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Theory of Knowledge

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Ethics Assessment

1 Argument

Are embryos humans? Technically, yes. They have nearly the same genes as every other human on the planet. If an embryo is a human, however, how can you justify “killing” it by extracting stem cells from it? That, I feel, is another question. While I would have to classify an embryo as “human” from a purely genetic standpoint, I would not call it “alive”, thus making it impossible to kill in the first place. An embryo is, in my mind, similar to a brain-dead individual. Yes, it is human: it has all of the features—the genes—that define a human. However, it is not a functional organism; the brain—the control centre—is no longer functional.

I believe it is apparent that the crux of my argument is that the embryo does not have a functional brain, which makes it inanimate. However, this introduces another question: is being brain-dead (or simply brain-absent) the same as being dead? This question can be discussed as an entirely new argument, but, for the sake of simplicity, I will define death (or, in the case of the embryo, never being alive) as either:

1. “Irreversible cessation of circulatory and respiratory functions”
2. “Irreversible cessation of all functions of the entire brain, including the brain stem”

(“Uniform Determination of Death Act”)

Let us lay out the information we have now:

1. A human is any entity with roughly the same genes as the rest of the human population
2. Death is defined by one of the two occurring:
 - (a) breathing/circulation stopping function
 - (b) brain stopping function
3. An embryo is a human, as defined by point 1
4. An embryo is “dead” (as in, not alive), as defined by point 2

With this, we can finally approach the actual question, which I have intentionally not mentioned until now: *Should embryonic stem cell research be supported? Is it ethical?*

Let us now set up the possible outcomes. The “null hypothesis”, that embryonic stem cell research is not ethical and should not be supported; and the “alternative hypothesis”, that embryonic stem cell research is ethical and should be supported. The basis for our “null hypothesis” stems primarily from the following two areas:

1. “The destruction of an embryo is akin to killing human life”
2. “Embryonic stem cells have not been successfully used to help cure disease”

(“Conservative vs. Liberal Beliefs”)

The first point we disproved in the preceding paragraph. How about the second point? This is one of those statements that is technically correct, but practically incorrect. Yes, it is true that embryonic stem cells have not been used to help cure disease. However, it would never be

possible to have embryonic stem cells cure diseases if they were not allowed to be researched in the first place, hence the practical incorrectness. However, simply saying the statement is *practically* incorrect is not enough; I need to prove that it is “absolutely” incorrect.

The statement claims that embryonic stem cells have not been successfully used to help cure disease. Let us assume that by disease, it is meant human disease, as to give the statement the benefit of doubt. Now, the embryonic stem cell does not have to cure the disease at this point; all it has to do is help. In that case, let me pose a question: if a drug that can cure a disease is tested on animals in a lab and proven effective, is that helping cure the disease? Given that the lab animals are designed to function similarly to humans (in the physiological sense) (Graham), it would be prudent to assume that most medical tests carried out on lab animals can be translated to human test subjects.

So what? So what that a test carried out on an animal produces similar results on a human? That fact becomes interesting when you learn that embryonic stem cells were used to help restore motor function in rats with spinal cord damage (Kierstead et al.). Spinal cord damage is a disease, by definition: “a disorder of a structure or function that affects all or part of an organism” (“Oxford Dictionaries”). Given that embryonic stem cells could help rats, we could state that it serves as a good proof-of-concept for human trials. Lab tests are not perfect; while animals are good at modeling human physiology, there are functions in the human body that differ. Thus, it would only be safe to assume that the lab test would confirm the possibility of a cure, which is help.

Now, the second statement is disproved. In short, our “null hypothesis” has been refuted, and our “alternate hypothesis”, that embryonic stem cell research is ethical and should be researched, is confirmed.

2 Metrics

2.1 Obstacles

- Merely expressing your preference—A preference is individualized; one person may like chocolate ice cream, another may not. Merely expressing your preference in a moral argument is analogous to telling someone who likes chocolate ice cream that they (the person who likes chocolate ice cream) do not like chocolate ice cream.
- Merely expressing your feelings—The same issue as above: feelings about a topic change from person to person, so basing an argument on feelings is insubstantial.
- Merely expressing what you think—Thinking also varies from individual to individual. Stating a thought is no different than stating a preference.
- Citing majority opinion—Just because a majority thinks a certain way does not guarantee the accuracy of that opinion. A majority can have power, but it does not necessarily have truth.
- Appeal to a moral authority—An ideal argument can function without the support of a moral authority. The existence and interpretation of a moral authority (like god) are all variable, again subject to the first three obstacles of individual perception.

2.2 Objectives

- Conceptual clarity—Main concepts should be clearly defined.
- Accurate information—Using facts instead of anecdotal evidence.

- Following the rules of logic—Recognize the connection between ideas.
- Impartiality—Do not favor an outcome.
- Keeping a cool head—Do not get caught up in the “heat” of emotions.
- Appealing to justifiable moral principles—Declare how a rational, free being must act.

3 Analysis

3.1 Obstacles

- **3**—By the time I began the argument, I already had an idea of what I thought the correct response would be. I preferred one response (positive response). It shows in my tone, and occasionally in my writing style, when the sentences become more terse.
- **4**—I feel that there are not many emotional statements in my argument, but I did notice that I did sound slightly dry at times, which gives away my emotions.
- **2**—When disproving the statement “Embryonic stem cells have not been successfully used to help cure disease” in the latter portion of my argument, I did not supply good evidence for my argument. Especially when I was talking about the lab animals, I felt that I was stating what I thought was true.
- **2**—I cited a majority opinion by extension, per se. One of my citations was for the Universal Determination of Death Act; this act was passed by a majority opinion by a group of individuals voted into power through majority opinion. While I may agree with the definition given by the act, it does not change the fact that I cited majority opinion.

- **5**—I do not appeal to a moral authority in my argument.

3.2 Objectives

- **3**—While I do try to define terms that are important, such as being human, dead, or diseased, I do not define them well; the terms are still relatively vague, especially when I use them in confusing ways (“A human is any entity with roughly the same genes as the rest of the human population”)
- **4**—I used peer-reviewed, government issued, or non-profit organization citations for all of my out-of-document research.
- **3**—I lay out my step-by-step thought process when analyzing the argument. I try to make as few logical jumps as possible, but I do recognize that I do skip steps in my argument; the section with the lab animals was particularly problematic, and I believe that the connection between the cited paper and my conclusion—that the second statement is false—is slightly rushed and incomplete.
- **2**—I favored the positive outcome. I want embryonic stem cell research to be supported, regardless of whether or not stem cells came from embryos or near-infants. My logic jumps and expression of thinking are products of this.
- **2**—My writing began to take on a tone that was slightly too dry to be called emotionless. While I would classify it as a colder emotional output, it was an output nonetheless. An example of the “dryness” is here: “However, it would never be possible to have embryonic stem cells cure diseases if they were not allowed to be researched in the first place, hence

the practical incorrectness.”

- 1—I do not explicitly define a justifiable moral principle.

Works Cited

“Conservative vs. Liberal Beliefs”. June 2015. Web.

Graham, B. “Model Organisms for Biomedical Research”. June 2015. Web.

Kierstead, H., et al. “Human Embryonic Stem Cell-Derived Oligodendrocyte Progenitor Cell Transplants Remyelinate and Restore Locomotion after Spinal Cord Injury”. June 2015. Web.

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