Death: Process or Event?

Robert S. Morison

Most discussions of death and dying shift uneasily, and often more or less unconsciously, from one point of view to another. On the one hand, the common noun "death" is thought of as standing for a clearly defined event, a step function that puts a sharp end to life. On the other, dying is seen as a long-drawn-out process that begins when life itself begins and is not completed in any given organism until the last cell ceases to convert energy.

The first view is certainly the more traditional one. Indeed, it is so deeply embedded, not only in literature and art, but also in the law, that it is hard to free ourselves from it and from various associated attitudes that greatly influence our behavior. This article analyzes how the traditional or literary conception of death may have originated and how this conception is influencing the way in which we deal with the problem of dying under modern conditions. In part, I contend that some of our uses of the term "death" fall close to, if not actually within, the definition of what Whitehead called the "fallacy of misplaced concreteness" (*1*). As he warned, "This fallacy is the occasion of great confusion in philosophy," and it may also confuse our handling of various important practical matters.

Nevertheless, there is evidence that the fallacy may be welcomed by some physicians because it frees them from the necessity of looking certain unsettling facts in the face.

In its simplest terms, the fallacy of misplaced concreteness consists in regarding or using an abstraction as if it were a thing, or, as Whitehead puts it, as a "simple instantaneous material configuration." Examples of a relatively simple kind can be found throughout science to illustrate the kinds of confusion to which the fallacy leads. Thus, our ancestors who observed the behavior of bodies at different temperatures found it convenient to explain some of their observations by inventing an abstraction they called heat. All too quickly the abstract concept turned into an actual fluid that flowed from one body to another. No doubt these conceptions helped to develop the early stages of thermodynamics. On the other hand, the satisfaction these conceptions gave their inventors may also have slowed down the development of the more sophisticated kinetic theory.

It should be quite clear that, just as we do not observe a fluid heat, but only differences in temperature, we do not observe "life" as such. Life is not a thing or a fluid anymore than heat is. What we observe are some unusual sets of objects separated from the rest of the world by certain peculiar properties such as growth, reproduction, and special ways of handling energy. These objects we elect to call "living things." From here, it is but a short step to the invention of a hypothetical entity that is possessed by all living things and that is supposed to account for the difference between living and nonliving things. We might call this entity "livingness," following the usual rule for making abstract nouns out of participles and adjectives. This sounds rather awkward, so we use the word "life" instead. This apparently tiny change in the shape of the noun helps us on our way to philosophical error. The very cumbersomeness of the word "livingness" reminds us that we have abstracted the quality for which it stands from an array of living things. The word "life," however, seems much more substantial in its own right. Indeed, it is all too easy to believe that the word, like so many other nouns, stands for something that must have an existence of its own and must be definable in general terms, quite apart from the particular objects it characterizes. Men thus find themselves thinking more and more about life as a thing in itself, capable of entering inanimate aggregations of material and turning them into living things. It is then but a short step to believing that, once life is there, it can leave or be destroyed, thereby turning living things into dead things.

Now that we have brought ourselves to mention dead things, we can observe that we have invented the abstract idea of death by observing dead things, in just the same way that we have invented the idea of life by observing living things. Again, in the same way that we come to regard life as a thing, capable of entering and leaving bodies, we come to regard death as a thing, capable of moving about on its own in order to take away life. Thus, we have become accustomed to hearing that "death comes for the archbishop," or, alternatively, that one may meet death by "appointment in Samarra." Only a very few, very sophisticated old generals simply fade away.

In many cases then, Death is not only reified, it is personified, and graduates from a mere thing to a jostling woman in the marketplace of Baghdad or an old man, complete with beard, scythe, and hourglass, ready to mow down those whose time has come. In pointing to some of the dangers of personification, it is not my purpose to abolish poetry. Figures of speech certainly have their place in the enrichment of esthetic experience, perhaps even as means for justifying the ways of God to man. Nevertheless, reification and personification of abstractions do tend to make it more difficult to think clearly about important problems.

Abstractions Can Lead to Artificial Discontinuity

A particularly frequent hazard is the use of abstractions to introduce artificial discontinuities into what are essentially continuous processes. For example, although it is convenient to think of human development as a series of stages, such periods as childhood and adolescence are not discontinuous, sharply identifiable "instantaneous configurations" that impose totally different types of behavior on persons of different ages. The infant does not suddenly leave off "mewling and puking" to pick up a satchel and go to school. Nor at the other end of life does "the justice, . . . with eyes severe and beard

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of formal cut" instantly turn into "the lean and slipper'd pantaloon." The changes are gradual; finally, the pantaloon slips through second childishness into "mere oblivion, sans teeth, sans eyes, sans taste, sans everything" (*2*). Clearly we are dealing here with a continuous process of growth and decay. There is no magic moment at which "everything" disappears. Death is no more a single, clearly delimited, momentary phenomenon than is infancy, adolescence, or middle age. The gradualness of the process of dying is even clearer than it was in Shakespeare's time, for we now know that various parts of the body can go on living for months after its central organization has disintegrated. Some cell lines, in fact, can be continued indefinitely.

The difficulty of identifying a moment of death has always been recognized when dealing with primitive organisms, and the conventional concept has usually not been applied to organisms that reproduce themselves by simple fission. Death as we know it, so to speak, is characteristic only of differentiated and integrated organisms, and is most typically observed in the land-living vertebrates in which everything that makes life worth living depends on continuous respiratory movements. These, in turn, depend on an intact brain, which itself is dependent on the continuing circulation of properly aerated blood. Under natural conditions, this tripartite, interdependent system fails essentially at one and the same time. Indeed, the moment of failure seems often to be dramatically marked by a singularly violent last gasping breath. Observers of such a climactic agony have found it easy to believe that a special event of some consequence has taken place, that indeed Death has come and Life has gone away. Possibly even some spirit or essence associated with Life has left the body and gone to a better world. In the circumstances surrounding the traditional deathbed, it is scarcely to be wondered at that many of the observers found comfort in personifying the dying process in this way, nor can it be said that the consequences were in any way unfortunate.

Now, however, the constant tinkering of man with his own machinery has made it obvious that death is not really a very easily identifiable event or "configuration." The integrated physiological system does not inevitably fail all at once. Substitutes can be devised for each of the major components, and the necessary integration can be provided by a computer. All the traditional vital signs are still there—provided in large part by the machines. Death does not come by inevitable appointment, in Samarra or anywhere else. He must sit patiently in the waiting room until summoned by the doctor or nurse.

Perhaps we should pause before being completely carried away by the metaphor. Has death really been kept waiting by the machines? If so, the doctor must be actively causing death when he turns the machines off. Some doctors, at least, would prefer to avoid the responsibility, and they have therefore proposed a different view of the process (*3*). They would like to believe that Death has already come for the patient whose vital signs are maintained by machine and that the doctor merely reveals the results of his visit. But if Death has already come, he has certainly come without making his presence known in the usual way. None of the outward and visible signs have occurred—no last gasp, no stopping of the heart, no cooling and stiffening of the limbs. On the other hand, it seems fairly obvious to most people that life under the conditions described (if it really is life) falls seriously short of being worth living.

Is a "Redefinition" of Death Enough?

We must now ask ourselves how much sense it makes to try to deal with this complex set of physiological, social, and ethical variables simply by "redefining" death or by developing new criteria for pronouncing an organism dead. Aside from the esoteric philosophical concerns discussed so far, it must be recognized that practical matters of great moment are at stake. Fewer and fewer people die quietly in their beds while relatives and friends live on, unable to stay the inevitable course. More and more patients are subject to long, continued intervention; antibiotics, intravenous feeding, artificial respiration, and even artificially induced heartbeats sustain an increasingly fictional existence. All this costs money—so much money, in fact, that the retirement income of a surviving spouse may disappear in a few months. There are other costs, less tangible but perhaps more important—for example, the diversion of scarce medical resources from younger people temporarily threatened by acute but potentially curable illnesses. Worst of all is the strain on a family that may have to live for years in close association with a mute, but apparently living, corpse.

An even more disturbing parameter has recently been added to the equation. It appears that parts of the dying body may acquire values greater than the whole. A heart, a kidney, someday even a lung or a liver, can mean all of life for some much younger, more potentially vigorous and happy "donee."

Indeed, it appears that it is primarily this latter set of facts which has led to recent proposals for redefining death. The most prominent proposals place more emphasis on the information-processing capacity of the brain and rather less on the purely mechanical and metabolic activities of the body as a whole than do the present practices. The great practical merit of these proposals is that they place the moment of death somewhat earlier in the continuum of life than the earlier definition did. By so doing, they make it easier for the physician to discontinue therapy while some of what used to be considered "signs of life" are still present, thus sparing relatives, friends, and professional attendants the anguish and the effort of caring for a "person" who has lost most of the attributes of personality. Furthermore, parts of the body which survive death, as newly defined, may be put to other, presumably more important uses, since procedures such as autopsies or removal of organs can be undertaken without being regarded as assaults.

In considering the propriety of developing these new criteria, one may begin by admitting that there is nothing particularly unusual about redefining either a material fact or a nebulous abstraction. Physical scientists are almost continuously engaged in redefining facts by making more and more precise measurements. Taxonomists spend much of their time redefining abstract categories, such as "species," in order to take into account new data or new prejudices. At somewhat rarer intervals, even such great concepts as force, mass, honor, and justice may come up for review.

Nevertheless, in spite of the obvious practical advantages and certain theoretical justifications, redefinition of abstractions can raise some very serious doubts. In the present instance, for example, we are brought face to face with the paradox that the new defini-

tions of death are proposed, at least in part, because they provide that certain parts of the newly defined dead body will be *less dead* than they would have been if the conventional definition were still used. Looked at in this light, the proposed procedure raises serious ethical questions (*4*). The supporters of the new proposal are, however, confronted every day by the even more serious practical problems raised by trying to make old rules fit new situations. Faced with a dilemma, they find it easier to urge a redefinition of death than to recognize that life may reach a state such that there is no longer an ethical imperative to preserve it. While one may give his support to the first of these alternatives as a temporary path through a frightening and increasingly complicated wilderness, it might be wise not to congratulate ourselves prematurely.

As our skill in simulating the physiological processes underlying life continues to increase in disproportion to our capacity to maintain its psychological, emotional, or spiritual quality, the difficulty of regarding death as a single, more or less coherent event, resulting in the instantaneous dissolution of the organism as a whole, is likely to become more and more apparent. It may not be premature, therefore, to anticipate some of the questions that will then increasingly press upon us. Some of the consequences of adopting the attitude that death is part of a continuous process that is coextensive (almost) with living may be tentatively outlined as follows.

An unprejudiced look at the biological facts suggests, indeed, that the "life" of a complex vertebrate like man is not a clearly defined entity with sharp discontinuities at both ends. On the contrary, the living human being starts inconspicuously, unconsciously, and at an unknown time, with the conjugation of two haploid cells. In a matter of some hours, this new cell begins to divide. The net number of living cells in the organism continues to increase for perhaps 20 years, then begins slowly to decrease. Looked at in this way, life is certainly not an all-or-none phenomenon. Clearly the amount of living matter follows a long trajectory of growth and decline with no very clear beginning and a notably indeterminate end. A similar trajectory can be traced for total energy turnover.

A human life is, of course, far more than a metabolizing mass of organic matter, slavishly obeying the laws of conservation of mass and energy. Particularly interesting are the complex interactions among the individual cells and between the totality and the environment. It is, in fact, this complexity of interaction that gives rise to the concept of human personality or soul.

Whatever metaphors are used to describe the situation, it is clear that it is the complex interactions that make the characteristic human being. The appropriate integration of these interactions is only loosely coupled to the physiological functions of circulation and respiration. The latter continue for a long time after the integrated "personality" has disappeared. Conversely, the natural rhythms of heart and respiration can fail, while the personality remains intact. The complex human organism does not often fail as a unit. The nervous system is, of course, more closely coupled to personality than are the heart and lungs (a fact that is utilized in developing the new definitions of death), but there is clearly something arbitrary in tying the sanctity of life to our ability to detect the electrical potential charges that managed to traverse the impedance of the skull.

If there is no infallible physiological index to what we value about human personality, are we not ultimately forced to make judgments about the intactness and value of the complex interactions themselves?

"Value" of a Life Changes with Value of Complex Interactions

As the complexity and richness of the interactions of an individual human being wax and wane, his "value" can be seen to change in relation to other values. For various reasons it is easier to recognize the process at the beginning than at the end of life. The growing fetus is said to become steadily more valuable with the passage of time (*5*): its organization becomes increasingly complex and its potential for continued life increases. Furthermore, its mother invests more in it every day and becomes increasingly aware of and pleased by its presence. Simultaneous with these increases in "value" is the increased "cost" of terminating the existence of the fetus. As a corollary, the longer a pregnancy proceeds, the more reasons are required to justify its termination. Although it may be possible to admire the intellectual ingenuity of Saint Thomas and others who sought to break this continuous process with a series of discontinuous stages and to identify the moment at which the fetus becomes a human being, modern knowledge of the biological process involved renders all such efforts simply picturesque. The essential novelty resides in the formation of the chromosomal pattern—the rest of the development is best regarded as the working out of a complicated tautology.

At the other end of life the process is reversed: the life of the dying patient becomes steadily less complicated and rich, and, as a result, less worth living or preserving. The pain and suffering involved in maintaining what is left are inexorably mounting, while the benefits enjoyed by the patient himself, or that he can in any way confer on those around him, are just as inexorably declining. As the costs mount higher and higher and the benefits become smaller and smaller, one may well begin to wonder what the point of it all is. These are the unhappy facts of the matter, and we will have to face them sooner or later. Indeed, attempts to face the facts are already being made, but usually in a gingerly and incomplete fashion. As we have seen, one way to protect ourselves is to introduce imaginary discontinuities into what are, in fact, continuous processes.

A similar kind of self-deception may be involved in attempts to find some crucial differences among the three following possibilities that are open to the physician attending the manifestly dying patient.

1) Use all possible means (including the "extraordinary measures" noted by the Pope) to keep the patient alive.

2) Discontinue the extraordinary measures but continue "ordinary therapy."

3) Take some "positive" step to hasten the termination of life or speed its downward trajectory.

Almost everyone now admits that there comes a time when it is proper to abandon procedure 1 and shift to procedure 2 although there is a good deal of disagreement about determining the moment itself. There is much less agreement about moving to procedure 3, although the weight of opinion seems to be against ever doing so.

The more one thinks of actual situations, however, the more one wonders if there is a valid distinction between allowing a person to die and hastening the downward course of life. Sometimes the words "positive" and "negative" are used, with the implication that

it is all right to take away from the patient something that would help him to live but wrong to give him something that will help him to die.

The intent appears to be the same in the two cases, and it is the intent that would seem to be significant. Furthermore, one wonders if the dividing point between positive and negative in this domain is any more significant than the position of zero on the Fahrenheit scale. In practice, a physician may find it easier not to turn on a respirator or a cardiac pacemaker than to turn them off once they have been connected, but both the intents and the results are identical in the two cases. To use an analogy with mathematics, subtracting one from one would seem to be the same as not adding one to zero.

Squirm as we may to avoid the inevitable, it seems time to admit to ourselves that there is simply no hiding place and that we must shoulder the responsibility of deciding to act in such a way as to hasten the declining trajectories of some lives, while doing our best to slow down the decline of others. And we have to do this on the basis of some judgment on the quality of the lives in question.

Clearly the calculations cannot be made exclusively or even primarily on crude monetary or economic criteria. Substantial value must be put on intangibles of various kinds—the love, affection, and respect of those who once knew the fully living individual will bulk large in the equation. Another significant parameter will be the sanctity accorded to any human life, however attenuated and degraded it may have become. Respect for human life as such is fundamental to our society, and this respect must be preserved. But this respect need not be based on some concept of absolute value. Just as we recognize that an individual human life is not infinite in duration, we should now face the fact that its value varies with time and circumstance. It is a heavy responsibility that our advancing command over life has placed on us.

It has already been noted that in many nations, and increasingly in the United States, men and women have shouldered much the same kind of responsibility—but apparently with considerably less horror and dismay—at the beginning of the life-span. In spite of some theological misgivings and medical scruples, most societies now condone the destruction of a living fetus in order to protect the life of the mother. Recent developments have greatly broadened the "indications" to include what is essentially the convenience of the mother and the protection of society against the dangers of overpopulation.

A relatively new, but very interesting, development is basing the decision of whether or not to abort purely on an assessment of the quality of the life likely to be lived by the human organism in question. This development has been greatly enhanced by advances in the technique of amniocentesis, with its associated methods for determining the chromosomal pattern and biochemical competence of the unborn baby. Decisions made on such grounds are difficult, if not impossible, to differentiate, in principle, from decisions made by the Spartans and other earlier societies to expose to nature those infants born with manifest anatomical defects. We are being driven toward the ethics of an earlier period by the inexorable logic of the situation, and it may only increase our discomfort without changing our views to reflect that historians (*6*) and moralists (*7*) both agree that the abolition of infanticide was perhaps the greatest ethical achievement of early Christianity.

Issue Cannot Be Settled by Absolute Standards

Callahan (*5*) has recently reviewed all the biological, social, legal, and moral issues that bear on decisions to terminate life in its early stages and argues convincingly that the issue cannot be settled by appeals to absolute rights or standards. Of particular importance for our purposes, perhaps, is his discussion of the principle of the "sanctity of life," since opposition to liberalizing the abortion laws is so largely based on the fear of weakening respect for the dignity of life in general. It is particularly reassuring, therefore, that Callahan finds no objective evidence to support this contention. Indeed, in several countries agitation for the liberalization of abortion laws has proceeded simultaneously with efforts to strengthen respect for life in other areas—the abolition of capital punishment, for example. Indeed, Callahan's major thesis is that modern moral decisions can seldom rest on a single, paramount principle; they must be made individually, after a careful weighing of the facts and all the nuances in each particular case.

The same considerations that apply to abortion would appear to apply, in principle, to decisions at the other end of the life-span. In practice, however, it has proven difficult to approach the latter decisions with quite the same degree of detachment as those involving the life and death of an unborn embryo. It is not easy to overlook the fact that the dying patient possesses at least the remnants of a personality that developed over many decades and that involved a complicated set of interrelationships with other human beings. In the case of the embryo, such relationships are only potential, and it is easier to ignore the future than to overlook the past. It can be argued, however, that it should be easier to terminate a life whose potentialities have all been realized than to interrupt a pregnancy the future of which remains to be unfolded.

Once it is recognized that the process of dying under modern conditions is at least partially controlled by the decisions made by individual human beings, it becomes necessary to think rather more fully and carefully about what human beings should be involved and what kinds of considerations should be taken into account in making the decisions.

Traditionally it has been the physician who has made the decisions, and he has made them almost exclusively on his own view of what is best for the patient. Only under conditions of special stress, where available medical resources have been clearly inadequate to meet current needs, has the physician taken the welfare of third parties or "society" into account in deciding whether to give or withhold therapy. Until recently, such conditions were only encountered on the battlefield or in times of civilian catastrophe such as great fires, floods, or shipwrecks. Increasingly, however, the availability of new forms of therapy that depend on inherently scarce resources demands that decisions be made about distribution. In other words, the physician who is considering putting a patient on an artificial kidney may sometimes be forced to consider the needs of other potential users of the same device. The situation is even more difficult when the therapeutic device is an organ from another human being. In some communities, the burden of such decisions is shifted from a single physician to a group or committee that may contain nonmedical members.

These dramatic instances are often

thought of as being special cases without much relationship to ordinary life and death. On the other hand, one may look upon them as simply more brilliantly colored examples of what is generally true but is not always so easy to discern. Any dying patient whose life is unduly prolonged imposes serious costs on those immediately around him and, in many cases, on a larger, less clearly defined "society." It seems probable that, as these complex interrelationships are increasingly recognized, society will develop procedures for sharing the necessary decisions more widely, following the examples of the committee structure now being developed to deal with the dramatic cases.

It is not only probable, but highly desirable that society should proceed with the greatest caution and deliberation in proposing procedures that in any serious way threaten the traditional sanctity of the individual life. As a consequence, society will certainly move very slowly in developing formal arrangements for taking into account the interests of others in life-and-death decisions. It may not be improper, however, to suggest one step that could be taken right now. Such a step might ease the way for many dying patients without impairing the sanctity or dignity of the individual life: instead, it should be enhanced. I refer here to the possibility of changing social attitudes and laws that now restrain the individual from taking an intelligent interest in his own death.

The Judeo-Christian tradition has made suicide a sin of much the same character as murder. The decline of orthodox theology has tended to reduce the sinfulness of the act, but the feeling still persists that there must be something wrong with somebody who wants to end his own life. As a result, suicide, when it is not recognized as a sin, is regarded as a symptom of serious mental illness. In this kind of atmosphere, it is almost impossible for a patient to work out with his doctor a rational and esthetically satisfactory plan for conducting the terminating phase of his life. Only rarely can a great individualist like George Eastman or Percy Bridgman (*8*) transcend the prevailing mores to show us a rational way out of current prejudice. Far from injuring the natural rights of the individual, such a move can be regarded as simply a restoration of a right once greatly valued by our Roman ancestors, who contributed so much to the "natural law" view of human rights. Seneca (*9*), perhaps the most articulate advocate of the Roman view that death should remain under the individual's control, put the matter this way: "To death alone it is due that life is not a punishment, that erect beneath the frowns of fortune, I can preserve my mind unshaken and master of myself."

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Death as an Event: A Commentary on Robert Morison

Attempts to blur the distinction between a man alive and a man dead are both unsound and dangerous.

Leon R. Kass

As I understand R. S. Morison's argument, it consists of these parts, although presented in different order. First: He notes that we face serious practical problems as a result of our unswerving adherence to the principle, "always prolong life." Second: Although *some* of these problems could be solved by updating the "definition of death," such revisions are scientifically and philosophically unsound. Third: The reason for this is that life and death are part of a continuum; it will prove impossible, in practice, to identify any border between them because theory tells us that no such border exists. Thus: We need to abandon both the idea of death as a concrete event and the search for its definition; instead, we must face the fact that our practical problems can only be solved by difficult judgments, based upon a complex cost-benefit analysis, concerning the value of the lives that might or might not be prolonged.

I am in agreement with Morison only on the first point. I think he leads us into philosophical, scientific, moral, and political error. Let me try to show how.

Some Basic Distinctions

The difficulties begin in Morison's beginning, in his failure to distinguish clearly among aging, dying, and dead. His statement that "dying is seen as a long-drawn-out process that begins when life itself begins" would be remarkable, if true, since it would render dying synonymous with living. One consequence would be that murder could be considered merely a farsighted form of euthanasia, a gift to the dying of an early exit from their miseries (*1*). But we need not ponder these riddles, because what Morison has done is to confuse dying with aging. Aging (or senescence) apparently does begin early