

THE DISTINCTION

When trying to explain why we should worry about genetic enhancements, many people appeal to a distinction between therapies and enhancements—a distinction that they also take to mark an important moral border to the effect that therapies are *always good* while enhancements are *always bad*.

HEALTH AND DISEASE

Here is one way one could try to argue for the moral relevance of the distinction: The aim of therapies is to treat diseases. The aim of enhancements, on the other hand, is to improve the human body (or psyche). And while the former aim is perfectly legitimate, the latter is not.

This line of reasoning makes two assumptions:

- (1) We have a clear and uncontroversial account of health and disease.
- (2) The goal of treating diseases is morally legitimate, while other goals are not.

Let's consider these assumptions in turn. As for (1), what does 'health' mean? Two suggestions:

The Value-Neutral Approach to Health

On this approach, to be healthy is just to have the functional abilities of a statistically typical member of your species.

Does this approach give you the result that enhancements are morally wrong, as per (2)? No. It makes no claim to the effect that deviations from the statistical norm is *wrong*; just that it's different from the norm. Compare the following:

To be tall is to be of a height that is greater than most people. But does it follow from this that it's morally wrong to be short? Hardly.

The Value-Laden Approach to Health

On this approach, to be healthy is to satisfy a set of social, moral, and cultural norms that may change over time and between different cultures.

Does this approach yield the result that enhancements are wrong, as per (2)? No. It follows that therapies are good, since they bring people into a good category (i.e., the healthy). But it does not follow that bringing people into the category of the *super-healthy*, is wrong. Compare the following:

It's good to be nice, and making people nice is good. But does it follow that making people *really* nice is bad? No.

THE GOALS OF MEDICINE

Let's try a different tack. Perhaps it can be argued that therapies are (always) good because they promote the goals of medicine, while enhancements are always bad, because they promote other, morally questionable goals.

Problem: Many of the goals of medicine, such as the prevention of disease and promotion of human health, can be promoted by procedures that we would classify as forms of *enhancements*. For example, it might be possible to perform interventions that enhance the immune system. And if we agree that providing children with immunization is a good thing, shouldn't we say the same thing about enhancements of the immune system?

HUMAN NATURE

Another argument runs as follows: Genetic enhancements are always wrong because they change the human form, or "the core of human nature." The latter claim seems true; using somatic therapy for enhancement purposes changes the cells of people, and germline therapy changes their DNA. Assuming that the "form" of human beings is defined in bio-

logical terms, it would follow that enhancements alter our form.

Problem #1: It seems that the same can be said about aforementioned *therapies*. But in that case, we no longer get the result that all enhancements are wrong and all therapies are morally ok.

Problem #2: Even this point aside, is it always wrong to change our form? First, what is our form?

- (a) certain physical traits and abilities, such as an opposable thumb, bipedalism, etc.
- (b) certain psychosocial traits and abilities, such as cognition, language, emotional responses, sociality, etc.
- (c) certain phylogenetic traits, such as membership in the biological species *Homo Sapiens*.

Second, why would it be wrong to change our form, so understood? That depends on what makes something wrong.

Utilitarianism

On utilitarianism, something is morally right if it brings about the greatest amount of *happiness*, and minimizes unhappiness, and wrong otherwise.

Does it follow from utilitarianism that changing our form is always morally wrong? No. For example, enhancements that improve our immune system, altruistic tendencies, etc., would qualify as morally permissible. Enhancements that made people mean—if such an intervention can even be called an ‘enhancement’!—would be morally wrong.

So, on utilitarianism, some enhancements would be morally OK, other enhancements would be morally wrong.

Kantianism

According to Kant, things that violate *human autonomy and dignity* are wrong.

Does it follow from this that changing our form is always morally wrong? No. Improving our immune system would probably qualify as morally permissible. On the other hand, creating a race of slaves would probably qualify as morally impermissible—although it’s unclear whether such a project could be included under the heading of ‘enhancements.’

So, on Kantianism, some enhancements would be morally OK, other enhancements would be morally wrong.

THE RIGHTS OF THE UNBORN

But perhaps enhancements are wrong because they violate the rights of the unborn. Here are some candidates:

- (a) *Enhancements violate the informed consent of the unborn child.*
This seems strange since this right can be exercised—and often is—by competent adults (i.e., the parents) acting in the best interests of the child. Why shouldn’t we be able to do the same in the context of enhancement?
- (b) *Enhancements violate the unborn child’s right to a germline that has not been manipulated.*
What kind of ‘right’ is this? For most children, being born with a genome that predisposes them to health and a wide range of opportunities is more important than being born with a genome that has not been manipulated.
- (c) *Enhancements violate the unborn child’s right to an open future.*
This does not seem true. Granted, some enhancements would seem to deny the child a right to an open future (e.g., if parents design their child to be extremely tall, in the hopes that he will become a basketball player), but equally many enhancements would seem to *augment* a child’s right to an open future (e.g., by way of a stronger immune system).

EUGENICS

Some people might want to argue that enhancements are wrong because they constitute a form of eugenics.

Parental Eugenics

Occurs every time parents select mates or sperm or egg donors. Is this kind of eugenics really troubling?

State-sponsored Eugenics

This seems more troubling, and the burden of proof would be on those who defend some form of state-sponsored program to defend it.