**Abstract**

Scientific and technological developments may permit the development of genetic enhancement technology – that is, deliberate intervention changing the genetic structure of the fetus in order to create enhanced qualities and capabilities. The type of intervention I address is germ-line intervention, in which the changes are inherited by future generations.

Given the possible future development of genetic enhancement technology, it is important to consider various moral aspects of this technology and to examine its moral value. Some thinkers believe that such a discussion requires the formulation of a specific ethical definition for genetic enhancement. Diverse ethical definitions can be found in the literature, each reflecting a particular ethical approach. An example is the perception that the examination of the moral value of enhancement should be distinct from the examination of the moral value of treatment.

The main problem inherent in the adoption of an ethical definition is that the selection of any such definition confines the moral discussion to certain types of enhancement. It is reasonable to assume that forms of enhancement not included in the definition nevertheless require moral examination. In order to ensure that the moral discussion encompasses diverse types of enhancement, it is better to refrain from adopting a single definition embodying a specific ethical approach. By way of example, adopting a definition based on increasing personal wellbeing excludes from the moral discussion all those types of enhancement that do not leads to the increase of wellbeing, even if they have considerable moral impact.

In the moral discussion on genetic enhancement, some argue that this technology is absolutely improper in moral terms, quoting various moral objections. However, a review of many critiques of these objections leads to the conclusion that the act of enhancement is not substantively improper. For example, a common objection is based on the assumption that humans must not alter nature: since genetic enhancement changes human nature, it is morally improper. However, an examination of this objection leads to the conclusion that there is no moral justification that can support this assumption. Human nature includes undesirable characteristics, and accordingly there is no reason to prohibit the altering of these characteristics.

If the objections to genetic enhancement are sufficient to disqualify this technology, it accordingly has an absolutely negative moral value and there is no room for further moral discussion. However, since the objections are not sufficient for this purpose, we must examine the moral value of the technology. As noted, genetic enhancement refers to prior intervention in the genetic system. Since this intervention both precedes and influences the psychology and personality of its object, the obvious question is whether the act of genetic enhancement creates a new human identity, while without it a different identity would have been created.

The question as to whether genetic enhancement creates a new identity is of considerable relevance to the examination of its moral value. The prevailing moral intuition is that an action has positive or negative moral value depending on the extent to which it benefits or harms a particular individual. It thus follows that an action that created the person’s identity has no moral value, since the individual could not have existed without that action, and the individual’s condition is neither worsened nor improved as the result thereof. Accordingly, if the act of genetic enhancement creates a new identity, it has no moral value.

There are those who argue that the above-mentioned moral intuition does not apply in all instances, since moral intuition also established that actions that create identity also have moral value. The desire to formulate a position reflecting moral intuition in all instances leads to the creation of diverse moral approaches arguing that moral identity is also to be attributed to actions that create identity. However, the various moral justifications supporting these approaches are not morally intuitive, and accordingly their adoption is unjustified.

Thus, by way of example, the impersonal approach argues that the moral value of an action depends on the manner and extent of its positive or negative influence on the status quo in the world in a manner that is not dependent on any specific person – not even the person who is the object of the said action. Accordingly to the impersonal approach, therefore, it is also possible to attribute moral value to actions that create identity. The problem is that the manner in which this approach justifies the attribution of moral value to actions is determined in a way that is not dependent on humans, and accordingly is not morally intuitive.

The approach that remains faithful to moral intuition is the narrow personal approach. This approach does not permit the attribution of moral value to actions that create a new identity. However, the justification as to why actions that create identity lack moral value is faithful to moral intuition, and accordingly this is the justifiable approach. Indeed, the idea that actions that create identity have moral value is unfaithful to moral intuition, and accordingly the attempt to defend this idea leads to the formulation of non-intuitive approaches.

Since actions that create identity lack moral value, and since the act of genetic enhancement is undertaken in a manner that influences the creation of a specific personality and psychology, it is important to consider the function of personality and psychology in human identity. If psychology is essential for human identity, then the act of genetic enhancement creates a new identity, and accordingly lacks moral value. Conversely, if psychology is not essential to human identity, the act of genetic enhancement does not create a new identity, and thus ostensibly has moral value. Accordingly, it would seem that the answer regarding moral value of genetic enhancement depends on the approach we adopt regarding human identity. Ostensibly, the adoption of an animalist approach will have certain ramifications, while the adoption of a psychological approach will lead to different ramifications.

Philosophical discussion of human identity includes two principal approaches, each of which reflects a distinct perception regarding the role of psychology in defining identity. According to the psychological approach, psychology is essential to human identity, and we are intrinsically psychological beings. Accordingly, genetic intervention that influences the creation of a new psychology thereby creates identity. Conversely, the animalist approach argues that we are intrinsically a human organism or animal, so that psychology is not essential to our identity. Thus genetic intervention in a fetus does not create a new identity, since it does not create a new organism.

The determination between these approaches is essential in order to answer the question whether genetic enhancement creates new identity. However, an examination of the different arguments in favor of these approaches leads to the conclusion that these approaches are based on distinct intuitions. In certain cases the psychological approach is intuitive, while in others the animalist approach is. The different arguments in favor of these approaches do not permit a determination to be made. Accordingly, we cannot answer the question whether genetic enhancement creates a new identity.

Although it is essential to determine between these approaches in order to answer the question whether genetic enhancement creates a new identity, it is not essential to do so in order to answer the question regarding the moral value of this technology. As mentioned, accordingly to the psychological approach, the act of genetic enhancement lacks value, since it creates a new identity. However, even if we accept the animalist position that the act of genetic enhancement does not create a new identity, it will still be correct to argue that it lacks moral value. The reason for this is that an action that does not create a new identity itself lacks moral value, according to a distinct justification. As we noted, the narrow personal approach argues that an action has moral value insofar as it benefits or harms the object of the enhancement. Since even according to animalism the act of enhancement precedes and influences the creation of psychology and personality, the evaluation by the object of the enhancement of his/her characteristics in itself depends on the characteristics created by enhancement. The individual never experienced a reality of different characteristics, and accordingly cannot evaluate reality as beneficial or harmful.

Although the act of genetic enhancement lacks moral value according to both the psychological and the animalist approaches, these approaches lead to distinct justifications as to why the action lacks moral value. On the one hand, the response that genetic enhancement lacks moral value is sufficient in ethical and practical terms. On the other, the question of the moral value of the act of genetic enhancement motivated me to examine whether a metaphysical inquiry may enable us to determine between the psychological and the animalist approach, and hence to answer the question as to why genetic enhancement lacks moral value.

The metaphysics of identity includes two central and opposed approaches. The three-dimensional approach reflects the intuitive perception that every object in reality exists in entirety at any moment in time. Conversely, the four-dimensional approach, which is not intuitive, argues that the object has a presence in time similar to its presence in space: at any point in time, a certain temporal part of the object exists, and a certain collection of such temporal parts creates an object.

The adoption of the three-dimensional approach does not enable us to determine between the psychological and the animalist approach. Conversely, the adoption of the four-dimensional approach allows us to determine that both the approaches we are examining are correct in metaphysical terms, so that we can then determine by means of moral and practical justifications which approach is relevant in any given instance. This study shows that, in the case of genetic enhancement, psychology is an important aspect in moral terms, and accordingly the psychological approach is justified in this instance.

The determination between the three-dimensional and the four-dimensional approach is possible through an exploration of temporal metaphysics. In temporal metaphysics, according to approach A time is transient, while according to approach B time is not transient and all times exist. Although approach A is faithful to human temporal reality, a number of arguments prove that approach A leads to a contradiction, and accordingly we should prefer approach B.

Approach B is inconsistent with the three-dimensional approach, which argues that every object exists in its entirety at one moment in time. Accordingly to approach B, an object exists at different moments in time. It is impossible that the object in its entirety exists at every one of the different moments in time, since an object that exists in its entirety in one moment cannot do so in additional moments. Accordingly, we should adopt the four-dimensional approach.

The discussion of the ethical aspect, combined with the discussion of the metaphysical aspect, enables us to provide a complete answer to the question regarding the moral value of genetic enhancement. Having adopted the four-dimensional approach, we may then adopt the psychological approach, which is justified in the case of genetic enhancement. Accordingly, the act of genetic enhancement lacks moral value since it creates a new identity.