ETHICAL PROBLEMS IN ARGUMENTS FROM POTENTIALITY

No less than four topics in medical practice and medical ethics are permeated by the concept of potentiality: (1) Clinical judgement, especially prognosis; (2) the issue of abortion; (3) issues of genetic manipulation and fertility control; and (4) argumentation from the potentially unexpected. Many other areas like environmental manipulation, health-care priorities, and medical education are also directly linked to the concept of potentiality, but because they remain outside the realm of clinical medicine they will not be analyzed here.

THE CONCEPT OF POTENTIALITY

Aristotle considered potentiality to be an attribute of real entities, consisting in being capable of changing or of causing change. Although anchored in reality, potentiality could be postulated without requiring its actualization, for a potential attribute was not diminished or negated even if it never became real. In fact, realization need not follow potentiality, but reality always precedes it. This order of precedence occurs, according to Aristotle, at four levels: (a) Conceptually, in that reality serves as a matrix to characterize potentiality. To say that a bud is a potential rose means first knowing a rose; (b) Temporally, in that reality gives rise to a potentiality capable of creating new realities: the attribute of potentiality refers to an already existing reality; (c) Ontologically, for the origins of potentiality and the end towards which potentiality aims are both anchored in a real entity. The efficient cause of becoming is no less real than the final cause towards which this becoming is aimed. It is always a being that becomes and becoming always leads to being; (d) Ontically, in that realities have a secured being and are thus eternal, whereas potentiality has a precarious existence that may come to be, but may also be hindered from being [1].

Aristotle's complex treatment of the subject was degraded by Spinoza to the belief that potentiality was a subjective description of our ignorance concerning the facts of reality. As knowledge increases, the attribution of potentiality shrinks [2]. Leibniz believed potentiality to be lodged in Divine Thought and therefore guaranteed in its actualization by a Divinity that was omnipotent [3]. In recent times, Sartre proposed to relocate potentiality as a characteristic of reality. But rather than simply being an attribute of reality in itself, potentiality is a feature to be observed from a vantage point external to this reality pregnant with potentiality [4].
Common to Aristotle and Sartre is the acceptance that potentiality is a description of a real entity. It can only be predicated of something that exists and the limitations of this reality cannot be surpassed by its potentiality. The better we know reality, the more accurately we can predict its potentiality for future states. If reality lacks freedom, its future developments can eventually be predicted so accurately, that potentiality gives way to determinism. A reality endowed with an area of impredicatability, in other words, with degrees of freedom, does not allow a deterministic prediction of its future states, but the range of these states can be mapped out in form of potentiality. Thus, potentiality applies meaningfully only to living entities. Outside of biology, Spinoza's dictum should hold true, that knowledge progressively displaces the notion of potentiality.

FEATURES OF POTENTIALITY

One of the most coherent characterizations of living organisms calls them autopoietic machines. A living entity consists, according to this view, in a system of components and processes engaged in perpetuating themselves. No ulterior purpose is postulated. Living organisms are closed systems, they interact with extra-systemic reality without distinguishing it from internal reality. These interactions serve no other purpose than to maintain the autopoietic machine [5]. In a slightly different version of this view it is stated that living beings, at least of animal level, are separated from their medium by their body which serves as a broad buffer to blur the distinction between inner and outer interactions [6].

Out of this characterization, living organisms show four important features: They are (a) autonomous, (b) individual, (c) unities, and (d) lacking inputs or outputs. Concepts like evolution, ontogeny, purpose, inputs, outputs, ecologic niche are not inherent to autopoietic machines but to the observer analyzing them. Accordingly, and accepting that potentiality is characteristic of living entities, it can be postulated that potentiality refers to the living entity itself, not to its history, environment, interactions or purpose. That is, potentiality is here understood as the set of future developments that can be read out of the present state of an organism.

Potentiality is certainly modulated by historic, environmental and teleologic contexts, but these expanded potentialities do not strictly pertain to the entity itself for they cannot be read out of its reality. Rather, they reflect the interpretation of the observer. Depending on the observer, a new-born baby can be seen as a potential child, king, drunkard, athlete, retired businessman or bullet-riddled corpse. In what way does reading the reality of this baby's existence