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The “Non-Identity Problem”: A Recurring Philosophical Issue in Medical Ethics and Legislation

A principle of law in many jurisdictions says that it is particularly blameworthy if I commit an act that directly harms a particular other person. For example, if I take a broken bottle and hit someone with it, this is a particularly blameworthy action. It is morally blameworthy, and it is also a criminal offense. There are also trickier cases. There is a class of actions that can harm someone, but of which we cannot say that they harm a particular other person. For example, imagine I leave a broken bottle in the forest. In that case, my action might or might not harm another person, depending on whether there will be another person who comes by and steps on the glass. In case there will be such a person, it is initially unclear who that particular person will be. Moreover, it is of course also unclear whether I really intended to harm anyone at all. It might nonetheless be morally blameworthy if I leave a broken bottle in the forest. But it is probably not quite as bad as if I take it and hit someone on the head with it. The law might say that it is negligent to leave the bottle in the forest. But it is probably not a criminal assault.

In biomedical ethics and jurisprudence we have a lot of cases that are arguably somewhat more like leaving a broken bottle in the forest rather than hitting someone with it. There are actions of which one might have to say that it is unclear whether they harm a particular other human being. Stem cell research is such a case.

When doing research with human stem cells we are doing research with cells of which we do not know yet whether they will turn into a *particular* adult. For one thing, the cells might have never made it through the pregnancy in the first place. Especially in the first trimester a pregnancy often just ends “naturally.” The mother might not even notice. Another reason we do not know yet whether the cells will turn into a particular adult lies in the fact that the blastocyst can still branch and continue in two separate strands as two separate human individuals. In cases outside of laboratories, the stem cells would then develop into

ordinary monozygotic twins. In laboratories, the process can get pushed even further. The blastocyst can in principle be divided even more often—a process called cloning.

Let's say some medical researchers do experiments on stem cells and later discard them. Have they thereby harmed *particular* human beings? If so, how many have they harmed? One, two, or infinitely many? How bad is it to harm a potentially infinite number of human individuals? In 2010, when our research group at the University of Münster was founded, Prof. Dr. Horst Dreier, a constitutional lawyer at the University of Würzburg gave a talk that partly addressed this problem. He argued that we should not attribute a literal right to life to early blastocysts. Prof. Dreier gave at least two central reasons for this view. First, as already mentioned, even in ordinary pregnancies, a lot of blastocysts do not actually survive and turn into adult beings at all. If we wanted to attribute a literal right to life to human entities at such an early stage of development, we might have to secure the survival of these cells in women who do not even know that they are pregnant, Prof. Dreier argued. Obviously, this is an impossible task. But Prof. Dreier also gave a second reason for his liberal position. He argued that blastocysts at such an early stage of development are not a *particular* individuals yet. Twinning can naturally still occur until nidation of the cells in the womb. Up until nidation, we are therefore not dealing with a particular individual yet, he argues. This would imply the following: If we do research on blastocysts and later discard them, we are not harming a particular individual.

From a philosophical perspective the question is: Which moral (and legal) assessment should we make of actions that do seem to affect human life, but that do not seem to affect humans as particular individuals. This problem has entered the philosophical literature as the so-called non-identity problem.

A recurring theme in the philosophical literature on this topic is a hypothetical thought experiment by Derek Parfit. According to this thought experiment, we imagine that medical technologies have advanced considerably and a grown-up person may simply branch and continue her existence as two separate individuals. Usually, philosophers discussing this thought experiment provide a science fiction story like the following: A triplet of three identical brothers get into a car accident. Two of the brothers are brain dead, the third one retains a healthy brain, but his body is destroyed. Advanced physicians now simply decide to put half of the healthy brain into the head of the first brother, and the other half into the head of the second brother. After the operation, the two wake up and have exactly the memories of the brother from whom the brain stems. Of course they also look the same. In a sense, the mind of the first brother has simply branched and his life continues in two separate strands in

two separate bodies. This thought experiment is usually attributed to Derek Parfit, but it is at least partly inspired by John Locke's work on personal identity.

Had I started my talk with this thought experiment, you might have thought, those philosophers are thinking about very theoretical issues. But if you have ever seen a pair of monozygotic twins, branching is exactly what happened in their case. For the purpose of analyzing the moral permissibility of stem cell research—a possibility just as real as twinning—we might therefore want to take a closer look at the philosophical debate surrounding this thought experiment.

The notion of numerical identity is a relation telling us under which condition an entity at a certain point in time is identical to an entity at a different point in time. For example, in bioethics, we can ask whether a particular cluster of cells that came into existence many years ago was the identical being as the person who is now talking to you.

Before I continue, let me clarify some things. From the perspective of identity this question can be entirely independent of the fact that I seem to possess higher cognitive faculties now that were not present in the earlier cluster of cells. Some people think that rational *persons* do not come into existence until sometime in human childhood. The question I am asking here is whether those past cells and the being talking to you now are in some more basic, but equally essential way the same being, or, in other words, whether we are part of the identical human life. One might now be inclined to argue as follows. There is a continuous and inherent causal chain between the cells and the person speaking to you. The presence of this causal chain might be the necessary criterion for being able to stipulate identity here. In a sense, this sounds persuasive. I might be identical to whatever there was in my past, as long as there is an inherent causal chain. However, there is a problem. Maybe I have a natural twin or a clone. In that case there is an intrinsic causal chain between the cells and two later beings, namely myself and my twin. Could we now still say that the cells and the person you are talking to are identical? Suddenly, this would seem problematic: It would imply that a being at one point in time can be identical to two entities at another point in time. This seems to undermine the very notion of identity. According to Leibniz's law, an entity can only ever be identical to one thing, namely itself. Or, more specifically, a thing can only ever be identical to a thing that has the exact same properties. Clearly, my twin and I do not have exactly the same properties right now. For example, we are clearly not in the same room. Hence, one should not be willing to say that my twin and I are identical. If we are two different entities, though, neither of us can be identical to the cluster of cells that came into existence many years ago. Applied to the issue of stem cell research this would seem to mean that a researcher

who destroys a cluster of embryonic stem cells is not harming any particular human individual. The reason is that the cluster of cells can still turn into any number of human individuals. Moreover, it might not turn into an individual at all. If this argument is convincing, then doing research on stem cells might be more like leaving a broken bottle in the forest, in a place where we do not know yet who and how many people will step on it. And to be quite honest, we do not even know yet whether there will be anyone at all who will step on it.

Of course one could argue that doing stem cell research is a lot worse than leaving broken glass in the forest. It might actually amount to a direct act of killing after all. The reason this is a defensible position consists in the fact that one can argue that killing any kind of human *life* at any stage is an act of killing, even if it is “only” a cluster of non-individuated cells. It will be hard to deny that the stem cells constitute human *life*. Cells are generally considered to be living things, and in the case of human embryonic stem cells, they have all the genetic information that is typical of humans.

The problem of non-identity only tells us that *another* argument against stem cell research actually rests on a logical mistake. It might be tempting to say that the problematic aspect of destroying embryonic stem cells consists in the fact that it renders impossible a valuable life of a later, grown-up human individual like the person who is now talking to you. If the loss of this valuable later existence of an individual is our main reason for objecting to stem cell research, then we have a reason that can be called into question by appeal to the claim that this later individual as an individual is not identical to those stem cells.

The case of branching is not the only notorious discussion case in the literature about the non-identity problem. Let me introduce you to a couple of related cases that are also particularly prevalent in the literature. Imagine you had a 14-year old daughter considering whether to get a baby. Most parents would be quite worried about this and would try to talk their daughter out of the idea. Your central argument might be this: If one gets a baby at such a young age, when one has no job and no higher education yet, one is likely to give the child a bad start in life. At a later point in life, one will have much better resources for one's child.

However, a closer look at the circumstances at the beginning of human existence reveals that this natural response suffers from a severe problem: It represents another instance of the non-identity problem. The baby that the girl would have at the age of 14 and the baby she could have later will clearly not be the identical baby. They would result from different eggs and sperms and would have different sets of genetic properties. This means the claim that her child will have a better start in life if she waits a bit longer is ambiguous. Both of the

possible children would be her child, but they would not be the identical child. There would be no one identical child that would be better off if your daughter waited.

This leads to a troublesome implication. It is usually compelling to act in such a way that our children will be better off. But in this case we should not compare the lives of the two potential children with each other. Instead, we should look at the potential fate of each possible child separately. The choice that we face for the child the girl could have at the age of 14 is the following: either it gets born and has a bad start in life, or the girl waits and that child will never get born. Clearly it is better to be born, but to have had a somewhat bad start in life, than never to have existed at all. This would seem to mean that the girl should go ahead and have the child. In a sense, she should maybe even have as many children as possible, because it is always better for people to exist with a bad start in life than not to exist at all. This second aspect of the case becomes apparent when we think of the second baby your daughter could have later in life. For that baby the choice lies between existing with a good start in life and not existing at all. It is even more obvious that existing and having a good start in life is better than not existing at all. So your daughter should clearly have this second child as well. In other words, what I am suggesting is this: If your teenage daughter wants to get pregnant and you are trying to come up with an argument to persuade her not to, and if your argument rests on the wellbeing of the future child, then you are committing a logical mistake. I am not saying that your daughter should go ahead and get pregnant. But I am saying that there seems to be a logical problem of non-identity here.

The third and last example I would like to introduce you to has more to do with environmental ethics than with biomedical ethics. I will introduce it anyway, because it will illustrate a further point. As we all know nowadays, we can either deplete and destroy the environment or preserve it for future generations. Generally, we will want to say that we should preserve the environment for future generations. Future generations should also be able to enjoy our natural resources and consequently have a higher quality of life than they would have if forests and lakes were destroyed and poisoned. However, as in the case of twinning or cloning, we do not know yet which particular people and how many of them there will be. There is certainly no identity between anybody existing now and anyone in future generations. This means that it might not be warranted to argue that it is a particularly strong moral duty to preserve the environment. If we destroy it, we do not seem to harm anyone in particular.

One of the reasons why it is popular to mention the depletion case in addition to the case of the teenage girl, is the fact that taken together, the two cases illustrate that the

normative force of the non-identity problem does not run neatly along the lines of religious doctrine. In the case of the teenage girl the argument seems to suggest that there might be no good reason not to have a child, and that one might have a reason to have as many children as possible. This might be compatible with traditional religious doctrines. However, in the depletion case, the non-identity problem seems to suggest that we have no particular reason to preserve God's Creation for future generation. This is probably not compatible with religious doctrines. Even though religious doctrines seem to suggest that we should subdue the earth, they also seem to suggest that we should preserve God's Creation so that future generations can benefit from it as well.

In both cases, the question the non-identity problem raises is the question of whether we have any good reason for the intuition that we have moral duties toward future individuals who do not exist yet. The case of stem cell research is slightly different in the sense that stem cells are clearly already human life, while in the case of the teenage child and in the case of depletion the human beings we are talking about do not even exist as a cluster of living human cells yet. However, what the non-identity argument as applied to stem cells nonetheless shows is that a cluster of stem cells is not necessarily identical to any particular adult human individual. In this sense, the moral question raised by the non-identity argument as applied to stem cells becomes more intricate, but remains similar in structure. Here we do not have to ask whether we can have moral duties toward human life that does not exist yet, but whether we have moral duties toward human individuals who do not exist as human individuals yet.

Before concluding, I would also like to introduce you to some of the most common solution strategies for the issues raised by the non-identity problem. In principle the non-identity problem forces us to decide whether your moral principles only have force if they affect particular individuals or whether that is not the case. The common English terminology here is "person-affecting" versus "non-person affecting." Let's assume for a moment that moral principles have force even if they do not affect any particular individuals. This position will be most plausible in the framework of value based ethical theories, for example consequentialism. However, if we have to be concerned about the wellbeing of people, even if they do not exist yet, we might well run into what is commonly called the Repugnant Conclusion. As I pointed out in regard to the case of the teenage girl, she might in fact have reason to have as many children as possible, because for each potential child it is clearly better to exist with a bad start in life than not to exist at all. If existing under half-decent circumstances is always better than not existing at all, then a non-person affecting value based moral theory would have to insist that there should be as many future people as possible. Of

course life on a severely over-populated planet would be rather hard, but as long as these potential people would still have even slightly more happiness than misery in their lives, it would be worth bringing them into existence. This conclusion is repugnant, it has been argued.

Some proponents of non-person affecting value-based theories have tried to tackle this problem by abandoning the maximization principle of classic consequentialism. Part of the problem is that value-based theories often ask us to maximize the good. If we can do so by putting as many people with a slightly positive happiness balance into the world as possible, then we would have to do so. The alternative would be to endorse a form of average consequentialism here. Instead of insisting that we should maximize the good, we might have to maximize the average of the good that persons do or will have. This position has been brought up by Henry Sidgwick and was, for example, discussed in some detail by John Rawls in *A Theory of Justice*. However, this averagism also runs into difficult problems. Imagine a world in which the average happiness among people is already extremely high and you could have a child that would be very happy, but not quite as happy as people already are on average. According to averagism it would be immoral to have the child under these circumstances, because bringing it into existence would lower the overall average of happiness.

The alternative to the views just discussed is the claim that our moral principles only have force if they are applicable to particular individual persons. Rights-based theories are usually thought to require this person-affecting element. Having a right makes no sense, if the right holder does not exist yet. According to such a position we have in principle two options. Either, we can bite the bullet and just accept the force of the non-identity argument in the cases discussed. This means we have no good reason for telling our teenage daughter not to have a child. There might be such a reason, but it cannot be an argument on the basis of the fact that she would give the baby a bad start in life. It also means that we have no good reason to preserve the environment for future generations.

Is there also a way in which one can deny these conclusions on the basis of a rights-based moral theory? Some authors have attempted to do so. The most central attempt consists in the claim that bringing someone into an existence with only the most minimal net balance of happiness over misery might violate that individual's right to be brought into a decent existence. It might violate that individual's right to be brought into an existence with a reasonably significant amount of happiness and a healthy environment. It sounds very moral to claim that everyone should have a right to be brought into a decent existence. But as you will guess by now, this solution faces challenges as well. Here the problem is that some

potential people can well be thought of as disagreeing with our judgments about what they have a minimal right to when brought into existence. In fact, they might prefer to exist without a right to substantial happiness and a healthy environment—especially if the alternative consists in not coming into existence at all.

This brings me to the end of my talk. I have presented you with a number of philosophical case studies to illustrate the problem of non-identity, some thoughts on what the problem amounts to in the context of stem cell research, a rough introduction to possible strategies of tackling the problem, but I have not given you an adequate solution. However, I hope to have given you some interesting problems to think about, that will likely be the basis of further inquiry in our challenging interdisciplinary field of biomedical ethics.