Veritatis Splendor and the Foundations of Bioethics: Notes Towards an Assessment of Altered Nuclear Transfer and Embryonic (Pluripotent) Stem Cell Research

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"We can form proper ethical judgments with respect to biotechnological science's production and manipulation of embryonic stem cells for health-serving ends only insofar as we recover adequate notions of nature and human-organic life (as gift)."

(1) *The nature of an organism: the insufficiency of the distinction between active potency and passive potency as a criterion.* The distinction between active potency and passive potency in determining the nature of an organism is, by itself, insufficient. This distinction can be illustrated by an acorn which, left to itself, will grow into an oak tree, but not (for example) into a desk. The acorn, in other words, bears an active potential to become an oak tree but only a passive potential to become a desk because, in this latter case, its potential can be realized only through external intervention. This distinction is

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employed in the case of ANT to argue that the entity brought into being through the manipulation occurring *ab initio* is a sub-human entity, that is, because this entity does not of its inner dynamic progressively manifest human-organic traits.

The problem is that this distinction begs what is the pertinent question: whether the manipulation performed *ab initio* produces a non-human entity or on the contrary a human entity that is radically disabled. What the distinction between active potency and passive potency by itself fails to answer, in other words, is whether an acorn that does not develop into an oak tree fails to do so because it is not actually an acorn, or whether, on the contrary, it fails to do so because it is a radically defective acorn.

In a word, the nature of an organism is not determined in the first instance by its capacity to progress to a more mature stage of development: *being* an organism is not synonymous with (progressively) *manifesting organismal traits*.

(2) *The nature of an organism: the all-at-once wholeness of what is an* unum per se. As an *unum per se*, an organism's coming-into-being bears an all-at-once character. An organism thus bears a wholeness of actuality that is complete "before" any development can occur. It follows that the beginning of an organism cannot be an exhaustively temporal process, merely the end point of a temporally continuous process; that this beginning cannot be explained simply in terms of a progressive development of parts; that the actual wholeness of an organism at any given moment of its development cannot be explained even by the totality of parts in their coordinated interaction. This implies neither that the all-at-once beginning does not presuppose a progressive development of parts; nor that the actual wholeness of an organism does not presuppose the coordinated interaction of its parts. It means only that the all-at-once actual wholeness proper to an organism is not exhaustively constituted by such a progressive development or coordinated interaction of parts. It means that an organism in its all-at-once wholeness transcends even as it includes its coordinated parts.

The causal agency constitutive of an organism, then, is *simultaneously* "downward" from whole to parts and "upward" from parts to whole (and the causal relation among the parts always shares in this simultaneously "downward" and "upward" causality). The organism in its wholeness has primacy in accounting for the (coordinated) behavior of the parts, even as the (coordinated) behavior of the parts is simultaneously-subordinately necessary for

the functioning of the organism as a whole. (All of this implies that an organism is not an absolute first cause of itself, as a whole or in its parts: cf. [4] below.)

ANT's appeal (in any of its current forms) to "systems biology," and again its distinction between active potency and passive potency, fail to take adequate account of the all-at-once wholeness proper to an organism and, consequently, of the implications of this all-at-once wholeness for the causal agency constitutive of an organism. Because of such failures, ANT remains within a mechanistic horizon, despite its intentions to the contrary.

(3) *The nature of an organism and the inherent limits of empirical knowledge and experimentation: ontological mystery*. In light of (1) and (2), we can see that mystery is woven into the fabric of organic reality, into the very nature of an organism. Mystery expresses the non-deterministic (not exhaustively mechanical) being and causal agency proper to an organism as described above. Mystery does not signify an unknown lying somehow simply behind or beyond the organism in its proper structure (cf. vitalism). Mystery and knowledge with respect to the being and behavior of an organism are not inversely but directly related: mystery does not first begin where knowledge leaves off, nor does knowledge come to an end where mystery first begins.

On the one hand, then: empirical observation is *necessary* for understanding the nature of organic life and determining when it actually occurs. And experimentation is *necessary* to determine how the parts of an organism behave such that they can be coordinated appropriately in relation to the organism as a whole. Thus, in the present case involving ANT and the generation of pluripotent (or embryonic) stem cells, empirical observation and experimentation (for example, on animals) could rightly be said to be necessary to determine whether the entity produced by ANT is an organism (embryo) or not, as well as, further, to determine how to organize or manipulate the behavior of ESCs (embryonic stem cells) or PSCs (pluripotent stem cells) such that they could be coordinated (for example) into well-functioning liver cells or brain cells.

At the same time, however, empirical observation and experimentation are for all that not *sufficient* for determining the nature of organic life and when it actually occurs, or for knowing exactly how (or whether!) these ESCs (PSCs) can be coordinated into well-functioning liver cells or brain cells. The limit to the knowledge characteristic of empirical observation and experimenta-

tion, in other words, is *intrinsic*. "Intrinsic" does not mean that the knowledge resulting from empirical observation and experimentation is exact and exhaustive *as far as it goes* but that *eventually* it reaches (what is always a progressively moving) limit *beyond which* it becomes inexact and incomplete. "Intrinsic" means rather, and more basically, that there is a limit operative *within* empirical-experimental knowledge in its original and abiding constitution as such. Empirical-experimental knowledge as such is intrinsically limited in the sense that, in each of its instances, it involves more than what can be made (fully) explicit or, a fortiori, (exhaustively) controlled. Empirical-experimental knowledge, in a word, is intrinsically limited because and insofar as the causal agency constitutive of an organism, as a whole and in its parts, is not exhaustively mechanical.

This intrinsic limit, or mystery proper to organic life, may seem—or be—trivial most of the time, in the sense that in large or macroscopic cases, it is sufficiently clear that an organism exists, or that the parts of an organism can be manipulated in a particular way that is health-enhancing. Thus a human person who walks and talks is clearly an existing organism; and the resetting of a broken finger clearly enhances the health of a human organism. The limit intrinsic to empirical-experimental knowledge, however, is scarcely a trivial matter when viewed in terms of the state of contemporary biotechnological science. The goal of biotechnology is to penetrate to the roots of human-organic life—in the original moments of its being and acting and in its initial wholeness and initially coordinated parts—in order to harness all of this toward health-serving ends. It is, however, precisely at these original moments that organic life exists in its most subtle and most vulnerable form; and it is therefore precisely at these moments that it becomes crucially important, indeed indispensable, to be attentive to the mystery inherent in, and the limit of, our knowledge, and, a fortiori, our ability to control.

The difficulty, then, is that ANT, failing to take account of the ontological mystery proper to organic life, is just so far incapable of providing any *principled* or *reasonable* means of checking the tendencies of the dominant scientific culture as these bear on (human) organic life at these most subtle and fragile moments. First of all, the principle that ANT offers for distinguishing a human organism from a sub-human entity, for the reasons indicated above and notwithstanding the clear intentions of ANT to the contrary, yields no criterion adequate for sustaining such a distinction. Secondly, ANT provides no principled criterion for noticing the

intrinsic limits imposed by *nature herself* on experimental knowledge —i.e., on the manipulation of pluripotent stem cells—and the (potentially) serious implications of such intrinsic limits.[1]

ANT (in all of its current forms), in short, blocks principled recognition of the proper nature of the being and acting of an organism at its most subtle and vulnerable moments, insofar as these involve more than what can be known empirically-explicitly and in mechanical terms, and thus insofar as they implicate mystery.

Note that recognition of the inner limits imposed by nature herself on experimental knowledge does not entail rejection *tout court* of experiments on human-organic life. In fact, it merely suggests a principled way of distinguishing among such experiments. The point is that there is a principled distinction to be made between experiments involving human-organic life in its initial and most subtle and fragile parts—e.g., pluripotent stem cells—and those experiments involving human-organic life in its already (more) maturely formed parts—e.g., adult stem cells, organ transplants, etc. In the latter cases, nature herself has already provided relatively complete and stable forms, and any (human-mechanical) intervention can therefore, *eo ipso*, work in a more profound way *with* nature, with what nature has already provided in and through her own organic environment.[2]

(4) *An organism does not, strictly speaking, possess its own life: givenness as an inherent feature of a nature.* The line of argument outlined in the foregoing comments becomes complete only when we see, in sum, that organic life is first *given*, that organic life as such is a gift.

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[1]The proponents of ANT, relying on *empirical* criteria, do of course acknowledge the (current) limits of experimental knowledge. In connection with pluripotent stem cells, they therefore insist on experimentation with animals as the prior condition for eventual application to humans. For a discussion of the sense in which recognition of such limits on empirical grounds alone fails—in a question-begging manner—to meet the burden of the point being made here, and of why this failure is potentially so significant for the eventual application of this experimental knowledge to humans, see my article, "Biotechnology and the Givenness of the Good," *Communio* 31, no. 4 (Winter 2004): 612–644, at 631–640.

[2]Cf. in this connection the distinctions and cautions introduced by Hans Jonas in his "Technology, Ethics, and Biogenetic Art: Observations on the New Role of Man as Creator," *Communio* 11, no. 1 (Spring 1985): 92–107, esp. 98–99 as cited in fn. 28, pp. 636–638, of my "Biotechnology and the Givenness of the Good."

As noted in (2) above, the causal agency constitutive of an organism involves a mutual if asymmetrical dependence of whole and parts. That is, the organism in its actual wholeness is prior to the organism in the coordinated action of its parts, even as the coordinated action of its parts is simultaneously-subordinately necessary for that actual wholeness. This mutual if asymmetrical dependence of whole and parts, as constitutive, implies that the being and indeed the existing nature of an organism is in the first instance dependent, hence received, given to itself and not self-generated. The organism is not an absolute first cause of itself as a whole or in its parts. Because the being of the organism as such is first *given*, this givenness remains the inner and abiding condition of its acting.

The ontological dependence indicated here can be fully and properly understood only in terms of the distinction between Being and beings, of what Thomists call the "real distinction" between *esse* and *ens*, or again of what Thomas understands as the primacy of *esse* precisely as non-subsistent. The distinction between Being and beings in turn evokes the question of God and his goodness, and of goodness as diffusive (*bonum est diffusivum sui*), and, finally, the question of the theological meaning of creation (and indeed of redemption[3]). The existence and nature of organic life as gift can be fully grasped only in the pondering of such questions.

Apropos of the earlier line of argument, then, the point here is to see that the issues surrounding ANT and embryonic stem cell research evoke the problem of Being and of God, that is, as a matter not only of (voluntary) "piety," but of the *intrinsic meaning and nature* of things—of the being and acting of organisms. ANT and embryonic stem cell research evoke such questions because and insofar as they have to do with manipulation of organisms precisely at their *origin*, in their *original being* and *acting*.

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[3]The importance of the Christian understanding of redemption for the issues raised in the present discussion needs to be underscored, though it cannot be developed adequately here. The paramount issue evoked in the discussion is that regarding the dignity and worth of human life and, as John Paul II states in *Evangelium vitae*, these are fully revealed only in light of the grandeur of the Father's love as disclosed "in the blood of Christ" (n. 25). The meaning of the human suffering that usually prompts the manipulation of stem cells in the first place can be seen finally only in this light, and indeed in the light of God's promise in Jesus Christ of a resurrected immortal life of joy. Recuperation of the created meaning of human life in its full sense thus implies recuperation also of its eschatological meaning.

(5) Veritatis splendor *and the foundations of bioethics*. *Veritatis splendor* makes it clear that ethical problems today have as much to do with the foundations of truth and its relation to freedom as with particular moral questions. In this context, the encyclical stresses the importance of recovering the proper meaning of human nature in its bodiliness, pointing out, for example, that the body has the character of gift. The foregoing comments are meant to indicate some main implications of this emphasis for bioethics. In the end, we can form proper ethical judgments with respect to biotechnological science's production and manipulation of embryonic stem cells for health-serving ends only insofar as we recover adequate notions of nature and human-organic life (as gift). And this recovery comes about only as we ponder biology, anthropology, and theology in all their ontological depth and breadth. Christians who would face the ethical problems posed by contemporary biotechnology, given its radical capacities now to manipulate life in its most fragile beginnings, no longer have the luxury of leaving such ponderings to "specialists." □

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