Case Study: The Promise of Xenotransplantation

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Utilitarianism offers an effective, though controversial, way of dealing with moral situations. The principle rule in this consequentialist theory states that we should make decisions based on a cost-benefit analysis relevant to the moral problem. This rule is often used when we try to make sense of bioethical dilemmas. If the choice seems to bring with it more cost than it does benefit, then utilitarianism prescribes that we ought to make the choice that benefits the greater good.

This philosophical theory is controversial in the sense that there will usually be a majority that benefits and a minority that suffers as a result. Part of the problem lies in defining the parameters for this sort of analysis. Much attention has also been given lately to the issue of whether animals fall within the parameters for this sort of analysis. What happens when the bioethical dilemma involves not only animals or humans, but both? An especially complex dilemma arises when xenotransplantation becomes an option in medical contexts.

Organ donation has long been an important medical and moral problem in America. By convention, patients in need of an organ enter their names into a registry that matches donors with possible recipients. The patients can also rely on donations from family or friends, in which case family members or friends would donate a piece of an organ to the recipient. However, these methods are far from perfect, as many patients die before they can receive an organ. Furthermore, heart failure, the number one killer of Americans according to the CDC, makes donation even more difficult because heart donation can only occur when someone else dies before the patient who needs the transplant.

Some see promise in the practice of xenotransplantation, which involves the transplant of organ tissue or whole organs from one species to another. The usual risks are certainly present with xenotransplantation, but the benefits that patients can receive are immense. For example, xenotransplantation might greatly increase the pool of donors if medical science can utilize the tissue of pigs, which are biologically similar to human tissue. Ordinarily, for organ transplant to be successful, the donor tissue or organ must match the recipient’s ABO blood type, tissue type and/or organ size. Yet emerging biotechnologies are able to engineer pig tissue that can mimic actual human tissue. Though whole xenotransplant organs are currently in use as donor organs, xenografts applied to ailing organs can also be successful. According to the CDC, “heart, kidney and liver xenografts have been able to support human life for an extended period. It is this fact that investigators wish to exploit in clinical bridging studies.”

In light of these facts, we might imagine the following case. Ms Smith is a working, single mother of two high school age children. She has recently been suffering from a number of strange symptoms, including nausea, fatigue and loss of appetite. Ms Smith decides to go to the doctor, and upon an examination and battery of tests, is horrified to discover that her liver has a small hepatocellular carcinoma. She is starting to experience the first stage of liver failure. Ms Smith is immediately admitted into the hospital, and her name is entered into the National Liver Transplant Database. She is forced to sit and wait as doctors search for a matching donor. If she does not receive the new liver within six months, Ms Smith will die.

On one hand, xenotransplantation may seem to provide an answer in this case. If Ms Smith can receive a
xenograft, or even a full xenotransplantation of a liver, her chances of surviving could dramatically increase. The xenotransplantation could even save her life by eliminating the waiting time, and the complications that come with finding a donor, such as matching blood type and organ size. On the other hand, we must take into consideration the life of the animal which makes this transplant possible. That animal must be killed in order for the doctors to harvest the desired organ/tissue.

It is simple enough to argue that Ms Smith has a career and family to live for, while the animal in question does not. But are we justified when we sacrifice one living being for another? Who is to say that we may take a vital organ from one living thing and transplant it into another? As useful as utilitarianism is many contexts, it is unclear if it can solve this moral dilemma. There are important questions about whether animals should be considered in the utilitarian equation, and how their interests fit into the usual parameters of risk and benefit, costs, and so on. There are also questions about how the benefit that a human patient might derive can be compared to the benefits, or costs, to the animal donor.

References:

Is utilitarianism a useful tool when we investigate the ethical dilemmas that medical progress presents us with? It can be, but however useful utilitarianism is, no moral theory can give us conclusive answers. If we ponder ethical situations from just one theoretical point of view, we can create an additional dilemma where we must, in order to maintain the coherence and the logic of our theoretical principles, sacrifice what we really think is right out of a strange obedience to the theory itself. It might be better for everyone if in some situations we integrated different theories into our inquiry in order to avoid the crystallization of our norms and the narrowing of our perspectives.

We can see this in the case that Karlene Chi presents on xenotransplantation. Karlene does a good job of showing the limits of an inquiry that is carried on from only the utilitarian point of view. As she explains, when we try to promote the good of the majority we will nearly always have to do this to the detriment of the minority. When we think like utilitarians, the principle that guides is says that one should aim for the most good possible; that principle reveals its inadequacy, in some cases, when we look at just what this means from the minority's side.

In the context of xenotransplantation, the shortcomings of utilitarianism are revealed when we take up the perspective of the unwilling participant, the animals whose organs are harvested (to say that they are donated seems inaccurate). It would seem convenient if we could move to the other side of the fence, and inquire about the degree of consciousness that the animal has, and any rights that it might possess. But that move is difficult, to say the least, in that we have no way to enter into complete identification with the animal, at least from its point of view.

How can these difficulties shows that we need to enlarge our own point of view? The dramatic background in Chi's example has us meet Ms. Smith, a working mother who might be kept alive through xenotransplantation. With this example, we are asked to consider a patient's right to a good life. But it also asks us to remember that Ms Smith has duties as a mother and as a worker. Then there are, as Chi notes as well, the questions about the animal's right to life. It is when trying to mediate between these standpoints that Chi asks if we are "justified when we sacrifice one living being for another."

The answer to such questions is, I think, beyond the scope of utilitarianism. Again, were we to ask the theory, utilitarianism could only repeat its priority for the good of the majority. Theory has this limitation regardless of its ambition or preferences. Deontology would perhaps do little better than utilitarianism, as it might only repeat claims about the rightness of certain principles or motives. The insufficiency of both perspectives emerges because we seem to think that we must justify the killing of a living being, the animal, or that we must accept that Ms. Smith will die.

In short, the problems surrounding xenotransplantation are many. The problems associated with utilitarianism are many too, and might be better known among writers in ethics. We might better understand, even if we cannot avoid, some of the doubt which suspend our judgment about Ms. Smith, if we looked to Aristotle's idea of phronesis. This concept, rooted in Aristotle's own ethical theory, has to do with the art of practical reason. An Aristotelian will hold that even "the last principles of a moral system, when enunciated with maxim precision, will still not give definitive answers to the infinite kind of problems that arise in human life" (Luisella Battaglia, 2009). This seems especially so with utilitarianism and its capacity to weigh the lives of two very different beings. Something must be done about Ms. Smith. She deserves moral consideration, and probably has a greater right to life than the animals that might prevent her death. The problem is in showing how we can arrive at that conclusion through the application of utilitarian or any other kind of ethical theory.