that the doctor could induce death by an over-dose of morphine. Most of us would think the second act, which involves active killing, morally unjustified in these circumstances, while many of us would think the first act morally justified. (This is not the place to consider whether in fact it is justified, and if so under what conditions.) What accounts for the apparent morally relevant difference?

[14] I have considered these two cases together in order to follow Rachels' method of entertaining parallel cases where the only difference is that the one case involves killing and the other letting die. However, there is a further difference, which crops up in the euthanasia context. The difference rests in our judgments of medical fallibility and moral responsibility. Mr. Quinlan seems to think that, after all, the doctors might be wrong. There is a remote possibility that she might live without the aid of a machine. But whether or not the medical prediction of death turns out to be accurate, if she dies then no one is morally responsible for directly bringing about or causing her death, as they would be if they caused her death by killing her. Rachels finds explanations which appeal to causal conditions unsatisfactory; but perhaps this is only because he fails to see the nature of the causal link. To bring about her death is by that act to preempt the possibility of life. To "allow her to die" by removing artificial equipment is to allow, for the possibility of wrong diagnosis or incorrect prediction and hence to absolve oneself of moral responsibility for the taking of life under false assumptions. There may, of course, be utterly no empirical possibility of recovery in some cases since recovery would violate a law of nature. However, judgments of empirical impossibility in medicine are notoriously problematic -- the reason for emphasizing medical fallibility. And in all the hard cases we do not know that recovery is empirically impossible, even if good evidence is available.

[15] The above reason for invoking the active/passive distinction can now be generalized: Active termination of life removes all possibility of life for the patient, while passively ceasing extraordinary means may not. This is not trivial since patients have survived in several celebrated cases where, in knowledgeable physicians' judgments, there was "irrefutable" evidence that death was imminent.

[16] One may, of course, be entirely responsible and culpable for another's death either by killing him or by letting him die. In such cases, of which Rachels' are examples, there is no morally significant difference between killing and letting die precisely because whatever one does, omits, or refrains from doing does not absolve one of responsibility. Either active or

passive involvement renders one responsible for the death of another, and both involvements are equally wrong for the same principled moral reason: it is (*prima facie*) morally wrong to bring about the death of an innocent person capable of living whenever the causal intervention or negligence is intentional. (I use causal terms here because causal involvement need not be active, as when by one's negligence one is nonetheless causally responsible.) But not all cases of killing and letting die fall under this same moral principle. One is sometimes culpable for killing, because morally responsible as the agent for death, as when one pulls the plug on a respirator sustaining a recovering patient (a murder). But one is sometimes not culpable for letting die because one is not morally responsible as agent, as when one pulls the plug on a respirator sustaining an irreversibly comatose and unrecoverable patient (a routine procedure, where one is *merely* causally responsible). Different degrees and means of involvement assess different degrees of responsibility, and our assessments of culpability can become intricately complex. The only point which now concerns us, however, is that because different moral principles may govern very similar circumstances, we are sometimes morally culpable for killing but not for letting die. And to many people it will seem that in passive cases we are not morally responsible for causing death, though we are responsible in active cases.

[17] This argument is powerfully attractive. Although I was once inclined to accept it in virtually the identical form just developed, I now think that, despite its intuitive appeal, it cannot be correct. It is true that different degrees and means of involvement entail different degrees of responsibility, but it does not follow that we are not responsible and therefore are absolved of possible culpability in any case of intentionally allowing to die. We are responsible and perhaps culpable in either active or passive cases. Here Rachels' argument is entirely to the point: It is not primarily a question of greater or lesser responsibility by an active or a passive means that should determine culpability. Rather, the question of culpability is decided by the moral justification for choosing either a passive or an active means. What the argument in the previous paragraph overlooks is that one might be unjustified in using an active means or unjustified in using a passive means, and hence be culpable in the use of either; yet one might be justified in using an active means or justified in using a passive means, and hence not be culpable in using either. Fallibility might just as well be present in a judgment to use one means as in a judgment to use another. (A judgment to allow to die is just as subject to being based on knowledge which is fallible as a judgment to kill.) Moreover, in either case, it is a matter of what one knows and believes, and not a matter of a particular kind of causal connection or causal chain. If we kill the patient, then we are certainly causally responsible for his death. But, similarly, if we cease treatment, and the patient dies, the patient might have recovered if treatment had been continued. The patient might have been saved in either case, and hence there is no morally relevant difference between the two cases. It is, therefore, simply beside the point that "one is sometimes culpable for killing . . . but one is sometimes not culpable for letting die" -- as the above argument concludes.

[18] Accordingly, despite its great intuitive appeal and frequent mention, this argument from responsibility fails.

III

[19] There may, however, be more compelling arguments against Rachels, and I wish now to provide what I believe is the most significant argument that can be adduced in defense of the active/passive distinction. I shall develop this argument by combining (A) so-called wedge or slippery slope arguments with (B) recent arguments in defense of rule

utilitarianism. I shall explain each in turn and show how in combination they may be used to defend the active-passive distinction.

[20] (A) Wedge arguments proceed as follows: if killing were allowed, even under the guise of a merciful extinction of life, a dangerous wedge would be introduced which places all "undesirable" or "unworthy" human life in a precarious condition. Proponents of wedge arguments believe the initial wedge places us on a slippery slope for at least one of two reasons: (i) It is said that our justifying principles leave us with no principled way to avoid the slide into saying that all sorts of killings would be justified under similar conditions. Here it is thought that once killing is allowed, a firm line between justified and unjustified killings cannot be securely drawn. It is thought best not to redraw the line in the first place, for redrawing it will inevitably lead to a downhill slide. It is then often pointed out that as a matter of historical record this is precisely what has occurred in the darker regions of human history, including the Nazi era, where euthanasia began with the best intentions for horribly ill, non-Jewish Germans and gradually spread to anyone deemed an enemy of the people. (ii) Second, it is said that our basic principles against killing will be gradually eroded once some form of killing is legitimated. For example, it is said that permitting voluntary euthanasia will lead to permitting involuntary euthanasia, which will in turn lead to permitting euthanasia for those who are a nuisance to society (idiots, recidivist criminals, defective newborns, and the insane, e.g.). Gradually other principles which instill respect for human life will be eroded or abandoned in the process.

[21] I am not inclined to accept the first reason (i). If our justifying principles are themselves justified, then any action they warrant would be justified. Accordingly, I shall only be concerned with the second approach (ii).

[22] (B) Rule utilitarianism is the position that a society ought to adopt a rule if its acceptance would have better consequences for the common good (greater social utility) than any comparable rule could have in that society. Any action is right if it conforms to a valid rule and wrong if it violates the rule. Sometimes it is said that alternative rules should be measured against one another, while it has also been suggested that whole moral codes (complete sets of rules) rather than individual rules should be compared. While I prefer the latter formulation (Brandt's), this internal dispute need not detain us here. The important point is that a particular rule or a particular code of rules is morally justified if and only if there is no other competing rule or moral code whose acceptance would have a higher utility value for society, and where a rule's acceptability is contingent upon the consequences which would result if the rule were made current.

[23] Wedge arguments, when conjoined with rule utilitarian arguments, may be applied to euthanasia issues in the following way. We presently subscribe to a no-active-euthanasia rule (which the AMA suggests we retain). Imagine now that in our society we make current a restricted-active-euthanasia rule (as Rachels seems to urge). Which of these two moral rules would, if enacted, have the consequence of maximizing social utility? Clearly a restricted-active-euthanasia rule would have some utility value, as Rachels notes, since some intense and uncontrollable suffering would be eliminated. However, it may not have the highest utility value in the structure of our present code or in any imaginable code which could be made current, and therefore may not be a component in the ideal code for our society. If wedge arguments raise any serious questions at all, as I think they do, they rest in this area of whether a code would be weakened or strengthened by the addition of active euthanasia principles. For the disutility of introducing legitimate killing into one's moral code (in the form of active euthanasia rules) may, in the long run, outweigh the utility of doing so, as a result of the eroding effect such a relaxation would have on rules in the code which demand respect for human life. If, for example, rules permitting active killing were

introduced, it is not implausible to suppose that destroying defective newborns (a form of involuntary euthanasia) would become an accepted and common practice, that as population increases occur the aged will be even more neglectable and neglected than they now are, that capital punishment for a wide variety of crimes would be increasingly tempting, that some doctors would have appreciably reduced fears of actively injecting fatal doses whenever it seemed to them propitious to do so, and that laws of war against killing civilians would erode in efficacy even beyond their already abysmal level.

[24] A hundred such possible consequences might easily be imagined. But these few are sufficient to make the larger point that such rules permitting killing could lead to a general reduction of respect for human life. Rules against killing in a moral code are not isolated moral principles; they are pieces of a web of rules against killing which forms the code. The more threads one removes, the weaker the fabric becomes. And if, as I believe, moral principles against active killing have the deep and continuously civilizing effect of promoting respect for life, and if principles which allow passively letting die (as envisioned in the AMA statement) do not themselves cut against this effect, then this seems an important reason for the maintenance of the active/passive distinction. (By the logic of the above argument, passively letting die would also have to be prohibited if a rule permitting it had the serious adverse consequence of eroding acceptance or rules protective of respect for life. While this prospect seems to me improbable, I can hardly claim to have refuted those conservatives who would claim that even rules that sanction letting die place us on a precarious slippery slope.)

[25] A troublesome problem, however, confronts my use of utilitarian and wedge arguments. Most all of us would agree that both killing and letting die are justified under some conditions. Killings in self-defense and in "just" wars are widely accepted as justified because the conditions excuse the killing. If society can withstand these exceptions to moral rules prohibiting killing, then why is it not plausible to suppose society can accept another excusing exception in the form of justified active euthanasia? This is an important and worthy objection, but not a decisive one. The defenseless and the dying are significantly different classes of persons from aggressors who attack individuals and/or nations. In the case of aggressors, one does not confront the question whether their lives are no longer worth living. Rather, we reach the judgment that the aggressors' morally blameworthy actions justify counteractions. But in the case of the dying and the otherwise ill, there is no morally blameworthy action to justify our own. Here we are required to accept the judgment that their lives are no longer worth living in order to believe that the termination of their lives is justified. It is the latter sort of judgment which is feared by those who take the wedge argument seriously. We do not now permit and never have permitted the taking of morally blameless lives. I think this is the key to understanding why recent cases of intentionally allowing the death of defective newborns have generated such protracted controversy. Even if such newborns could not have led meaningful lives (a matter of some controversy), it is the wedged foot in the door which creates the most intense worries. For if we once take a decision to allow a restricted infanticide justification or any justification at all on grounds that a life is not meaningful or not worth living, we have qualified our moral rules against killing. That this qualification is a matter of the utmost seriousness needs no argument. I mention it here only to show why the wedge argument may have moral force even though we already allow some very different conditions to justify intentional killing.

[26] There is one final utilitarian reason favoring the preservation of the active/passive distinction. Suppose we distinguish the following two types of cases of wrongly diagnosed patients:

1. Patients wrongly diagnosed as hopeless, and who will survive even if a treatment is ceased (in order to allow a natural death).
2. Patients wrongly diagnosed as hopeless, and who will survive only if the treatment is not ceased (in order to allow a natural death).

[27] If a social rule permitting only passive euthanasia were in effect, then doctors and families who "allowed death" would lose only patients in class 2, not those in class 1; whereas if active euthanasia were permitted, at least some patients in class 1 would be needlessly lost. Thus, the consequence of a no-active-euthanasia rule would be to save some lives which could not be saved if both forms of euthanasia were allowed. This reason is not a decisive reason for favoring a policy of passive euthanasia, since these classes (1 and 2) are likely to be very small and since there might be counterbalancing reasons (extreme pain, autonomous expression of the patient, etc.) in favor of active euthanasia. But certainly it is a reason favoring only passive euthanasia and one which is morally relevant and ought to be considered along with other moral reasons.

IV

[28] It may still be insisted that my case has not touched Rachels' leading claim, for I have not shown, as Rachels puts it, that it is "the bare difference between killing and letting die that makes the difference in these cases". True, I have not shown this and in my judgment it cannot be shown. But this concession does not require capitulation to Rachels' argument. I adduced a case which is at the center of our moral intuition that killing is morally different (in at least some cases) from letting die; and I then attempted to account for at least part of the grounds for this belief. The grounds turn out to be other than the bare difference, but nevertheless make the distinction morally relevant. The identical point can be made regarding the voluntary/involuntary distinction, as it is commonly applied to euthanasia. It is not the bare difference between voluntary euthanasia (i.e., euthanasia with patient consent) and involuntary euthanasia (i.e., without patient consent) that makes one justifiable and one not. Independent moral grounds based on, for example, respect for autonomy or beneficence, or perhaps justice will alone make the moral difference.

[29] In order to illustrate this general claim, let us presume that it is sometimes justified to kill another person and sometimes justified to allow another to die. Suppose, for example, that one may kill in self-defense and may allow to die when a promise has been made to someone that he would be allowed to die. Here conditions of self-defense and promising justify actions. But suppose now that someone A promises in exactly similar circumstances to kill someone B at B's request, and also that someone C allows someone D to die in an act of self-defense. Surely A is obliged equally to kill or to let die if he promised; and surely C is permitted to let D die if it is a matter of defending C's life. If this analysis is correct, then it follows that killing is sometimes right, sometimes wrong, depending on the circumstances, and the same is true of letting die. It is the justifying reasons which make the difference whether an action is right, not merely the kind of action it is.

[30] Now, *if* letting die led to disastrous conclusions but killing did not, then letting die but not killing would be wrong. Consider, for example, a possible world in which dying would be indefinitely prolongable even if all extraordinary therapy were removed and the patient were allowed to die. Suppose that it costs over one million dollars to let each patient die, that nurses consistently commit suicide from caring for those being "allowed to die," that physicians are constantly being successfully sued for malpractice for allowing death by cruel

and wrongful means, and that hospitals are uncontrollably overcrowded and their wards filled with communicable diseases which afflict only the dying. Now suppose further that killing in this possible world is quick, painless, and easily monitored. I submit that in this world we would believe that killing is morally acceptable but that allowing to die is morally unacceptable. The point of this example is again that it is the circumstances that make the difference, not the bare difference between killing and letting die.

[31] It is, however, worth noticing that there is nothing in the AMA statement which says that the bare difference between killing and letting die itself and alone makes the difference in our differing moral assessments of rightness and wrongness. Rachels forces this interpretation on the statement. Some philosophers may have thought bare difference makes the difference, but there is scant evidence that the AMA or any thoughtful ethicist must believe it in order to defend the relevance and importance of the active/passive distinction. When this conclusion is coupled with my earlier argument that from Rachels' paradigm cases it follows only that the active/passive distinction is sometimes, but not always, morally irrelevant, it would seem that his case against the AMA is rendered highly questionable.

V

[32] There remains, however, the important question as to whether we ought to accept the distinction between active and passive euthanasia, now that we are clear about (at least one way of drawing) the moral grounds for its invocation. That is, should we employ the distinction in order to judge some acts of euthanasia justified and others not justified? Here, as the hesitant previous paragraph indicates, I am uncertain. This problem is a substantive moral issue -- not merely a conceptual one -- and would require at a minimum a lengthy assessment of wedge arguments and related utilitarian considerations. In important respects empirical questions are involved in this assessment. We should like to know, and yet have hardly any evidence to indicate, what the consequences would be for our society if we were to allow the use of active means to produce death. The best hope for making such an assessment has seemed to some to rest in analogies to suicide and capital punishment statutes. Here it may reasonably be asked whether recent liberalizations of laws limiting these forms of killing have served as the thin end of a wedge leading to a breakdown of principles protecting life or to widespread violations of moral principles. Nonetheless, such analogies do not seem to me promising, since they are still fairly remote from the pertinent issue of the consequences of allowing active humanitarian killing of one person by another.

[33] It is interesting to notice the outcome of the Kamisar-Williams debate on euthanasia -- which is almost exclusively cast by both writers in a consequential, utilitarian framework. At one crucial point in the debate, where possible consequences of laws permitting euthanasia are under discussion, they exchange "perhaps" judgments:

[34] I [Williams] will return Kamisar the compliment and say: "Perhaps." We are certainly in an area where no solution is going to make things quite easy and happy for everybody, and all sorts of embarrassments may be conjectured. But these embarrassments are not avoided by keeping to the present law: we suffer from them already.

[35] Because of the grave difficulties which stand in the way of making accurate predictions about the impact of liberalized euthanasia laws -- especially those that would permit active killing -- it is not surprising that those who debate the subject would reach a point of

exchanging such "perhaps" judgments. And that is why, so it seems to me, we are uncertain whether to perpetuate or to abandon the active-passive distinction in our moral thinking about euthanasia. I think we do perpetuate it in medicine, law, and ethics because we are still somewhat uncertain about the conditions under which passive euthanasia should be permitted by law (which is one form of social rule). We are unsure about what the consequences will be of the California "Natural Death Act" and all those similar acts passed by other states which have followed in its path. If no untoward results occur, and the balance of the results seems favorable, then we will perhaps be less concerned about further liberalizations of euthanasia laws. If untoward results do occur (on a widespread scale), then we would be most reluctant to accept further liberalizations and might even abolish natural death acts.

[36] In short, I have argued in this section that euthanasia in its active and its passive forms presents us with a dilemma which can be developed by using powerful consequentialist arguments on each side, yet there is little clarity concerning the proper resolution of the dilemma precisely because of our uncertainty regarding proclaimed consequences.

VI

[37] I reach two conclusions at the end of these several arguments. First, I think Rachels is incorrect in arguing that the distinction between active and passive is (always) morally irrelevant. It may well be relevant, and for moral reasons -- the reasons adduced in section **III** above. Second, I think nonetheless that Rachels may ultimately be shown correct in his contention that we ought to dispense with the active-passive distinction -- for reasons adduced in sections **IV-V**. But if he is ultimately judged correct, it will be because we have come to see that some forms of active killing have generally acceptable social consequences, and not primarily because of the arguments he adduces in his paper -- even though something may be said for each of these arguments. Of course, in one respect I have conceded a great deal to Rachels. The bare difference argument is vital to his position, and I have fully agreed to it. On the other hand, I do not see that the bare difference argument does play or need play a major role in our moral thinking -- or in that of the AMA.

