Is There a Biological Person?

ROBERT S. MORISON

Program in Science, Technology, and Society,
Massachusetts Institute of Technology

THIS PAPER IS NOT A FINISHED ESSAY BUT A challenge to discussion. For the most part it represents the stream of consciousness that began when I was asked to respond to a consideration of personhood from a biological point of view. It emphatically does not begin with a careful definition and proceed from there. Rather it begins with a "gedanken experiment" in which the attempt is made to observe personhood with the biologist's usual tools and then to search for it as an induction or inference, pausing meanwhile to take a look at the surprisingly relevant but not very reassuring dictionary definition.

The most important lead grows out of the dissatisfaction of some biologists with attempts to understand organisms simply by reducing them to their physical and chemical elements. This leads in turn to a search for a more direct way to deal with the whole, an effort that frequently leads to considerations of purpose or final cause.

Next we look at various philosophical efforts to find personhood in some presumptive but crucial difference between Homo sapiens and other species. Finally, we note the distinctive plasticity of the human nervous system which makes it both possible and necessary for human beings to invent their own social behavior patterns and rituals. It is

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concluded that personhood may represent such an invention aimed at the preservation of individual security in what otherwise might be a war of all against all.

In conclusion, it is recognized that others hold quite different, transcendental views. The ensuing differences of opinion lead to bitter arguments in the realm of general principle. All is not lost, however, since men of good will can usually agree on matters of specific practice while disagreeing bitterly on the general principles which lead them to agree.

Is Personhood an Observable Fact?

When a biologist looks at or listens to or palpates a human body he encounters various anatomical entities and functional relationships. For a long time systematic study of these objective realities provided the principal scientific base for the practice of medicine. As the biologist employs more and more refined instruments, he sees smaller and smaller details and, by resorting to chemical methods, he can infer even finer morphological elements and the functional relations between them. But no matter how closely he looks, or how refined his chemical methodology, he does not encounter any empirical reality resembling what other people have in mind when they talk about personhood.

Is it a Reasonable Inference?

Failing to discover personhood among observable biological facts, he might look next for what may be inferred from other facts. As one pokes about in this area, one soon encounters the notion that a whole organism acts as if it were more than the mere sum of its parts. Since personhood implies a similar transcendence it seems reasonable to look for some relation between it and a hypothetical "wholeness factor."

Many people, including some biologists, certainly regard the picture of any complex organism revealed by the usual observational methods as distressingly incomplete. Not only is this "reductionist," "nothing but" position esthetically restricted, but it provides what to many observers is an inadequate explanation of behavior. This sense of

inadequacy leads directly to the hypothesis that the whole transcends its parts. Implicit in this attitude is the notion that a whole can develop purposes and seek out goals of its own. Indeed, the ancients adopted this position as a matter of course and attributed something that sounds a lot like voluntary intention even to inanimate bodies. Thus, water was thought to "seek its own level," and solid bodies fell to the ground because they "wanted" to, with differing degrees of urgency for heavy and light ones.

In physics, this attitude failed to survive the age of Galileo and Newton. In biology, certain embryologists and psychologists and even some unorthodox evolutionists maintained it well into the present century. Even today "holism" has not been wholly banned from the scholarly lexicon. But even those who believe that reductionism can never explain human behavior cannot bring the "wholeness factor" or the individual "essence" within the purview of direct observation. Whatever these characteristics are, their existence remains inferential.

There is nothing wrong about inferences per se. Scientific knowledge is largely made up of them. The difficulty is that, unlike most legitimate scientific inferences, what I have called the wholeness factor has been hard to test and thus does not command the allegiance of any but a small proportion of the scientific community. This lack of enthusiasm may also derive from the fact that the inference is drawn not from an array of positive clues but rather from a feeling of emptiness at regarding men and women as simply nodes in a network of what Aristotle called efficient causes. It is difficult to pursue this line of thought without lapsing into mysticism; but the best of the modern "holists," philosophers like Whitehead, the gestalt psychologists, or the more sober emergent evolutionists, have tried to keep their thinking in touch with the conventional materialist limits while searching for something beyond the usual mechanistic concepts.

A much longer tradition is frankly dualistic and holds that the body is derived from the familiar material world of "extension" while the wholeness factor emerges from a quite different, insubstantial, transcendental one. Indeed, so different were the two realms thought to be that it was even posited that the two elements might have entirely different time courses, the wholeness factor existing forever (it might then be called a soul) and the biological body "for but a little time." Even more peculiarly, the biological entity might exist for considerable periods without its wholeness factor. The timing of

junction and disjunction then become matters for lively debate. To those who take a dualistic position, the fusion of soul and body is all important since it is only the combination that constitutes the complete human being. There are difficulties with this position for the biologist, especially in the usual form that limits the possession of souls to human beings. Before discussing this however, let us turn to more worldly matters.

Even if the case for a wholeness factor were stronger, it would not provide a solid foundation for personhood as the latter concept functions in developed societies. Still other factors must be added to reach the full meaning of personhood as that term is now understood in its legal and moral sense. In fact, the principal point of personhood resides in the rights and privileges that go with it, or, as Nozick (1974) puts it, the *constraints* that it puts on others.

Two common arguments in support of personhood for human beings rest specifically on fancied crucial differences between the biology of man and that of other animals—his ability to reason and his greater capacity for suffering. Some authorities couple one or both of these capacities to the phenomenon of consciousness that is similarly assumed to be unique to human beings. There is, however, no real evidence for this latter view. It is in fact impossible to prove the nonexistence of a subjective phenomenon like consciousness. It might seem equally difficult to prove its existence and this is indeed the position taken by orthodox behaviorists. More "common sense" types, impressed by their own undoubtedly conscious state, find it embarrassing to deny it to everyone else and see little more reason to deny it to other species. Indeed, the most thoughtful biologist to devote a full dress effort to the subject finds the weight of evidence and speculation coming down in favor of consciousness, at least for most vertebrates (Griffin 1976).

Reason has some operational features that make it easier to identify than consciousness. We can set an animal, a man, or a computer a task which requires reasoning for its solution and observe at least the result if not the process itself. Here the evidence is very clear. Human beings are much better at reasoning than are any other animals. There is, however, some embarrassing doubt about computers which seem to be constantly increasing the number of things they can do better than we can. The human superiority over animals is correlated closely with a marked difference in brain size. The difference in size and

complexity of connection is almost entirely confined to the newer parts of the cerebral cortex, once called "silent" because electrical stimulation gave rise to no observable activity and their ablation was followed by no obvious deficit in hearing, seeing, or feeling. It is now believed that these areas are the site of the higher brain functions among which reason is included.

Presumably coupled with these anatomical differences are two further closely related functions so remarkably developed in human beings as to seem peculiar to them—the ability to draw general rules from sets of individual instances and the use of language. Other animals, of course, communicate by sounds and visible movements, but these are considered by experts in such matters to consist largely of signals and signs with highly specific referents. The ability of nonhumans to extract general rules or properties from observed data sets and the attachment to them of true symbols is thought to be primitive at best.

It is true that within the last few years a small number of chimpanzees have been taught to communicate through the use of a limited number of visible hand signs similar to those used by deaf and dumb human beings. There is a lively argument about whether or not these learned behaviors constitute true language. Whatever the conclusion of the experts (one suspects that those who know and love language will hold negative views, while those who know and love chimps will accentuate the positive), the outsider cannot help being struck by the contrast between the painstaking labor involved in teaching the brightest of chimps to put a few halting words into even fewer usable "sentences" and the extraordinary ease with which average two year olds, not to mention J.S. Mill or Herbert Spencer, master the use of language and extract their own grammatical rules.

It can only be concluded that the human brain does, indeed, profoundly separate Homo sapiens from even his closest relatives. Indeed, some significant philosophers have erred in the other direction and decided that reason, so obviously and at the same time so obscurely related to the brain, brings human beings closer to divinity. Beginning even before Pythagoras, those who thought of God as a mathematician argued that the ability to do math gave men a share in the divine presence. Extrapolating from this essentially Greek way of looking at the matter, Jews and Christians have suggested that men are sons of God and, as a consequence, brothers (and, we may hope, sisters as

well). This identification in turn makes it easier to invoke natural law in support of a special sort of personhood for human beings. But there are difficulties in the way of deriving the idea of personhood from the capacity to think. For example, Aristotle is often regarded as the classical protagonist of this view, but Bertrand Russell (1957) employs his gift for extracting a kind of superclarity from obscure passages to interpret Aristotle as follows: ". . . individuality—what distinguishes one man from another—is connected with the body and the irrational soul, while the rational soul is divine and impersonal." But the social significance of personhood resides precisely in its attachment to particular individuals. Clearly, there is something wrong here.

A good deal of reasoning since the days of Aristotle about reason and its relation to personhood remains moot. Nozick (1974) in a brief but fascinating review of modern thinking on what it is that justifies a person in putting constraints on others (his way of characterizing natural right) suggests that it might lie in the ability to use the mind to develop and observe moral rules and shape one's "life in accordance with some overall plan." But he is quick to point out the difficulties in this position. In any case, the foregoing brief glance at the stately monuments of metaphysics reveals nothing that requires a biologist to revise his earlier observation that there is no clear empirical relation between reason and personhood.

Unable to find the rights of personhood in the higher levels of brain function, some philosophers seek them in the need to protect the individual from suffering. In order to avoid extending those rights to other animals, this view emphasizes the greater sensitivity of human beings. Since suffering is almost by definition subjective, a proper biologist should probably not comment, but his common sense, coupled with observations of animals exposed to what to himself are painful experiences, makes him at least uneasy about such distinctions.

Attribution and Its Origins

To make a long story short, there is no observable or postulated biological property that automatically or by some logical necessity entails the rights of personhood. On the contrary, we are forced to conclude that personhood and its appurtenant rights are in the truest

sense of the word "attributes"—in the words of the dictionary "ascribed or added to" an individual or thing.

Perhaps the unbiological, ascriptive, if not wholly arbitrary character of the idea of personhood is best revealed by the origin of the word itself. To the Romans "persona" meant mask, or an artifact attached to a human body to make it look like something it really is not. To remove personhood finally and completely from any biological context, it is only necesary to note that the soulless (and flesh-and-bloodless) corporation has become a particularly important "person" in the eyes of the law, with rights to life, liberty, and especially property. Some corporations may even pursue happiness, if not for themselves, at least for the greatest number of stockholders.

This brief and impressionistic review should be enough to make it clear that personhood is not a basic biological property of human beings like metabolism, motility, reproductive capacity, or the ability to play chess, nor is it necessarily peculiar to them. It is instead an invention or abstraction which can be attached as may seem desirable to a number of different entities. As Singer (1977) and Nozick (1974) independently suggest, nonhuman animals appear to be eligible. When a California lawyer wrote a paper entitled "Should Trees Have Standing?" he was consciously raising the question of personhood for the entire ecosystem. At this point it might be good for our own souls to recall that such a question would have seemed far less radical and not even slightly amusing to our animistic or pantheistic forebears.

However that may be, and without attempting to answer such ultimate questions, perhaps we can agree that where personhood exists it is an attribute or endowment and not a biological characteristic. Nevertheless, one may still wish to ask a couple of additional biological questions. Is there, for example, something about human biology that makes it desirable, necessary, and/or possible for us to invent the idea of personhood? Insofar as biology is prepared to answer the first part of the question, it must draw rather heavily on the still youthful subdiscipline of ethology.

As befits its youth, ethology is still characterized by an exuberant tendency to run in several directions at once and to arrive sometimes at what may be premature conclusions. Nevertheless, there is a hard core of evidence that the social relations of human beings are governed in a somewhat different way than are those of most other animals. In a word, the social behavior of animals tends to occur in stereotyped

patterns peculiar to the species. In the individual, particular patterns appear at particular stages of development and although they may be triggered or "released" by events in the environment they are shaped by them only in predetermined ways. In computer jargon, the social behavior patterns of other animals are relatively "hard wired."

Many of these patterns can be related without too much Procrustean pulling and hauling to what we know as life, liberty, and property, if not, indeed, the pursuit of happiness. Thus, in many species the early life of the individual is dependent on a firm bond between the infant and its mother. This normally develops very quickly, apparently in response to sights, sounds, and smells in combinations that vary with species. Once formed, the bonds are not broken until the infant reaches a stage at which he can look after himself. Then another set of stereotypes appears to break the bonds and push the now adolescent offspring out into the world on his own. At the appointed time still another set of behaviors asserts the "right" of the individual to a given property or territory. Among the birds this is often proclaimed in song. Somewhat more boorishly, dogs, cats, and rodents may mark out their homesteads with urine enhanced by specially coded odors. Soon thereafter, a set of behaviors devoted to courtship and mating appears. Here again, the behaviors of particular species are highly stereotyped. On the other hand, the variety among species is simply staggering.

In many species, of course, the establishment of property rights or the selection of mates does not go unchallenged. The resulting competition may then lead to aggression. But hostilities are rarely allowed free rein. Instead, signals and signs are exchanged in rigidly standardized ways to determine winners and losers so that new statuses are accepted before serious damage to either party can occur. Konrad Lorenz (1979), who has done so much to observe and elucidate these behaviors, is not embarrassed to refer anthropocentrically to them as "rituals" for the resolution of potential conflict. In any case, most students of the subject find it reasonable to interpret them as the result of the invisible hand of evolution concerned to achieve an equitable distribution of status and property without the bloodshed that might endanger survival of the species.

Homo sapiens seems to have evolved in a different way. The distinguishing feature of human behavior is its plasticity and susceptibility to change by environmental influences, in a word by what we call

"learning." As Julian Huxley put it many years ago, man's specialization is for unspecialized behavior. A significant part of this arrangement is the very long period of immaturity during which children are dependent upon, and in a position to learn from, their parents and tribal associates. It was this extraordinary dependence on experience that caused John Locke to make his famous analogy with the "white card" on which all that we are is written after our birth.

Locke's position would now strike many biologists as extreme, but it has been immensely influential as the basis for the concept of perfectibility which so captivated the optimistic children of the enlightenment. A related consequence is the enormous faith that the Western world has put in universal education and such related matters as the reform of prisons and treatment of criminals. A possibly less benign result has been the tendency to turn any kind of investigation of differences among human beings into a political argument.

The secular optimists of the enlightenment never succeeded in completely suppressing the notion of original sin, much less the sinful behavior which many still regard as its result. Indeed, the idea of predestination emerges in modern dress to suggest that the continuing aggressive and destructive behavior so characteristic of human beings is determined in some way by genetic constitution. Others prefer to attribute it to the inadequate society in which individuals are forced to grow up. Fortunately, it is not necessary for us to engage in this largely unproductive debate. All we need do is observe that much human behavior is aggressive for whatever reason and that we lack the stereotyped "ritualistic" patterns found in other species for turning away wrath and/or accepting the inevitable.

It is therefore necessary for us to invent substitutes for the protections evolution grants to our less plastic relations. Some of us learn to smile and turn the other cheek when assaulted, while many more master the art of shaking hands on any and all occasions, including the beginning of boxing matches, to show that no real harm is intended. Many other niceties of etiquette have been developed from time to time to make life in the human jungle more comfortable. But the need for more basic, more general, and more durable defenses has long been recognized. May I suggest then that it is the awareness of the lack of inborn mechanisms and the inadequacy of learned etiquettes for turning away wrath that has led to the invention and elaboration of personhood with its sanctification of rights to life, liberty, and

property. In recent times the list of appurtenant rights and privileges has grown with a lush rapidity that makes one wonder about the soundness of the traditional underlying structure; but that is not our point today.

Before ending this biological assessment, however, it may be worth while pausing to note that the inventors and defenders of personhood have always worried about its fragility and have sought to buttress it with appeals to outside sanctions. Probably the oldest and most durable device is to couple personhood with the idea of an immortal soul which brings with it some fraction of divinity. In Christianity, as noted above, the relationship has been quite explicit—we are all "brothers" because we are all "sons" of God. Thus, a sin against a brother is in a sense a sin against God. Because Darwin's notion of the descent of man removes part or all of this protection, his theory early provoked discussions of great emotional intensity, still continuing today.

The secular humanists of the enlightenment arrived at much the same conclusion as the creationists but in a more sophisticated way by appealing to "Nature" and "Nature's God." Their arguments sounded like science and indeed it was believed that the same thought process that revealed the laws governing the physical world would also show human behavior to be part of a "Natural" (or divine) order. Oddly enough, although many of these humanists knew David Hume and apparently liked him, they seem not to have fully digested his famous discussion of the danger of turning an "is" into an "ought." Condorcet (1980), that most optimistic protagonist of the Age of Reason, overcame the terrors of a fugitive from the Revolution to put it this way: "Just as the mathematical and physical sciences tend to improve the arts that we use to satisfy our simplest needs, is it not also part of the necessary order of nature that the moral and political sciences should exercise a similar influence upon the motives that direct our feelings and actions?"

The modern biologist may find clarification of the philosophical problem evaded by the sages of the enlightenment in the last two paragraphs of Prof. Leo Strauss's (1953) "Natural Right and History." "Natural right in its classic form," he says, "is connected with a teleological view of the universe." This view has been destroyed by modern natural science, leaving us with two unsatisfactory alternatives:

"a non-teleological conception of human life" or a "typically modern dualism of a non-teleological natural science and a teleological science of man," a view echoed more recently by Nozick in his caustic "utilitarianism for animals, Kantianism for people." Liberals elect the first of these positions; the Catholic and non-Catholic followers of Aquinas and Aristotle elect the second. "Looking around us," Strauss (1953) concludes, "we see two hostile camps, heavily fortified and strictly guarded. . . . An adequate solution to the problem of natural right cannot be found before this basic problem has been solved."

It would be an unfeeling biologist who could look without embarrassment on the destruction by science of the teleological conception which served for so long as the basis for individual security. What more then can a biologist say? Well, for one thing he can invoke the biologist's formula for circumventing the problem of teleology and talk about evolution. Although some scholars have professed to see some sort of purpose or goal direction in evolution, the conventional majority prefers to talk in terms of chance and necessity, with differential survival as the driving force. We exist because our ancestors survived and for no other reason. As pointed out above, human beings lack the inborn rituals for turning away wrath. Instead, they use their plastic and creative nervous system to develop the idea of personhood and natural right to protect themselves and the members of their tribe from aggression within the group.

Cultural Considerations

Clearly, this kind of explanation involves transferring the idea of survival value from purely biological to cultural patterns. Not all anthropologists would agree with this, and it is easy to point to surviving items of culture that seem to have little current survival value. The same is true of certain strictly biological characteristics, and it should not be surprising that some parts of a culture lag behind other parts even though all are ultimately subject to evolution. Fortunately, it is not necessary for our purposes to enter into the discussion recently opened by Lumsden and Wilson (1981) of what may be the coevolution of biological and cultural characteristics. The jury is likely to be out for a long time on many of the issues raised in their book.

In the meantime, regardless of the genetic basis for the human ability to invent concepts like personhood or natural right, their current significance is best understood in the context of culture.

On the other hand, a biologist may perhaps be excused if he regards anthropology, to paraphrase Clausawitz (1976), as the pursuit of human biology by other means. Very few anthropologists like to think of themselves as biologists, not even Marvin Harris (1974), a self-confessed materialist-determinist who interprets such diverse cultural items as the Jewish food laws, the sacred cows of India, and the human sacrifices of the Aztecs in terms of the biological need for protein. Regardless of what the anthropologist's self image may be, the biologist in search of the roots of personhood finds the anthropological record interesting. Thus, he learns that in earlier stages man was more aware of the extrinsic, ascriptive origin of personhood than many of us are today. We are told, for example, that in many, perhaps most, early communities the newborn child was not automatically protected and brought into the family or tribe as a regular member. Someone, often the father, but sometimes the mother (in some societies, a select committee), decided to confer the protected status after review of the infant itself and the prevailing sociodemographic and economic condition of the family and tribe.

Similar customs prevailed well into historic times and, as is well known, the Greeks and Romans often "exposed" to the elements those infants that for one reason or another seemed ineligible for personhood. Such treatment was not simply a matter of crude convenience. It was specifically permitted, if not actually encouraged, by such philosophers as Aristotle in cases where there was some doubt about the infant's fitness. Unlike some of his predecessors, however, he frowned on the practice as a means of population control.

For most of recorded history the protection of personhood, even for adults, was not the absolute all-or-nothing condition we hope for today. There were, in fact, several degrees of personhood depending on age, sex, previous condition of servitude, and so on. Prof. David Davis (1966), among others, has given us detailed accounts of the degree of personhood enjoyed by slaves at different times and places. Not the least extraordinary of these relativities was the provision in the United States Constitution that allowed slaves to be counted as three-fifths of a person for apportioning representation and taxation among the several states even though they themselves enjoyed far less

than three-fifths of the rights that might have done them, rather than their state, some good.

Even within the Christian Church, which held to the divinity of personhood and frowned upon infanticide for that reason, there was some doubt about timing. Only rarely and recently has personhood been thought of as arriving simultaneously with the formation of the zygote. Others at this conference will doubtless review the evidence supporting other moments in gestation which form the background for the choices hit upon by the Supreme Court in *Roe vs. Wade,* 410 U.S. 113 (1973). However uncertain the timing, it is sufficient for our purposes to notice that, during most of Christian history, personhood has been something added to the biological being, not intrinsic to it.

To the biologist who has by now pretty well persuaded himself that the idea of personhood has an understandable human origin, it is puzzling to hear that those who hold most strongly to its divine origin should now be seeking the help of biologists in establishing its time of arrival in particular cases. It is perhaps more puzzling that there are biologists willing to take part in the exercise. How can they fail to notice that human beings, like other complex organisms, develop over long periods of time, and that a blueprint is a very different thing from a completed building?

Those who maintain that a new individual human life begins with the formation of the zygote are, so far as I can see, correct as long as they are using a strictly biological definition of "human" as referring to a particular biological species characterized by specific morphological and chemical characteristics. Confusion arises because in ordinary non-biological discourse "human" means a great many other things. Many of these "other things" are simply developments of potential properties of the zygote unfolding in various directions as the result of the interaction of characteristically human DNA and environmental influences. Other characteristics, like personhood, knighthood, or Ph.D. degrees, have no real base in the zygote but are ascribed to the individual by society. All such designations are important primarily because they change the way the possessor is treated by society. From the biologist's point of view these ascriptions, in the long run, have survival value for the species. Thus, we have suggested that personhood takes the place of inborn mechanisms for controlling destructive aggression possessed by more stereotyped species. Knighthoods have

lost utility with the disappearance of dragons, but they may still serve as incentives to excellence at less expense than tax cuts.

It could even be that ascribing immunities to the immature or defective is a form of altruism, which can be shown to have survival value for the species. But there are limits to the number of nonproductive persons that can be supported by any society and these limits are reached fairly early in nontechnological societies. Reflecting on these limits, at least one distinguished biologist, Neel (1970), has given the definition of humanity a wry twist by suggesting that man became really human not when he invented tools or developed a spoken language but when he became aware of his relation to a limited ecosystem and used female infanticide as a mode of keeping the balance. A more productive technology, as well as a talent for hiding our actions behind a veil of hypocrisy, has made it possible for modern society to maintain the sacredness of an extended definition of personhood. But this too may have its limits as others in this conference may wish to discuss.

Decisions, Decisions!

Efforts to bolster the power of personhood by invoking the odor of sanctity, the quasi rationality of natural law, or the Kantian imperative that makes every human being an end rather than a means all tend to obscure its human ascriptive origins. At the same time we are able to avoid deciding what it is about a particular organism that justifies the protections conferred by personhood. The better people we are, as measured by the standards of our Judeo-Christian culture, the more reluctant we are to judge others. The horrors perpetrated by those who all too recently made categorical judgements on the value of whole communities burn in our minds and hearts. It would be so much easier if we could only find a sign to tell us when personhood arrives and when it finally leaves. But there are no such signs and we must learn to live without them.

To this biologist the pain of decision is the price we pay for having evolved a central nervous system that first allows and then requires us to decide. From the practical standpoint, however, it must be admitted that it may be a long time before a satisfactorily large

majority will view decisions about personhood from the same set of assumptions. Professor Strauss's (1953) "hostile camps" will be with us for a long time. Indeed, a biologist may wonder if the resolution of conflicts between monism and dualism, utility and odontology, reason and revelation, nominalism and realism may not lie beyond the capacity of the human nervous system. Paradox may lie in wait for us at the end of every closely reasoned train of thought. In our present state of grace, paradox is hard to accept; when reason fails, religious revelation takes over. If we are to have peace and mutual respect in contemporary society we may have to put the veritable nature of personhood into the same category as the eucharist and allow each man and woman to decide where he or she stands as a matter of conscience and religious liberty. Fortunately, as Toulmin (1981) has recently pointed out, differing views on general principles do not necessarily entail differences in behavior in specific practical situations. It is surprising how often men of good will can agree on what to do while disagreeing violently on why they agree. Thus, a biologist who regards personhood as an ingenious invention and a theologian who is convinced that it is a gift from God are likely to treat most persons in the same way most of the time.

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Address correspondence to: Robert S. Morison, M.D., Program in Science, Technology, and Society, Building E51-128D, Massachusetts Institute of Technology, Cambridge, MA 02139.