The sacredness of human life

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Christian de Duve's voluntary passing away on 4 May 2013 could be seen as the momentous contribution of an eminent biologist and Nobel laureate to the discussion about 'last things'. In contrast to his fellow scientists Ludwig Boltzmann and Allan Turing, who had made a deliberate choice to end their life in a state of depression and despair, de Duve "left with a smile and a good-bye", as his daughter told a newspaper.

What is the value and meaning of life? Is death inevitable? Should dying with dignity become an inalienable human right? Theologians, philosophers, doctors, politicians, sociologists and jurists have all offered their answers to these fundamental questions. The participation of biologists in the discussion is long overdue and should, in fact, dominate the discourse.

We can start from de Duve's premise—expressed as a subtitle of his book *Cosmic Dust*—that life is a cosmic imperative; a phenomenon that inevitably takes place anywhere in the universe as permitted by appropriate physicochemical conditions. Under such conditions, the second law of thermodynamics rules—prebiotic organic syntheses proceed, matter self-organizes into more complex structures and darwinian evolution begins, with its subsequent quasi-random walks towards increasing complexity. The actors of this cosmic drama are darwinian individuals—cells, bodies, groups and species—who strive to maintain their structural integrity and to survive as entities. By virtue of the same law, their components undergo successive losses of correlation, so that structures sustain irreparable damage and eventually break down. Because of this 'double-edge' of the second law, life progresses in cycles of birth, maturation, ageing and rejuvenation.

Death is the inevitable link in this chain of events. 'The struggle for existence' is very much the struggle for individual survival, yet it is the number of offspring—the expression

of darwinian fitness—that ultimately counts. Darwinian evolution is creative, but its master sculptor is death.

Humans are apparently the only species endowed with self-consciousness and thereby a strongly amplified urge to survive. However, self-consciousness has also made humans aware of the existence of death. The clash between the urge for survival and the awareness of death must have inevitably engendered religion, with its delusion of an existence after death, and it might have been one of the main causes of the emergence of culture. Culture divides human experience into two parts: the sacred and the profane. The sacred constitutes personal transcendence: the quest for meaning, the awe of mystery, creativity and aesthetic feelings, the capacity for boundless love and hate, the joy of playing, and peaks of ecstasy. The psychologist Jonathan Haidt observed in his book *The Righteous Mind: Why Good People Are Divided by Politics and Religion* that "The great trick that humans developed at some point in the last few hundred thousand years is the ability to circle around a tree, rock, ancestor, flag, book or god, and then treat that thing as sacred. People who worship the same idol can trust one another, work as a team and prevail over less cohesive groups." He considers sacredness as crucial for understanding morality. At present, biology knows almost nothing about human transcendence. Our ignorance of the complexity of human life bestows on it both mystery and sacredness.

The religious sources of Western culture, late Judaism and Christianity, adopted Plato's idea of the immortality of the human soul into their doctrines. The concept of immortality and eternity has continued to thrive in many secular versions and serves as a powerful force to motivate human creativity. Yet, immortality is ruled out by thermodynamics, and the religious version of eternal life in continuous bliss constitutes a logical paradox—eternal pleasure would mean eternal recurrence of everything across infinite

time, with no escape; Heaven turned Hell. It is not immortality but temporariness that gives human life its value and meaning.

There is no 'existence of death'. Dying exists, but death does not. Death equals nothingness—no object, no action, no thing. Death is out of reach to human imagination, the intentionality of consciousness—its directedness towards objects—does not allow humans to grasp it. Death is no mystery, no issue at all—it does not concern us, as the philosopher Epicurus put it. The real human issue is dying and the terror of it. We might paraphrase Michel Montaigne's claim that a mission of philosophy is to learn to die, and say that a mission of biology is to teach to die. Biology might complement its research into apoptosis—programmed cell death—by efforts to discover or to invent a 'mental apoptosis'. A hundred years ago, the microbiologist Ilya Mechnikov envisaged, in his book *Essais Optimistes*, that a long and gratifying personal life might eventually reach a natural state of satiation and evoke a specific instinct to withdraw, similar to the urge to sleep. Biochemistry could assist the process of dying by nullifying fear, pain and distress.

In these days of advanced healthcare and technologies that can artificially extend the human lifespan, dying with dignity should become the principal concern of all humanists, not only that of scientists. It would therefore be commendable if Western culture could abandon the fallacy of immortality and eternity, whilst Oriental and African cultures ought to be welcomed to the discussion about the 'last things'. Dying with dignity will become the ultimate achievement of a dignified life.

CONFLICT OF INTEREST

The author declares that he has no conflict of interest.

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