

# ON LIFE AND DEATH AND IMMORTALITY

by James Peter Warbasse

## LIFE AND DEATH

Recalling our knowledge of biology and physics, the substances of which the human body is comprised are elusive materials. They have been thought of as solid with volume and ponderability; but, as we look into the starry heavens with the eye of the physicist, we realize that substance is about as solid and ponderable as the universe itself, with each solid element composed of universes within universes, the ultimate of which still eludes the conception of substance. Modern science finds the smallest known material thing, the atom, is a universe within which electrons, protons, and neutrons swirl about in orbits comparable to the orbits of the heavenly bodies—a vast constellation which, when reduced to categorical terms, is a collection of forces, electrical in nature. What space they fill and what ponderability they exhibit reside in their power of electric attraction and repulsion and in the waves and substance they emit. Disorder in the constituent forces of the atom, like disorder in the cells of the animal, can result in its destruction. In the case of a certain disorder or disease affecting the integrity of the atom, a veritable hell is to pay—or Hiroshima, at least. It suffers violent death. In the loss of health in the animal body, the event may not be cataclysmic, but it might mean the loss of Einstein, Newton, or Galileo—perhaps even more calamitous.

Just what is death? In current terms, the world over, a person is regarded as dead when heart and lungs cease to perform their mechanical functions and unconsciousness supervenes. The stoppage of either—heart or lungs—causes the stoppage of the other. To the physiologist, unconsciousness is another name for cessation of mental function; but the structure of the heart and lungs is the same immediately after death as immediately before death. They have stopped and caused unconsciousness as a result of depriving the brain of adequate oxygen-carrying blood—the lungs responsible for the oxygen, the heart for the carrying. This seems to be the immediate difference discernible between life and death. But during life the heart stops at every diastolic

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period between heart beats, and at the end of inspiration the respiratory muscles become passive and are at rest. Breathing, we know, can be stopped voluntarily by practice for several minutes; and it can at least be held in abeyance for a longer time by the possum, overcome by enemies, and by man as he feigns death when cornered by an animal that eats only what it kills, or by a soldier who kills only what seems alive. The whale can stop breathing for an hour while muscular respiration has ceased as in death. However, one cannot say: the diver dies many deaths, the landsman but one. As to the heart, it not only stops but the surgeon substitutes an artificial pump; and, while circulation goes on, he takes the heart in his hand, gives it the benefit of his surgery, puts it back in its place, and sets it pumping again. In a disease condition called bradycardia, the heart, instead of beating seventy-two times a minute, may have the frequency of beating reduced to eighteen times a minute, or less, while during the long diastolic intervals the organ is passive and at rest. In death also, it is passive and at rest.

Physiologists find that a muscle cannot be in a constant state of complete contraction, for contraction releases certain toxins which, translated into fatigue, compel cessation of muscular function. Heart muscle saves itself and enjoys rest during that salutary period between contractions; otherwise it would collapse with fatigue. In catalepsy, the individual becomes unconscious, and detection of heart beat and respiration may be difficult. The Hindus have cultivated an ability to hold these functions for a time in seeming abeyance, and thus simulate death; the ground-hog and bear hibernate, and during this period respiration and heart beat are scarcely perceptible; and fishes and frogs go under the mud and disappear apparently from life.

When respiration and circulation cease, unconsciousness comes to the fore-brain and death is said to prevail; but the fore-brain ceases to function also in sleep, and unconsciousness occurs. Thus "death's sister, sleep," is the similitude of death, so far as consciousness is concerned. Without reference to spiritual phenomena, we see that what has stopped in death are two noticeable mechanical actions—a pump and a bellows—but the cells composing the body are still alive, and not aware of death. The skin continues to function without respiration or circulation, and hair grows for several days, as is evidenced by the beards found on dead faces which before have been clean shaven. A common practice of the surgeon is to take skin from one part of the body and graft it on a raw surface of another part, or from one individual to another. Also, skin taken from a body after death can be transplanted immediately or it can be preserved and later grafted upon a living person and proved to be alive. Skin thus transplanted as an island goes

on producing more skin until it is united to the surrounding skin, and the raw surface is covered. In the research laboratory various parts and organs are taken from one animal, kept in preservation, or immediately grafted upon another animal, and resume their living nature. A piece of muscle of the heart, contained in a nutritive medium in a glass jar in the laboratory, remains indefinitely alive, grows and increases its bulk, and contracts when subjected to the stimulation which activates heart muscle—thus illustrating living heart muscle without a body. So delicate a piece of anatomy as the cornea of the eye is removed from the dead, grafted by the surgeon upon a living eye, and continues to function. Who can look upon the body of the deceased and say how much of that body is dead and how much alive? Who can look upon a grain of wheat and answer: Is it dead? or is it living? Seeds a thousand years old have been planted and produced fruit. A Japanese botanist has recently caused a lotus seed, which for two thousand years had lain buried in a boat in a peat bog, to germinate and produce a beautiful pink lotus flower—bursting into a glorious resurrection.

When the lower extremities of a man are amputated, they are discarded as dead while the upper part of the man survives; still, skin, bone, muscle-tendon, and other tissues of these amputated limbs may be transplanted to another body which lives on. When half of an earthworm is amputated from the other half, which is the amputated half? Each becomes an independent living creature, the end wounds heal, and each goes about its own business.

However, death does visit the cells of the living animal body—and while the processes of life go on, the substance of the cells is metabolized, burned up, and the residue carried away by the blood stream; new material is supplied; the cells are in a constant state of destruction and restoration. Death is a continuous process; it begins at birth; man is always dying. The body of the infant does not become the body of the adult; indeed, the man of yesterday is not the man of today. Burning or oxidation of most animal cells is a rapid process, involving in the case of some cells only a few days. One becomes a new man in comparatively short periods—the old man within us dies; the new man is born. Millions of cells in the human body perish each day, are cremated, buried, or relegated to the rubbish, and never recover. Red blood cells are particularly short-lived; there are only young ones; the old have died; the oxygen-carrying job is the task of youth. The fate of some cells after their death is no more glorious than to dye the skin in summer, to fill an abscess with pus, or to make a ring around the bathtub.

The biologist looks upon the animal body as a community of living

cells, each cell an individual, and each with its own life to live. This great municipality, called the body, has its social and economic organization to govern its citizenry of cells. When the socioeconomic system of a city collapses, the co-ordinated functions of the municipality cease, while no citizen yet has died. Gas-works, electric plant, sewage, water supply, and wheels of commerce may all stop, but each citizen is alive. The town is dead; the people live on. The individuals perish when they are attacked by inside or outside enemies, or when they are deprived of necessities of life by cessation of functions of municipal co-ordination. Thus death of the city, in due time, may result in death of each of its citizens. Likewise, death of an individual from stoppage of respiration and circulation is followed in time by death of each of his billions of cells, one after another. Bacteria attack the cells and break them down; oxidation reduces them to their constituent elements; chemical substances, toxins, products of fermentation, and cold itself work their disintegration until all life of all the cells is destroyed. Only then can the whole body be looked upon as dead. This disintegration is regarded as assurance of total death. Since the exact time of death cannot be determined, any event that is supposed to occur at that moment, such as the flight of the soul, encounters uncertainty.

The individual dies, but even yet, death has not won its victory. For during life the conditions of survival are built up, and after total death this survival constitutes an immortality which supervenes. This is a continuation of existence, created out of the very character and substance of life. It is the projection into a future eternity of the product of an eternity of the past. The life of the individual is a complex of phenomena dwelling between two infinities—the one out of which it was born, the other into which it moves. It is quite as much a miracle that we live at all as that we shall not die.

#### IMMORTALITY

When the word "immortality" is used in Western society, the religious connotation is commonly inferred. This "immortality" implies continuation of life, materially or spiritually, in some other sphere beyond this earth, where one shall have consciousness, meet and fraternize with people of the past, and where new life shall be lived and the old life renewed—a pioneering in a more beautiful world. This is not easy for the unindoctrinated mind to comprehend, however true it may be; and conceptions of it are as varied as imaginations are varied.

There is an immortality that is easily understood, and which in no wise conflicts with or opposes belief in an immortality of religious origin, or of the imagination, of tradition, legend, or superstition. It is

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an immortality which the simple mind can grasp and enjoy in its contemplation. Man is immortal in three definite and cogent senses.

1. The human being is a moving thing created of substances—such as proteins, carbohydrates, calcium, iron—tangible materials. Physicists long ago found that matter is indestructible, although changeable into other forms. Ice becomes water; water, steam; steam, hydrogen and oxygen; but the total weight of the two gases is the same as that of the ice from which they came. Thus the substances of our bodies are not to be destroyed. Man dies, his body is not removed from the world, he becomes part of the earth from which he was created. If he is buried in the ground, in the course of time the material of his body resolves itself in the soil, small creatures consume his substance and live on. Roots of trees find his burial place, “and bear the buried dust they seize in leaves and blossoms to the skies.” What is presumed to be dead is life-giving, and transforms itself into other life. If a body is cremated, not one grain is lost; but all exists somewhere about the earth, in gas, in ashes, or in water, which if collected together would have the same weight as at the time of cremation. Materially man is immortal. When he dies he falls ultimately into the embrace of his mother nature who gave him birth.

2. Man is indestructible in the biological sense. He becomes the parent of children, his genes pass from himself into younger individuals who take the substance of the earth and expand their bodies; and they, in turn, pass on to others the genes acquired from him. Thus a fan-like progeny spreads out—wider and wider across the face of the earth as descendants of man spread him out—imperishably. The individual who is a parent lives on in generations which he has seen and in generations yet unborn.

Also each individual contains within himself or herself the substance of an ancestry transcending the widest conceptions of history—extending into the past, into millions of years of the past of living things, until as an animal, as a primitive one-celled thing, he finds his ancestry still beyond in a vegetation which by strange mutations transforms itself into animal life. Beyond this vegetable life man has an ancestry in the slimy ooze of the sea, in the swirling atoms of the air which surrounds the earth, in the inanimate substances out of which all things are made. When he was but a single cell, created by coalescence of two cells in his mother's body, he contained within himself this infinite heritage. Products of this ancestry, which began back in the eons of time beyond history, appear in present-day living things, while the living individual now transmits them to his progeny. So long as man

lives, so long as man inhabits the earth, each individual has his immortality in the existence of this humanity, this thing we call mankind.

3. The great immortality is that which is born of man's relation to his environment—animate and inanimate. His contact with the substances of the earth results in buildings, monuments, bridges, tunnels under the earth, and cables that transmit his ideas from continent to continent. A block of marble is exposed to his influence, and as a result a statue appears, to perpetuate him long after he is gone. We look upon an art gallery, a factory, or a library, and there is man immortalized in his influence upon material things. He disappears and his deeds live on, projecting him into the future life of other men.

A spiritual immortality, more important than all, is the immortality which every individual enjoys, be he parent or not parent. Each radiates from himself impressions which impinge upon other individuals. These are sensations for good or for woe, enlightening or unenlightening; but they are impressions, radiating from each as surely as waves of substance and of light radiate from the sun, moving outward and onward—imperishable manifestations of one mind to another, of one personality to another, in speaking, in writing, and in deeds. An individual performs a generous act; the one who enjoys its benefit experiences a change in his psychology as a result of this impression which has come from another source; and he, too, becomes better qualified as a result to perform a generous act for another—on and on through the unlimited generations of man and of time.

Also, the quality of injustice and baseness, associated with similar characters, survives in crime and profligacy, born and nurtured in such an environment; for immortality is impartial to both good and evil. While these qualities of ill seem to be eating at the vitals of humanity and spreading their infection, good should ultimately prevail because of its greater power of survival. The informed, the truthful, and the just prosper and find happiness and ultimately survive to a greater degree than the ignorant, the deceitful, and the unjust. Were this not so, society long since would have perished. Virtues are, perhaps, more prevalent than vices, although not emblazoned on the pages of the public press, because man will pay more to learn of calamities he has escaped than to learn of happiness which is but the normal health of the soul. Mediocre minds also find vicarious thrills in the vices of others; only the intelligent find virtue thrilling.

What man does in the privacy of his chamber does something to his own character, which in time will express itself in the presence of others. His thoughts and acts in solitude influence his thoughts and

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acts in the company of individuals upon whom his character is impressed. Each individual takes something from the other; each manifests himself to every soul with whom he comes in contact; and thus, a wave which has no end is set in action. It moves around the world through all society and becomes the immortality that is most significant of all. It is this immortality that determines the quality of people. Each individual is the nutrient medium in which immortality is making its germinal growth; and this statement is as scientific as though expressed in terms of botany or of biophysics. Science cannot ignore psychological facts. The quality of this burgeoning thing is reflected in the character of the individual. He radiates and announces the sort of immortality he is creating. This is of consequence because man is concerned not only with his own fate but with the fate of his children, and of his children's children, and therefore of all mankind. Here is expressed not only the potentiality of his own character but the possibility of his expansiveness. Socrates said, "Be of good cheer and say, you are burying my body only." Cicero observed, "That last day does not bring extinction to us, but change of place."

Thus, the individual may look into the future and see that his material substance lasts forever, his biological progeny survive as long as mankind survives, and his influence upon society persists while the human race remains on the earth. There is a factual everlastingness; the normal person feels a sense of it through his whole being. So far as his consciousness is concerned, he is immortal; for, while he may believe he is going to die, he knows only life; he never knows that he is dead. He continues, like those majestic planets whose light shines on for a million years after they have gone.

Ultimately man passes into unconsciousness and into eternal sleep, having built for himself an existence in which he is embraced by all humanity and enfolded in the arms of the universal mother. Immortality—of all the things in life—is thus understandable, real, and significant. This may suffice in lieu of heaven and hell. Indeed, heaven and hell can be found within the boundless scope of this life and this immortality. One may always say with the ancient Roman, "Non omnis moriar," I shall not wholly die. And though there were no immortality for me to contemplate, I would not for the world have missed the wonders of this mortality that has been mine.