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Potentiality Arguments and the Definition of "Human Organism"

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These considerations suggest that Stier and Schoene-Seifert have not made their case even when we think of the kinds of cases they are considering. Just what we should say about the potentialities of, say, zygotes is, in my view, very, very difficult (Marquis 2007; in book form, Gruen, Grabel, and Singer 2007). It requires more analysis than either Stier and Schoene-Seifert provide or than I have provided here. Nevertheless, we may safely conclude that potentialities have a robust role to play in moral judgments concerning issues in medicine. ■

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Potentiality Arguments and the Definition of “Human Organism”

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Bettina Schöne-Seifert and Marco Stier (2013) present a host of detailed and intriguing arguments to the effect that potentiality arguments have to be viewed as outdated due to developments in stem cell research, in particular the possibility of resetting the development potential of differentiated cells, such as skin cells. If the development potential of the embryo is not a unique and thereby viable indicator of moral status anymore, one may wonder which other property could be employed for this purpose. Clearly, there has to be a point in development at which human beings—in contrast to individual skin cells—start possessing a moral status that gives them a claim not to be consumed for research purposes.

A leading liberal proposal that has influenced the discussion context in which Schöne-Seifert and Stier have been working is the possibility of conferring moral status to human life at the point at which twinning is not possible anymore (suggested in particular by legal scholar Horst Dreier). From a legal perspective this suggestion can be made compelling by pointing out that subjective rights, such as a right to life, or a right not to be consumed for research purposes, require a particular subject as the carrier of those rights. Arguably, in those development stages in which twinning is still possible, we are not dealing with a *particular* human subject yet, because we do not know yet how many subjects will develop, and whether there will be any at all.

However, the claim that we do not know yet how many, if any, adult subjects will develop is of course a potentiality argument that Schöne-Seifert and Stier have to be critical of. This leaves them without an account for an appropriate cutoff time in human development. Moreover, a further disadvantage of the leading proposal consists in the fact that the conclusion from divisibility to nonindividuation might well be wrong. The fact that human life in the morula stage,

for example, is still divisible does not logically imply that we are not dealing with one particular morula right now. This morula happens to be divisible, but this has no logical implication for its individuation as *one particular* current entity (pointed out in particular by Michael Quante), which may well serve as the carrier of certain rights.

An alternative proposal that should be of interest to both proponents and critics of stem cell research would be to start working with the concept of a human *organism*. Arguably, a skin cell is merely *part* of a human organism, while an embryo *is* at some point a human organism. According to this argumentative strategy one should confer moral status not to all human life, including skin cells, but merely to living human organisms. A suitable working definition of an organism might be something like the following:

An organism is an entity in which multiple biological systems or processes of different kinds function in a particularly integrated way and at least somewhat autonomously from their environment.

On the basis of such a working definition, one could argue that a skin cell does not display the required properties. Arguably the skin cell is not autonomous enough from its environment, specifically due to its present differentiation and function as a skin cell. Notice that this would not be a potentiality argument, since it would focus on present properties, rather than future ones.

Dogmatic opponents of stem cell research might want to insist that the fertilized ovum already constitutes an organism. They would then have to show that the biological integration and autonomy of the fertilized ovum exceeds the integration and autonomy of systems or processes that we do not take to be organisms. What such an argument could look like and whether it would be successful cannot

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be the subject of a brief commentary. In any case, it is to be expected that the argument is easier to make in later development stages, even though it might not be impossible to make it for this very early stage.

Since stem cells are currently extracted in the blastocyst stage, it is of particular interest how promising it would be to insist that a blastocyst constitutes an organism. Obviously a blastocyst is made up of a number of cells, which might strengthen the claim that we are looking at multiple biological systems or processes. Moreover, in contrast to the earlier morula, the cells of the blastocyst seem to serve different functions: The tightly connected outer cell mass (the trophoblast) seems to serve the purpose of holding liquid around the inner cell mass (the embryoblast). As a result, it may be justified to ascribe coordinated and integrated functioning to the two different kinds of cells, as well as a minimal degree of autonomy from the environment in the sense of a tight outer border restricting the passage of liquid. This implies that there is room for the argument that the blastocyst forms a human organism, while the skin cell does not. If this position works, destroying blastocysts by extracting stem cells would be morally more problematic than the destruction of skin cells.

An obvious objection to this argument would be to insist that the functional differences and the integration between the different kinds of cells in the blastocyst are irrelevant. In particular, one might be tempted to insist that the outer cell mass is morally irrelevant, because those cells will not develop into the baby; merely the inner cell mass will do this. However, this would be a potentiality argument. Research-friendly critics of the prohibitive argument should not base

their views on the fact that the outer cell mass does not have the potential to turn into a baby. It might be more promising to criticize the prohibitive argument by insisting that the functional differences between the cells in the inner and in the outer cell mass are not *sufficient* to satisfy the requirement of “integrated biological systems or processes of different kinds.” Even though the outer cell mass seems to serve the function of containing liquid within the blastocyst, in other ways the degree of cellular differentiation in the inner and outer cells seems to be the same. If this argument can be made compelling, then the blastocyst does not constitute a human organism yet and extracting stem cells from it would be morally less problematic than extracting them at a later stage at which the organism requirements are already fulfilled in a less controversial way.

Which result the application of an appropriate working definition of “organism” would actually yield cannot be decided here. In any case, though, the strategy seems to have the potential of redividing the argumentative landscape along familiar lines. As Schöne-Seifert and Stier correctly anticipate, though, such alternative attempts at finding an appropriate cutoff line for moral status will shift the focus away from potentiality arguments, which indeed seem to have become “depotentialized” in light of the developments discussed in their article. ■

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Prematurely Depotentialized? Ethical Nonnaturalism and the Absurdest-Extension Objection

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Schoene-Seifert’s and Stier’s thought-provoking target article (2013) addresses so many complex issues that it seems impossible to provide a comprehensive commentary in this space. Therefore, we confine our remarks to a special discussion of the absurdest-extension argument (AEA), which strikes us as central to their claim that the argument from potentiality (PA) cannot survive. In short, AEA runs like this:

- P1: Recent developments in cellular biology have shown that we can create totipotent cells via tetraploid complementation.
- P2: If this is true, we cannot distinguish the potentiality of these cells prior to their reprogramming from the potentiality of embryonic cells.
- K: Therefore, reprogrammable cells have the same moral status as embryonic cells.

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