

QUAESTIO DISPUTATA

DELAYED HOMINIZATION: A RESPONSE TO MARK JOHNSON

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TO RECEIVE a close, careful, and thoughtful reading of one's work is both flattering and terrifying. Thus I am indebted to Mark Johnson who, in a recent issue of this journal, offered a very critical evaluation of my work on the moral status of the preimplantation human embryo.¹ I am indebted as well to Jean Porter for her response to him.² Yet I want to return Johnson the favor of a careful reading of his work.

My first issue is the very title, "Delayed Hominization." While this is a standard, traditional rendering of the topic, it also asks a specific question with particular presuppositions: When does the soul begin to animate the body? The question that needs to be asked here is: What biological structures are necessary (but perhaps not sufficient) preconditions for what we call a person? This formulation reflects the conviction that the body does not need an external principle of animation for its biological development. That is, the fertilized egg has within itself the capacity to develop in the appropriate way. It does not need what has been traditionally referred to as the intellectual soul (nor a vegetative nor an animal soul) to develop biologically. Thus I think Johnson's very starting point is problematic because it does not address the particular question my work seeks to resolve and because his phrasing locates both the question and the possible answers within a very particular philosophical tradition. This may beg the question and does not address the substance of my claims.

Second, Johnson makes recurring use of the terms "genetic individuality" and "developmental individuality."³ My point is that one's genetic code or one's genome does not confer individuality. If one's genetic profile performed this function, on what basis would we differentiate twins with the identical genetic profile (a veiled reference to *materia signata quantitate* as the means of individuation, a position I also reject)? Consequent to the process of fertilization, the preimplantation embryo received a genetic profile that is clearly not that of the mother or father. To this point in the development process, such a genetic

¹ Mark Johnson, "Delayed Hominization: Reflections on Some Recent Catholic Claims for Delayed Hominization," *TS* 56 (1995) 743-63.

² Jean Porter, "Individuality, Personal Identity, and the Moral Status of the Preembryo: A Response to Mark Johnson," *TS* 56 (1995) 763-70.

³ Johnson, "Delayed Hominization" 744.

profile is surely unique. But, in fact, such a genetic profile can be replicated through the biological process of twinning or artificially through embryo division or, should the technology be developed, organism cloning. The question of individuality is a question different from that of uniqueness. To conflate these questions misreads the biology and leads to unnecessary philosophical complications. One's genome reveals that one is a member of the human species, which is an important part of one's identity but not all of it. Additionally, this genetic profile can be replicated without necessarily harming the entities bearing it. Neither species membership nor an organism's genetic structure say anything about individuality, which is a critical presupposition for personhood.

Third, I find the discussion of some kind of organ of "central control"⁴ interesting but ultimately problematic. Part of the problem is my sense of a certain fluidity in Johnson's terms "organ" and "organism." His later identification of blastomeres with organs is also problematic.⁵ His use of the word organism as a static system of ordered parts and a dynamic system of the functions of these parts is well taken and a good description. But he then argues that the fact of developmental complexity and differentiation gives the basis for an "a posteriori induction made in response to the factual presence of organization within the living thing."⁶ Thus he argues that we have the equivalent of organs at the cellular level. Why so? At stages two, four, eight, etc., of cell division, one has cells, not organs as they are commonly understood in biology. To be sure these cells have an organization and some of them will eventually become organs and other body parts but it is stretching language to call the parts of the cell organs, even analogically. What directs the growth and integration of the organism is its genetic code. Eventually as the organism develops and matures, the brain develops into a separate organ and does indeed serve as the organ of central physical integration. But the brain's composition and structure is derived from the information contained in the genetic code.

Also to speak of an agent of central control is to introduce a dualism: an organism vs. that which controls and directs it. This is reminiscent of the traditional Aristotelian progression: first a vegetative soul, then an animal soul, and finally a human soul as prerequisites for development. Johnson of course does not explicitly state this (though it is part of the conceptual framework of the traditional delayed-hominization problem to which he alludes in his title). However, as I read the essay, this model kept coming to mind. Perhaps I am using Ockham's razor unsafely, but I think one can explain the development of the organism on the basis of the composition of the organism, that is, on the basis of the genetic information it possesses.

⁴ Ibid. 750-52

⁵ Ibid. 753 n. 20.

⁶ Ibid. 750 n. 15.

Johnson also appeals to death by brain criteria as the basis for some agent of activity and organization within the organism. I would simply note that the understanding of death by virtue of brain criteria is a recognition of disorder, not order. I have argued elsewhere that the concept of brain life, understood as analogous to brain death, is not a useful idea.⁷ Johnson's comments here do not persuade me to change my mind, nor to think that there is an agent of organization distinct from the structure as a whole.

Fourth, I find the discussion of the totipotency of the cells of the preimplantation embryo problematic. To say, as Johnson does, that cells are "potentially totipotent"⁸ is somewhat misleading. True enough, the cells do not actually become other organisms unless they are divided either through twinning or artificial separation. However, they really can become other organisms; such a capacity actually resides within the organism. Whether they do or not is a factual question; that they can is a fact. To describe this developmental capability as a potential is to misstate the reality somewhat.

Johnson also claims that the cells in the morula, since they are in a fluid state because of their totipotency, have only "an incidental unity."⁹ While he directs this criticism primarily to Ford, it would also extend to me as well where he redescribes my uses of the term "aggregate" with the term "heap."¹⁰ My understanding of Ford's position is that this organism possesses a teleological unity which is quite distinct from an incidental unity and a heap. For Ford the preimplantation embryo has a teleological unity in that its genetic code directs it to a particular end. And as this end is more directly attained, the more integrated this unity becomes until it eventually becomes what he terms an ontological individual. The purpose of this distinction is to mark the transition between an organism that has unity at one level (the organism is programmed to become a being of a particular kind) and an organism that has passed a certain biological threshold (the genes are turned off and on in such a way that each cell is now programmed to become one body part only). This is a unity of a different kind: an ontological unity, which means that if the organism is divided it will consist of parts only. This is in contrast to the organism prior to restriction in which it can actually be divided into parts (either biologically or artificially), each of which can become a whole. This un-

⁷ Thomas A. Shannon and Mario Moussa, "The Search for the New Pineal Gland: Brain Life and Personhood," *The Hastings Center Report* 22 (May-June 1992) 30-37.

⁸ Johnson, "Delayed Hominization" 759.

⁹ *Ibid.* 758.

¹⁰ *Ibid.* 761 and n. 35. I understand an aggregate to be a union of entities that are related and connected. A heap is a pile of things dumped together. To equate my calling the cells of the preimplantation embryo an aggregate with a heap is to misrepresent my position grievously. Additionally, to claim that the preimplantation embryo is "an organism, or it is a heap" (761) is a false dilemma.

derstanding of ontological unity or ontological individuality is not driven by metaphysics but by biology.

Finally, I would argue, contrary to Johnson's position, that there certainly is a biological unity in the preimplantation embryo and that it possesses genetic uniqueness. This gives us, on a biological level, a living, dynamic organism that bears the human genome. Two important questions follow: Does the manifestation of the human genome confer a privileged status upon that organism? And is this organism an individual? The answer to the second question may shed light on answering the first question. To phrase the second question somewhat differently: Does this organism possess a unity such that, if it is physically divided, it will consist of parts only? Or does it possess a unity such that, even though developmentally or teleologically directed to a certain end, if it is physically divided, each part can become a distinct whole being? That is a biological question. It has important philosophical and theological implications because if this organism is truly an individual (incapable of being divided), then a necessary, but not sufficient, threshold has been cleared, for only an individual can be a person. Biology tells us that such does not occur until after the process of restriction has occurred and this occurs about two weeks or so after the process of fertilization has started. Thus, while this organism has a biological unity and the human genome from its beginning, it is not an individual organism until later in its developmental process. That is biology, not metaphysics, even though one may draw significant metaphysical implications from these biological facts.