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HPS/PL 183: Bioethics

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12/9/24

Bioethics Final

*Q: In a technologically advanced society where embryo models do have the developmental potential to form a viable fetus, would there be a morally relevant difference between natural embryos and embryo models? Defend your position on what the moral status of each would be.*

*A:*  In the modern context, embryo models refer to lab-synthesized structures of cells which closely mimic the behavior of early human embryos. Embryo models are used as laboratory tools for research, enabling scientists to take a close look at human developmental processes and understand how they work and how developmental risks can be mitigated. The more similarly these models function to human embryos, the more useful they could be for research, since the data they provide will be more akin to the human development process. However, it is important to question how far this similarity can go before reaching the limits of morality – if the models attain the potential to become viable human fetuses, would we still be justified in using them for research? In this argument, I will first defend the position that in such a case, natural embryos and embryo models would share equal moral status. I will then claim that the equal moral status of each should be very low and justify through the lens of both deontological and utilitarian theory.

To ascertain the difference in moral status between a natural embryo and an embryo model given that both have the potential to develop into viable fetuses, it is critical to identify the differences between each and determine which differences are morally relevant. There are 3 main differences between the model and the natural embryo in my eyes, being physical/molecular differences, source of biological material, and method of synthesis.

I will tackle molecular differences first. An ideal embryo model in the most extreme case would be one which is molecularly identical to a natural embryo. The viability of the potential fetus presumably scales with the molecular similarity of the model to a natural embryo such that there is a limit to how different the two cases can be. Therefore, I claim that molecular differences are not morally relevant – after all, the molecular makeup of adult humans makes no difference when we are comparing their moral status to each other. When evaluating the moral status of two humans, we find it totally irrelevant to assess differences in their molecular composition, and it is unclear why it would be any different in this case.

Next, the source and synthesis method of models differs from that of natural embryos. While natural embryos are produced via fertilization of sex cells, embryo models are lab grown using body stem cells. This means both the source of biological material and process used to produce the embryo differ. Do either of these make a difference to the moral status of the resulting product? There is a clear moral danger to claiming that it makes a difference – say the model eventually develops into an adult human. That adult human still would have been produced without fertilization or sex cells, such that if these details are morally relevant, then the adult human would lose moral status. Therefore, these details cannot be considered morally relevant.

Thus, I have shown that there are no morally relevant differences between a natural embryo and an embryo model given that both have the same viability to develop into an adult human. Next, I turn to what this equal moral status is. Consider first the deontological approach by turning to Kant and his categorical imperative. The categorical imperative holds that no rational being may be used as a means to an end alone, but rather must be treated as an end in themselves. This appears at first to threaten my perspective – it seems like performing research on embryos (regardless of their origin) could be considered “usage” of a being. However, to be rational according to Kant, one must both possess will and be able to act according to that will. No type of embryo is capable of this – not only is it **incredibly** unlikely that an embryo if any sort has a conscious will, but it is also clear that they lack the ability to act according to that will. Therefore, both types of embryos will miss the mark of being a rational being, and from a deontological perspective, will lack moral status. One could argue in response to this that the being in question is the counterfactual one – the one that could have come about were the embryo allowed to develop. However, I would argue that actual persons have higher moral status than counterfactual ones – they are immediately conscious and can suffer, and therefore are more morally significant then a being that could have been conscious in the future. Therefore, if any moral status stems from counterfactual personhood of the embryo, it is slight, and certainly a lower level of moral status than any living person.

Next, turn to the utilitarian perspective. This perspective is much simpler to defend. In utilitarianism, regardless of your concept of utility, it is required that a being is conscious to experience utility. Again, it is **incredibly** unlikely that an embryo could have a conscious experience, and therefore **incredibly** unlikely that there is any consideration of the utility of the embryo warranted. One might argue that it is better to be safe *in case* the embryo has a conscious experience and suffers in the process of lab research. However, in this case, I would resort to the numbers game played by utilitarians – the minor suffering experienced on the part of a limited number of research embryos with limited consciousness would be overall outweighed by the high utility it could provide through enhancing reproductive care. Therefore, any more status granted to the embryos would once again be limited.

I have argued here a two-part claim regarding embryo models with the potential to form viable fetuses. Firstly, these models have no morally relevant differences from natural embryos, and therefore no difference in moral status. I have then shown that though there may be a limited amount of moral status due to both types of embryos, that status would be highly limited, and thus it is likely permissible to use the embryos for research purposes.

*Q: The NIH does not fund research that creates or destroys human embryos. Can this decision be defended using the public reason framework? Some suggest that embryo models are a promising alternative to overcome this difficulty, and that research using these models should be funded. Do you agree or disagree?*

*A:*  John Rawls’ public reason framework presents an avenue of political philosophy through which a governing body can justify instating laws or policies for which there exist disagreements in society. This justification hinges on the ability for the governing body to explain the policy using reasons that all persons can reasonably accept, regardless of their personal doctrines (including religion, philosophy, etc.). This explanation should not only be possible, but it is also *required* of all persons as a civic duty to defend their perspectives using such reasons in political discourse. In this argument I will prove that the public reason doctrine *does* provide a defense of the NIH policy, and that this defense still holds when the subject of the policy transitions to embryo models as opposed to natural embryos. However, I will demonstrate that this defense only holds for the policy concerning the distribution of funds and would not hold in the case of an outright ban on embryo research.

The key principle of the public reason framework is that the justification of a policy must consist of reasons which may be accepted by anyone in society regardless of their personal doctrine. At a first glance, it appears that the justification of the NIH’s policy against funding embryo research must evaluate the relevant moral and ethical issues surrounding the use of embryos in research and whether or not any reasonable individual could accept arguments which make the research impermissible. However, this excludes a key detail: it is not the allowance or disallowance of the research at question, it is the instead the distribution of funds which is acted upon by this policy. This radically changes the form of possible justifications of the policy. To prove this point, I will provide a sketch of one such possible justification and show that it meets the requirements of public reason.

One possible route for justification begins by considering that the NIH is funded by taxpayer dollars. Taxpayer dollars are funds acquired from the public at large to support social institutions and the government in their activities. The use of taxpayer dollars is influenced by the voice of the voters in a democratic republic, and if the taxpayers become unsatisfied with the use of their tax monies, they will elect representative who will change the policies. Embryo research is highly controversial; there are multiple religious groups who object to it and the philosophical basis for it is not settled. Were the NIH to fund research involving the creation and destruction of human embryos, I would expect enough taxpayers to be unhappy enough with the use of their tax dollars for this purpose that they would elect representative who would allocate less funding to the NIH. Defunding the NIH would be indisputably harmful – many important research projects with implications for human health would receive less funding in turn. Not funding embryo research projects avoids this consequence. Though it foregoes the potential benefits which would emerge from embryo research, it maintains the funds allocated to other research projects which improve people’s lives in other areas.

I argue that this justification is composed of reasons that any reasonable citizen could accept. Regardless of political faction or religion, people would reasonably agree that massive defunding of medical research projects would be a severely negative event. There may be extremist groups of religious persons who believe that medical research should be discontinued altogether, but their argument is against public reason. One might argue that there is no evidence that the removal of funding from the NIH would result from the funding of embryo research; however, it is clear that there is a risk of such an event happening based on the controversy surrounding the research in question.

Notice that this argument is independent of the specific details of the controversy surrounding embryo research. It is not the moral standing of the embryo or the permissibility of the research, but rather much more practical concerns about the sustainability of tax funding for critical projects. A consequence of this fact is that the argument automatically extends to cover the case of embryo models as well – as long as the controversy surrounding this research is intense enough to result in the redistribution of tax dollars, the argument against the NIH funding the research holds.

This argument is clearly restricted to the domain of the distribution of tax dollars. No case has been made here against continuing those research projects which require the creation and destruction of human embryos. In fact, I argue that a policy banning such research is not justifiable on the grounds of public reason. Based on my argument in question 1a above, I do not see an explicable moral reason why any kind of embryo has sufficient moral standing to outlaw this research. This means that the explanations given for such a policy would revolve around personal philosophy or religious beliefs, falling short of the standards required for public reason. Therefore, while public reason can defend the refusal to allocate tax dollars to research involving the creation and destruction of human embryos or embryo models, it cannot defend an outright ban on these types of research.

*Q: Was Jeanne Miller right to refuse to allow her nursing home patients to participate in Dr. Berten’s Proposed Clinical Trial?*

*A:*  Jeanne is *most likely* wrong in refusing to allow any of the nursing home patients participate in Dr. Berten’s proposed clinical trial, conditional on a) the next best available treatment to the nursing home patients other than THA, and b) The way subjects from the study will be compensated and treated after the study. In this argument, I will demonstrate that so long as these two areas of concern are being handled appropriately, the nursing home patients should be allowed to participate in the study with the proper consent given.

Jeanne objects to the study on the grounds of exploitation. Her argument is that because the nursing home residents are vulnerable and disabled, and that therefore using them in a scientific study is exploitative. To show that the patients aren’t being exploited we need to prove that informed consent is being properly given, the patients aren’t being harmed, and the patients are benefitting proportionally from the study. If all these conditions are satisfied, then the trial is not exploitative, and *should* proceed given its potential to help people and reduce the harms caused by Alzheimer’s.

Note that great care is being taken on the part of the investigator to ensure consent is being given. In the setup, consent is required from both the patient, the medical staff, and the closest family member available in order to conclude that there is sufficient consent to proceed with the trial. This is appropriately cautionary – even in the cases when the patient appears to be fully capable of deciding for themselves, still a family member and doctor are asked, so that all stakeholders who may be aware of different risk factors of participation in the study are in agreement that the treatment may be administered to the patient. In the case of the patients who are not capable of providing consent themselves you may argue there is an ethical dilemma, and you may be right, however, Jeanne did not argue that the patients who were legally incompetent shouldn’t participate in the study, she blocked all patients from participating in the study, and in the case of more competent patients, this clearly can’t be justified though insufficient consent.

To address the worry about harm to the patients, we need to assess equipoise. If this study is being conducted under clinical equipoise, where there is genuine uncertainty surrounding the best treatment for Alzheimer’s, and assuming appropriate cautions have been taken prior to the study, we will be able to conclude no harm is being done to the patients. Clinical equipoise ensures that no patient is receiving what is thought to be a worse treatment for Alzheimer’s – no patient is foregoing a better treatment as a result of participation in the study. Note that the setup is unspecific – whether or not the trial is being conducted against the next best available treatment (be that another drug or placebo) is relevant in this case. As long as the researchers have done their due diligence and are administering only THA and the next best treatment where equipoise holds, the patients are not missing out on superior treatment and are therefore not being harmed.

One might respond that receiving the treatment could still cause harmful side effects that the researchers are unaware of. While this is true, this possibility is included in informed consent, and so as long as the researchers sufficiently warn the consent-givers of this possibility, this is not a blocker to the study moving forward.

Finally, we need to describe the conditions on the compensation of the patients and ensure that they are benefitting proportionally from their participation in the study. For the nursing home patients to participate in the study, they should expect to benefit in exchange for the risks they are taking for their involvement. This benefit should be in two forms. First, the patients participation should be incentivized through a monetary reward, as is customary for participation in studies. This monetary reward offsets the time the patient contributed towards the study, and should be set at a reasonable hourly rate of compensation. Second, and more importantly, the patient should expect to benefit from the treatment they helped to prove if it is proven to treat Alzheimer’s more effectively than the next best alternative. It is not sufficient to say that those patients who receive the THA during the study will reap the benefits of the drug during the time period of the study, it must be required that the patients who receive THA during the study are able to maintain their access to the drug after the trial if it is proven effective, and that those patients who received the control during the study gain access to THA after the trial if it is proven effective. It is only through the time and risks of this group of patients that the drug is proven and made available, and if other get to benefit from this but not the patient, than this is exploitative. However, as long as the patients are all able to access the drug if it proves effectively after the trial, this issue is safely avoided.

If all of the conditions described above (clinical equipoise, compensation, and access to treatment) are met, then the proposition for the patients is as follows: either stick to the status quo if you so choose, or accept an n% chance of receiving a better treatment with low risk. Should a more effective treatment be proven, receive the more effective treatment indefinitely. The patients are given then choice, and the proposition is mutually beneficial to the patients, researchers, and humanity at large. If Jeanne objects to this on the grounds of exploitation, which I’ve shown to be absent, then she is standing in the way of a potential large benefit to many moral agents without a proper justification. This being the case, we can conclude that given the above conditions are met, Jeanne is clearly in the wrong.