

TWO CONCEPTS OF DIGNITY FOR HUMANS AND NON-HUMAN ORGANISMS IN THE CONTEXT OF GENETIC ENGINEERING *

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ABSTRACT. The 1992 incorporation of an article by referendum in the Swiss Constitution mandating that the federal government issue regulations on the use of genetic material that take into account the dignity of nonhuman organism raises philosophical questions about how we should understand what is meant by “the dignity of nonhuman animals,” and about what sort of moral demands arise from recognizing this dignity with respect to their genetic engineering. The first step in determining what is meant is to clarify the difference between dignity when applied to humans and when applied to nonhumans. Several conceptions of human dignity should be rejected in favor of a fourth conception: the right not to be degraded. This right implies that those who have it have the cognitive capacities that are prerequisite for self-respect. In the case of nonhuman organisms that lack this capacity, respecting their dignity requires the recognition that their inherent value, which is tied to their abilities to pursue their own good, be respected. This value is not absolute, as it is in the case of humans, so it does not prohibit breeding manipulations that make organisms more useful to humans. But it does restrict morally how sentient animals can be used. In regard to genetic engineering, this conception requires that animals be allowed the uninhibited development of species specific functions, a position shared by Holland and Attfield, as opposed to the Original Purpose conception proposed by Fox and the Integrity of the Genetic Make-up position proposed by Rolston. The inherent value conception of dignity, as here defended, is what is meant in the Swiss Constitution article.

KEY WORDS: dignity, Swiss Constitution, nonhuman inherent value, genetic engineering

In a Swiss referendum on May 17th, 1992, a majority of voters enacted a constitutional article (“24novies”). This was included in a long specific legal footnote with the appropriate abbreviations, which presented the general guidelines for the legal regulation of gene technologies and reproductive medicine. Paragraph 3 of this article pertains to the domain of non-human living beings and states:

The federal government shall issue regulations on the use of the genetic material of animals, plants, and other organisms. It thereby shall take into account, the dignity of non-human organisms “*die Würde der Kreatur*” as well as the safety of human beings, animals, and the environment, and shall protect the genetic diversity of animal and plant species.

* This paper is a slightly revised version of a paper that had been published in German in 1998 (“*Menschenwürde vs. Würde der Kreatur*,” Freiburg i.Br.).



This discussion about the concept of the dignity of non-human organisms¹ will raise a series of questions in need of a thorough philosophical examination. To begin,

- (1) How is the concept, the dignity of non-human organisms, to be understood?
- (2) Which moral demands arise out of the notion of the dignity of non-human organisms with respect to their genetic engineering?

I. THE MINIMAL CONCEPTION OF INHERENT HUMAN DIGNITY

We all know the concept of human dignity. And one might think that the concept of the dignity of non-human organisms is just an extension of the concept of human dignity.² But we do not think that this is the case. The dignity of non-human organisms has a meaning that needs to be determined independently of the concept of human dignity. This is the claim we will defend in this section.

Even though the idea of inherent human dignity has found a home in the constitutions of many countries and in many international treaties in our century, the majority of theories in contemporary ethics do not make any use of it.³ Some authors even plead that the concept should be entirely given up, on the grounds that assuming free will is incompatible with a scientific world-view.⁴ Others hold the idea to be indispensable, while at the same time maintaining that human dignity is an “indefinable, simple quality,” which cannot be deduced from “mere grounds of rationality.”⁵

To us, both of these viewpoints appear to be untenable. The latter is unsustainable simply on the grounds that the retention of an indefinable legal term would unacceptably lead to arbitrary interpretations in the

¹ This is our translation of the German word “Kreatur.” The word “Kreatur” has theological connotations which we think should be avoided because a constitution in a secular society has to be acceptable to non-religious citizens as well.

² Cf. Praetorius and Saladin (1996) and Sitter-Liver (1995).

³ Bedau (1992, p. 156) called the concept of human dignity the “*terra incognita*” of contemporary philosophy. Countries that have the concept of human dignity anchored in their constitutions include Germany, Greece, Ireland, Italy, Canada, Portugal, Switzerland, Sweden, and Spain. The concept does not appear in the constitution of the United States of America, but is referred to by the Supreme Court in connection with the first, fourth, sixth, eighth, and fourteenth Amendments. See Meyer (1992, p. 3).

⁴ See Skinner (1972) and Bayertz (1996a). For an introduction to the contemporary discussion of the question of the existence of a free will, see Kane (1996).

⁵ See Spaemann (1987, p. 297) and Praetorius and Saladin (1996, p. 29).

courts. We hold the former to be inadequate because it is possible to formulate a minimal conception of the idea of human dignity without making use of the controversial assumption of free will. The concept is also consistent with deep-seated moral intuitions, and it is compatible with most ethical theories. Before we introduce this minimal conception, we would like briefly to turn our attention to three alternative conceptions of inherent human dignity. These conceptions play a major role in contemporary discussions. Our goal is to expose their shortcomings.

1. *Three Inadequate Conceptions of Inherent Human Dignity*

(i) *The Kantian Conception*

The conception that has had the most lasting impression (especially within the German speaking world) on contemporary understanding of human dignity is due to Immanuel Kant. Kant understood the inherent dignity of human beings as a value that can only be ascribed to those who have the ability to act rationally and morally. Kant referred to this ability as “autonomy” or “humanity.” He called living organisms that were autonomous in this way “persons.”⁶ The dignity of a person is characterized by Kant as an “incomparable value,” or as an “end” or an “end in-itself.”⁷ When Kant wrote that the respect for the dignity of a person means that “this [person] should never be used merely as a means, but always also as an end in-itself,” he meant that a person’s dignity can only be respected if and only if her autonomy is treated as an “incomparable value.”

What Kant wanted to say was more than simply that dignity, as the value of autonomy, cannot be “traded-off” against other values (such as freedom, standard of living, beauty, etc.). According to Kant, even a small infringement on a person’s dignity cannot be compensated for by some large amount of another value. For example, an infringement on the dignity of a person, through brainwashing, cannot be justified even if it were to raise the national living standard. However, if only “trade-offs” with other values were concerned, then the possibility that a loss of dignity by one person could be compensated for by a gain of dignity by another could not be ruled out. For example, it is conceivable that the autonomy of one person may be sacrificed, if thereby the autonomy of ten people could be maintained. Yet according to Kant, that which has dignity “has no equivalent.” By this he meant that dignity cannot be compensated for by any

⁶ Kant specialists dispute whether or not Kant held the opinion that non-autonomous human beings, i.e., children or the mentally disabled, lack inherent human dignity.

⁷ Kant ([1785] BA 79, 80), *Groundwork of the Metaphysic of Morals*: H. J. Pattons translation (1964), Harper and Row Publishers.

value, not even an increase in the dignity of others.⁸ Not only does dignity fail to permit “trade-offs” with other values, it does not allow for any “trade-offs” whatsoever. Kant’s perspective presents the inherent dignity of human beings, and their corresponding autonomy, as an infinite value. This is his justification for the claim that the dignity of ten people does not count more than that of a single individual’s.

At first glance, it appears plausible that the dignity of a human being cannot be weighed against the dignity of other human beings, and is incomparable with other values. We are not prepared to sacrifice a human being’s dignity in order to increase our freedom or our standard of living. Such actions would treat human beings as a means to an end, which we consider to be morally reprehensible. However, upon closer inspection, the thesis proves to be problematic. We do not act as if human life (our own as well as other’s) has an infinite value that cannot be compared to other goods.⁹ This becomes especially clear when we consider how we act toward risks. We knowingly accept certain life-threatening risks, provided that they confer enough advantages. For example, one might support the construction of a hydroelectric dam, even in light of the fact that if the dam is breached it could cause the death of many people. In such cases, an implicit “trade-off” between the value of human life and other values takes place. If human life were actually infinitely valuable to us, we would not be prepared to take the risk just mentioned.¹⁰ Thus, the dignity of a human being does not appear to have an infinite value in every case. In fact, the value of human life is often weighed against other values.¹¹ As we do not perceive of the construction of a dam itself as an infringement on human dignity, the Kantian conception of human dignity seems to be too restrictive.

⁸ Kant ([1785] BA 79).

⁹ It would not fit our well-considered intuitions to say that it would be morally wrong to act in ways that do not implicitly assign human lives an infinite value.

¹⁰ In some situations, we certainly do grant human life an infinite value. In situations where the life of a personal acquaintance must be sacrificed, we look upon it as immoral to make such trade-offs. To us, it does not appear necessary to define the term “human dignity” along specifications of calculated risks, as is reminiscent of Schöne-Seifert (1990, p. 472). This runs the risk that human beings would have dignity in certain situations but not in others, which conflicts with our common understanding of human dignity, through which the dignity of every human being is granted regardless of their actions or other such contingent conditions.

¹¹ This does not mean that the value of human life can be measured in monetary value, as Perret (1992) suggests. In our opinion, money is not a medium adequate for the expression of the value of a human being.

(ii) *Human Dignity and the Ability to Claim Moral Rights*

In contrast to Kant, the majority of contemporary authors stress a close connection between inherent human dignity and specific (moral and legal) rights, and thus follow the United Nations Declaration on Human Rights, in which it is stated that: “all men are born equal and free in dignity and rights.”¹² There is, however, no consensus about how to understand the relationship between human dignity and these rights.

Joel Feinberg, an American philosopher of law and ethics, defends the view that inherent human dignity rests on rights insofar as only those who have rights can claim these rights. Human dignity exists in the ability to claim rights. He writes,

... it is claiming that gives rights their special moral significance ... Having rights enable us “to stand up like men,” to look others in the eye, and to feel in some fundamental way the equal of anyone ... What is called “human dignity” may simply be the recognizable capacity to assert claims. To respect a person, then, or to think of him as possessed of human dignity, simply is to think of him as a potential maker of claims.¹³

If inherent human dignity exists in the ability to make claims about rights, it follows that human beings that do not have this ability, i.e. small children or the mentally disabled, also lack inherent human dignity. However, this is counter-intuitive¹⁴ and clearly conflicts directly with the UN Declaration on Human Rights on the inherent dignity of all human beings.¹⁵

(iii) *Human Dignity as a Group of Moral Rights*

Dieter Birnbacher has suggested that human dignity should be equated with a group of four “inalienable rights;” namely, (i) with the right of “provision of the biologically necessary means of existence,” (ii) the right of “freedom from strong and continued pain,” (iii) the right of “minimal liberty,” and (iv) the right of “minimal self-respect.” Accordingly, to respect inherent human dignity means “to respect certain minimal rights owned by its bearer irrespective of considerations of achievement, merit, quality, and owned even by those who themselves do not respect this minimal right to others.”¹⁶ Birnbacher’s conception has the advantage that it avoids the difficulties of Feinberg’s suggestion. However, upon closer examination, it becomes questionable whether or not what Birnbacher

¹² Cited from Gewirth (1992, p. 10).

¹³ Feinberg (1980, p. 151).

¹⁴ That is to say, it does not fit our well-considered intuitions to say that small children and mentally disabled people do not have an inherent human dignity.

¹⁵ See Gewirth (1992, p. 11f).

¹⁶ Birnbacher (1996, p. 110).

identifies as an infringement on human dignity is correctly identified as such.

Let us take torture and poverty as two paradigmatic cases of infringements on human dignity. According to Birnbacher's view, in these cases, human dignity is degraded in two different ways. In the case of torture, human dignity is violated because it violates the right to freedom from extreme and lasting pain. As for poverty, human dignity is violated because the right to self-subsistence (e.g., access to basic, essential goods such as food, clothing, shelter, basic medical treatment, etc.) is undermined.¹⁷ But Birnbacher misses the point that all cases in which we are intuitively inclined to speak of a violation of human dignity share a common characteristic: Someone is degraded and debased to some extreme extent. Torture is a paradigmatic case of the violation of human dignity, not because of the fact that the victim suffers excruciating pain, but rather because she is degraded by it. (The degradation of victims seems to belong to the essence of torture). In the same way, it seems that the real reason that we hold extreme poverty to be degrading is not because of the fact that some essential goods are lacking. Rather, it is because of the fact that living in the absence of these goods is degrading.

2. *Human Dignity as the Right Not to be Degraded*

From our perspective, it seems more plausible to support another conception of human dignity. From the above-cited paradigmatic examples of a violation of dignity, a minimal common conception of the idea of human dignity can be ascertained. This minimal conception can be summed up as follows. *Human dignity is something that can be infringed upon when a person is degraded.*¹⁸ Through such degradation, a physical good is not somehow damaged. Rather, a claim right is neglected. When we grant a person dignity, we grant them the moral right not to be degraded. What we are granting to others, contrary to Feinberg, is not the capability of demanding rights, but rather, we are granting the right to be treated by others in a certain way, or the right to lead a certain kind of life.

This raises the question: What does it mean to be degraded? The concept of degradation can best be elucidated with the aid of the concept of *self-respect*. Someone is degraded if they find themselves in circumstances within which they can no longer respect themselves. Another person can bring about these circumstances, or they may be structurally determined by outside circumstances. An example of circumstances caused by another is poverty. A person who lives in poverty and is forced to eat garbage is an

¹⁷ See Birnbacher (1996, p. 111).

¹⁸ See Parent (1992).

example of degradation that can result from structural conditions. In this context, we speak of debasing circumstances, or circumstances that are undignified for human beings.

Here the question arises as to whether or not self-respect is bound to an objective standard.¹⁹ If answered affirmatively, then it follows that a person can respect one's-self without having reasons for doing so. A point in favor of this view is that we assess the circumstances of our lives, or the behavior of others, as degrading, even if the person in question maintains their self-respect. On the other hand, one can also conceive of self-respect as a psychological state that may or may not be present. On this view, there is no unjustified self-respect. In this context, the question as to which of these conceptions of self-respect is favorable shall be left open.

What is important for our context is the following. Organisms can only have self-respect if they possess a practical self-understanding. One must have some understanding of one's aspirations and desires and of how one wishes to be treated (Of course, it is not necessary to have a completely formulated life plan. It is sufficient that individuals can reflect upon their own desires). This presupposes certain cognitive capacities. These capacities include at least the following: self-consciousness, and the capacities necessary for a normative self-understanding, i.e. the ability to judge and understand one's situation. Without such a practical self-understanding, one could not judge one's actions or assess what is happening as debasing or unacceptable.

When we examine these requirements for the condition of self-respect, it becomes clear that not all human beings are capable of such self-respect. (Consequently, they cannot be degraded). Young children have not developed the required relation to themselves. Those who are mentally challenged may have completely lost this capacity or may have never possessed it. Does this mean that these people should not be ascribed human dignity?

This would indeed be the case if there were no reasons for granting such individuals the moral right not to be degraded.²⁰ However, there are reasons to ascribe all human beings an inherent human dignity at birth. This suggestion arises out of social-psychological considerations. We feel

¹⁹ See Massey (1983).

²⁰ One could object here that when talking of a moral right, we are talking about something that by definition cannot be ascribed to someone. Human beings have moral rights independent of whether or not they are granted them by a contingent social and judicial agreement. It is true that moral rights are not ascribed through actual social or judicial procedures. Moral rights differ from judicial rights because they possess a validity that is independent of their recognition. When we talk above of moral rights, we mean an ascription in a philosophical context.

some special connection to young children and the mentally challenged. It seems obvious that a line should be drawn here, because it is very difficult practically to handle a norm concerning the dignity of human beings that is based on the capacity of having self-respect. The capacity of self-respect is a gradually developing phenomenon. That is why it is impossible to determine whether or not a human being has a practical self-understanding. It is certainly so that there will be very many cases in which it will not be clear. However, which human beings are granted dignity, and which are not, should be clarified.²¹

In this context, it is helpful to remember the difference between our suggestion and that of Feinberg. As we have seen, Feinberg identifies human dignity with the capability to claim human dignity, while we place it on the same level as a moral right. There is no reason to ascribe a capacity to someone who does not have it. Accordingly, young children and the mentally challenged would not have human dignity in Feinberg's conception. In our conception, there are good reasons to grant the moral right not to be degraded even to those who cannot be degraded.

II. THE DIGNITY OF NON-HUMAN ORGANISMS AS AN INHERENT VALUE

Bearing in mind the previously outlined minimal conception, if non-human beings are to be granted human dignity, then they must at least have those cognitive capacities that are prerequisites for self-respect. In particular, they must have self-consciousness. In today's ethological research, whether any other organisms other than human beings have self-awareness is still under dispute. Ethological findings (such as experiments with mirrors and studies on communication, e.g., learning sign language) provide some reasons for believing that the larger primates (Chimpanzee, Bonobo, Gorilla, and Orangutan) have some perception of their individuality. This means that it is also appropriate to ascribe self-awareness to larger primates.²² Even if this were the case, and larger primates are self-aware, it would still be questionable as to whether it would make sense to speak of degrading or debasing a Chimpanzee or a Gorilla. This is because a degradation or debasement would only be present if the chimpanzee also

²¹ That we should assign human dignity to all human beings does not render the minimal concept of human dignity a practical one. The special feelings we have towards our fellow creatures do have their own moral weight. Special relations are – as we think – grounds for moral value and obligations.

²² A very careful examination of this point can be found in Cheney and Seyfarth (1990). See also Patterson and Gordon (1993).

had some conception of how it should live. It is highly unlikely that such a self-awareness, which may indeed be present in a Chimpanzee, can be tied to such a normative conception of its own individuality or personhood.²³ Even in its minimal conception, the idea of inherent human dignity seems to be applicable only to human beings.²⁴

While this minimal conception of human dignity raises a question about whether or not it should be granted to apes,²⁵ raising such a question about organisms that do not have self-awareness would be fruitless. Obviously, it cannot be applied to organisms that lack mental states altogether such as plants and microorganisms. Since the constitutional article also ascribes an inherent value to organisms that lack self-awareness, the concept of the dignity of non-human organisms needs to be distinguished from the concept of the dignity of human beings and given an independent definition. A plausible way of deciding how the content should be defined within a limited bio-centric framework could be to grant non-human organisms an inherent value.

The conception of the dignity of a non-human organism seems to assume that we are morally accountable to them *for their own sake*. The motivation for this last expression is that plants and animals are not objects of moral actions because they are useful and pleasing to us. We should be accountable to these organisms independently of the value that they have for human beings and other organisms. With regard to plants and animals, we should behave morally on their behalf. Correspondingly, it is not wrong to fell an apple tree because it is held to be aesthetically valuable by human beings, or even because we can eat the fruits. The tree should not be cut down for its own sake.

Those who share this intuition with the authors of the Swiss constitution face a problem: why are we morally accountable to living beings and not to machines or other natural entities such as stones and meteors? A plausible answer to this question will be presented in three steps. The answer starts with the assumption that organisms, plants, and animals can be described as beings that (i) have their own good, that (ii) pursue individual goals, and that (iii) can be described as organic units.

²³ Even the protocols of Gorillas and Bonobo's communication does not lead to this conclusion. Here see Patterson and Gordon (1983).

²⁴ Actions that injure non-human beings can of course infringe upon human dignity. One could say that animal abusers degrade themselves through their own actions, and thus infringe upon their own dignity. This is the course that Rust (1994) takes. It seems questionable to us whether this method of granting dignity to non-human beings can be justified.

²⁵ A possible extension of the conception of human rights is supported by the so-called "Great Ape Project." See Cavalieri and Singer (1993), as well as Cavalieri (1996).

Concerning (i): Microorganisms and plants do not appear to be capable of subjective sense perception. Thus, we cannot speak of the subjective well-being of microorganisms, fungi, or plants. Even so, we can speak about a fungus or a plant as being in a good or bad condition. In this manner, in such a situation, we can talk about something as being good for such organisms. For example, it is good for a plant to be watered, and bad for a beetle to be stepped on. Phenomenon such as wilting and rotting demonstrate that a plant can be ascribed its own good. Concerning animals, we can speak of sickness, behavioral disorder, and maladjustment. Even of the smallest microorganism, one can ask whether or not it is properly functioning as a member of its kind. As opposed to this, it does not make sense to say that it would be bad for a stone to be broken. Concerning (ii): Of course, one could also ascribe such an own good to a machine, as it may rust, and fall into such a bad condition that it is unable to perform its function properly.²⁶ However, machines exist only to fulfill certain purposes for which human beings have designed them. They do not have ends in-themselves. This is the second point made by biocentric ethicists. When speaking of living beings, we can say that they have their own ends. The internal functions and the outside behavior of a living being are set up in such a way that it can survive, adapt, and reproduce. Each living being “struggles” to keep itself alive, and “tries,” in its own unique way, to protect its own interests, to increase its well-being, to reach its goals, or to fulfill its purpose.

Concerning (iii): In addition to the demarcation between machines and living beings, a further distinction is necessary. One can even say that individual organs, such as the heart or the liver, are in good condition, and that they too are pursuing specific ends.²⁷ Nevertheless, there is a relevant difference between an organ and an organism. Organisms are organic entities that exist as individuals.²⁸ A liver or a heart is only part of an individual or organic unity. Their specific tasks are only a partial function of the entire organism. They do not have their own good.

In contrast to material objects, every organism, from a microorganism to a complex mammal, possesses its own good. When talking about being accountable to plants and organisms, it can only be with respect to their

²⁶ One could object that mineralogists know what is good or bad for a crystal (J. CL. Wolf, 1997: 59). But it is questionable as to whether “the good” here refers to something other than the fulfilment of a goal set by the mineralogists, say for example an aesthetic desire. A personal standpoint, and thereby a personal good, can only be ascribed to things that are alive.

²⁷ See Sumner (1996, p. 76).

²⁸ Ant or bee colonies and eco-systems do not count as organic units in this sense. Even in an ant colony, individual ants follow personal “goals.”

individual good. This individual good is what the “inherent value” of living creatures is based upon.²⁹

Considering the above distinction between machines and living beings, one might suppose that when human beings breed animals or grow plants, they infringe upon their inherent value.³⁰ Animals are bred to meet human goals. However, it is important to realize that there are two different points with respect to animals and plants that are bred or crossed. First, they function according to the ends that have been set for them by human beings (if they give enough milk, lay eggs, bear tasty kiwis, etc.); and second, as individual living organisms, they can be in good condition *pertaining to their own ends* (if they are healthy, grow well, etc.). Even organisms that have been bred by human beings, or have been produced by some other means, deserve to be ascribed an inherent value that exists independently of the purpose for which the organism has been bred. The inherent value of plants and animals that have been bred or transgenetically engineered is not simply cancelled out just because they have been shaped to meet human needs and desires.³¹ They still maintain their own dignity.

If one examines the dignity of non-human organisms independently from human dignity, the following two reasons for ascribing all living beings an inherent value are close at hand. First, such an ascription rests on the rejection of a purely subjective conception of well-being. A purely subjectivist position clashes with widespread intuitions. For example, one can imagine the following scenario. It could become possible, through the use of drugs or breeding techniques, that living beings are better capable of tolerating increasingly restrictive living conditions without stress or suffering. A purely subjectivist position could not morally condemn this.

²⁹ Prominent supporters of this position are the environmental ethicist Paul Taylor (1986) and the animal ethicist Tom Reagan (1984). See also Westra (1989, and 1994, ch. 3).

³⁰ If one were tempted to claim that the inherent value of a being would be cancelled out if one is created by someone else in order to fulfill someone's goals, one would arrive at other argumentative difficulties. The belief that God created human beings, would then raise the question as to whether or not human beings should be granted their own independent value. Sumner (1996, p. 76) writes: “Suppose, as many people seem to believe, that all living things were created by some deity for some obscure purpose of her own. In that case, do none of us have a good of our own?”

³¹ Robin Attfield (1995, p. 205) also comes to the same conclusion. He also emphasizes that the creation of living beings for human purposes, and an instrumental attitude towards animals, does not automatically have the repercussion that their dignity is being infringed upon. While it is obvious that transgenic manipulation essentially involves an instrumental attitude to animals, it does not invariably involve a neglect or subversion of what might be regarded as the implicit ends that as a result of evolution are embedded in their ways of life.”

However, this is counter-intuitive. Even in the case of animals, it is sensible to make the transition from a perspective that *only* concentrates on suffering, to one that takes their quality of life into account. Second, if more than mere subjective sensations count, then there are no reasons for ascribing moral status only to organisms that are capable of having sensations. It seems advisable to extend the application of “inherent value” to those organisms of which one can sensibly speak of their quality of life. Of course, both of these assumptions need a justification. Nevertheless, they present *prima facie* plausible possibilities for explaining and partially justifying the ascription of an inherent value, and thus dignity, to all living beings, and only to living beings. Restricting the ascription of inherent value to some, but not all living beings, cannot be maintained given this background. All living beings ought to be ascribed the inherent value of dignity.

This inherent value reminds human beings that we always have to respect living beings when interacting with them, and that they also have their own good, and thereby are ascribed their own value. In order to take into account the inherent value, i.e., dignity, of a living being, an organism should not be seen only as a means, but should be recognized as a being with its own good. In the case of some living beings that are capable of having sensations, it probably demands that we are accountable to the organism’s subjective well-being as well. The inherent value and their own good is to be taken into consideration in the case of all living beings, including those that are not capable of sensation. *The conception of an inherent value corresponds with what the constitution intended through the use of the idea of “the dignity of organisms.”*

Even if all living beings are ascribed an inherent value, or a dignity, this value can be weighed against the value of other goods.³² That living beings possess an inherent value does not mean that they have an absolute value. Only absolute values cannot be weighed against other values. One could perhaps conjecture that the constitution wanted to ascribe an absolute value to living beings with the expression “the dignity of non-human organisms.” However, this hardly seems plausible, because such a position would have practical consequences that no one would be prepared to accept. For example, the consumption of plants would then be morally prohibited. Biocentric positions, that ascribe non-human living beings an inherent value or “dignity,” do not exclude the possibility of weighing goods against one another. Praetorius and Saladin go too far when they write that interference with the dignity of non-human organisms can only

³² See Schweizer and Saladin (1995, p. 64).

follow, “when the existence of (human beings) otherwise is threatened.”³³ Their attempt to merge the weight of the dignity of non-human organisms with the weight of human dignity is unjustified. Due to the completely distinct contents of these two concepts, as well as their independent philosophical foundations, the moral weight cannot be transferred simply by analogy from human dignity to the dignity of non-human organisms.³⁴

That is why it does not necessarily follow that “practices such as large-scale animal husbandry and meat consumption, having pets . . . manipulating animals and plants” should be placed in question in light of the dignity of non-human organisms. This would only be the case, if the dignity of non-human organisms had a weight that is comparable to human dignity. If this is not the case, then having such far-reaching consequences does not follow from the concept of inherent value. All the same, we are inclined to think that certain practices of large-scale animal husbandry and certain forms of hobby animal husbandry infringe upon the dignity of non-human organisms. It is important, however, that such infringements upon dignity are determined by clear criteria and not just asserted in an *ad hoc* manner.

That all living beings are ascribed an inherent value does not mean that all organisms possess the same inherent value. It would remain in line with the concept of the dignity of non-human organisms that a chimpanzee would be ascribed a higher inherent value than a blade of grass, or a rose a higher value than a mold. Such a hierarchical conception of inherent value fits better with our well-considered intuitions than the egalitarian conception does. The grounds on which the criteria for this hierarchy can be established must be left open here.

III. THE DIGNITY OF NON-HUMAN ORGANISMS AND GENETIC ENGINEERING

We have already mentioned above that the discussion of the dignity of non-human organisms pertains to individual living organisms. For this reason, the protection of the environment, or the genetic variety of animal and plant species, are independent from the moral demands linked with the dignity of non-human organisms. An infringement upon dignity is the violation of the dignity of individual plants and animals.³⁵ This follows from the idea that such individual living beings have their own good.

³³ Praetorius and Saladin (1996, p. 44ff.).

³⁴ *Ibid.*

³⁵ In the discussions about gene technology, many arguments that make reference to species and individuals are easily confused. For more on this topic, see Rollin (1995).

But what exactly does having your own good mean? Let us consider three proposals that have been put forward. We will attempt to show that only the last one survives critical scrutiny.

1. *The Dignity of Non-Human Organisms and the Original Purpose of the Species*

According to the first position, the inherent value of a living being is preserved when it is capable of developing into a typical representative of its species. Its own good would then refer to certain species specific traits that should distinguish the individual as a member of its species.³⁶ It is the purpose of all living beings to develop their species-specific traits. Thus, we have moral reasons to respect the species-specific traits of all individual living beings.

This proposal has two difficulties. The first difficulty concerns the practical consequences that would follow from this position. It is hardly the “original purpose” of a sheep to be herded, sheared, and eaten by people. If one were to assume an “end purpose” for animals, one would have to speak out against every human interaction with animals, and specifically against animal husbandry.³⁷ A contemporary sheep does not live according to the standards of wild sheep. Animal husbandry violates their inherent value. It is morally irrelevant that animal husbandry, as opposed to genetic engineering, has been carried out for longer periods of time, and that it is a long, drawn-out method. The motive of a breeder who wants to alter a sheep collides with the principle that every individual should live according to the standards of the original purpose of the species. As soon as one draws attention to the length of the breeding process in order to limit the moral doubts of genetic engineering, one actually leaves this first position and posits a different evaluative standard. Genetic engineering leads to a stronger alteration of the phenotype than breeding, and it is questionable as to whether or not such alterations can be morally justified. But if this is the basis of the traditional distinction between animal husbandry and genetic engineering, then we are not talking about changes to species specific traits. We are concerned much more with an assessment of the

³⁶ Fox (1990) goes in this direction. A version of this teleological theory is presented by Sitter-Liver (1995, p. 361). He says that organisms strive for a “condition of fulfillment.” Praetorius and Saladin (1996, p. 44) say there are “certain species specific life forms which constitutes its own non-comparable teleological constitution.”

³⁷ One could of course say that domesticated sheep make up a different species, where the species specific purpose is different from those of the original sheep in the wild. However, then every kind of breeding would be allowed, because by every new race a new purpose would be present. Either all of the alterations by human beings would be allowed, or all of the alterations would be morally questionable.

phenotype. With this, we would already be at the third position that has yet to be introduced. We should emphasize here that what is important is not the connection between two different positions. The distinctive moral judgements about animal husbandry and genetic engineering can only be justified if one holds the second or third position.³⁸

There is a second difficulty: It always remains questionable as to what exactly this unchanging nature of a species, this “original purpose” of a living being is supposed to be. In order to be able to support the idea of an inherent value that makes reference to species specific functions, one would have to give an acceptable answer as to what the appropriate standards for species X are supposed to be. What function should an insect of the kind Y fulfil? Do specific behavioral patterns and environmental circumstances also need to be accounted for when we describe the special function of a species? It would be difficult to deal with all the relevant variables and the highly adaptive capabilities of living beings. Consider a fox that has adapted itself to a human environment. Does this fox live a good life according to the standards of its species?

These two difficulties attempt to avoid the second answer to the question of how the own good of an individual living being is to be determined.

2. The Dignity of Non-Human Organisms and the Integrity of the Genetic Make-Up

Holmes Rolston III assumes that in a secular conception of the Aristotelian theory, which is satisfactory from the perspective of contemporary natural science, the genetic make-up of a being corresponds to what Aristotle called telos.³⁹ We can speak of an organism’s well-being when its individual genetic material develops to maturity. This position, which finds reverberations in public opinion about the integrity of the genetic make-up, does not morally prohibit animal husbandry. Rather, it prohibits the production of transgenic animals. After all, breeders do not change the individual genetic material or inherent value of an organism. They simply choose the parent animals from whose genes the individual genetic make up is composed. Genetic engineering is different. Here, an existing genetic make-up is changed through technical intervention. The production of transgenic living beings principally collides with that of the dignity of

³⁸ The moral intuitions that are reflected in the writings of some critics of genetic engineering (such as Koechlin and Amman 1995) do not allow themselves to be reconciled with the talk of an original purpose.

³⁹ See Rolston (1988, pp. 98ff). The reference to Aristotle can be found more explicitly in Rolston (1992, p. 79).

animals. It must be made clear that this is not a violation of the species limits, rather it is an infringement upon the individual dignity of the living being itself. Peter Saladin must be making reference to this position when he writes, “that human alteration of the genomes of ‘non-human organisms’ detracts from their dignity.”⁴⁰ If this were the case, the only way to maintain this viewpoint would be to place the own good of an individual organism equal to the integrity of the genome. However, this position also contains grave disadvantages.

First of all, the genetic reductionism of this position must be examined. That the identification of the own good of a living being with genetic integrity is problematic is obvious as soon as one casts a glance at complex animals or humans beings. Mankind cannot be reduced to its own genetic material. Our specific histories and cultures form our individuality and identity. The genome is not such a “soul” that encompasses the heart of one’s own individuality and identity. Rather, the genome is only one of many conditions that influence our individuality. A reductionistic view is also incorrect with respect to other living beings. Animals, and even plants, are not simply expressions of their genes. Their environment can form even their individuality. Higher animals demonstrate that their individuality is partly formed by both experience and their primitive cultures. A reduction of the idea of having its own good to the integrity and development of a genome is rather implausible.

The difficulty with this position becomes obvious when one bears in mind that an individual’s genetic material can be damaged and develop into a phenotype that brings the individual pain and suffering.⁴¹ According to Holmes Rolston’s theory, something must be good when such a damaged genome develops. And it would be an infringement on the dignity of a being, if the damage were repaired by means of interfering with the gene pool. It is nonetheless hardly plausible that it could be morally right to accept a development that negatively effects the well-being or quality of life of the being concerned. The identification of individual good and the integrity of this good are confusing for this reason. The own good of an individual being always refers to that phenotype that develops out of the genome.

⁴⁰ Saladin (1995, p. 369). See also Praetorius and Saladin (1996, p. 94).

⁴¹ See Dobson (1995, p. 233). Dobson suggests that Rolston’s fundamentalist position should be complimented by a limitation, that the genome should develop normally. However, with this he already evokes other normative standards. If a genome were the telos of an individual, it should always be allowed to develop itself.

3. *The Uninhibited Development of Species Specific Functions*

On the other hand, the third position has advantages that are advocated, for example, by the philosophers Alan Holland⁴² and Robin Attfield.⁴³ They relate the own good of living beings to those functions and operations that a member of the species can *normally* perform. A reduction or limitation of capabilities infringes on the good of a being and detracts from its quality of life. This occurs independently of its ability to feel the difference. This third position is not concerned with whether a sheep lives a life as a sheep is supposed to live. It is not concerned with a species specific being, or with setting a goal that complies with its species' kind.⁴⁴ It is concerned that a sheep can perform those functions that a sheep or related mammals can normally perform (e.g. growth, reproduction, motion, or their social capacities). Accordingly, an infringement of this function would interfere with the good of the living being. This would, for instance, be the case if one were to tear the wings off a fly, allow roses to wilt, or sever the tendons of a horse.

Animal husbandry, according to this position, does not principally impair the dignity of non-human organisms. Animal husbandry would only be morally problematic when the living being concerned were unable to perform its normal functions (for example when it causes birth defects, or bodily damage). Animal husbandry is a violation of the dignity of non-human organisms if it produces a deficient animal (e.g., an animal with only one leg), or where the outcome causes suffering (e.g., a pig that is too fat to walk).

Which concrete practical consequences follow from the concept of the dignity of non-human organisms for genetic engineering? The production of transgenic plants and animals, by itself, does not represent an infringement of the dignity of non-human organisms. Whether such an infringement is present or not would have to be determined in view of (expected or empirically demonstrated) phenotypes of the transgenic plants and animals. Thereafter, whether this infringement on the dignity of non-human organisms can be justified in the face of other relevant moral considerations would still have to be considered. Let us take a closer look at the problem by examining a few of the examples that dominate public discussions.

⁴² See Holland (1990).

⁴³ See Attfield (1995).

⁴⁴ It therefore does not presuppose a teleological view of nature. Put in this way, when we talk about the functions and operations a member of a species normally performs, we do not assume that non-human beings have – as Aristotle thought – a telos.

There are pigs that have been mutated to produce human growth hormones. This practice violates the dignity of non-human organisms, and in view of the current “successes” in traditional pig husbandry, we see no reason how this could be justified.

The dignity of Tracy the sheep, who produces the pharmaceutical product Alpha-1-Antitrypsin (AAT) in her milk, need not be in any way infringed upon. What is morally relevant is only that Tracy can live out her normal functioning, (e.g., be able to move, grow, reproduce, and live together with other sheep). That she was created for some other purpose is irrelevant. Even if a being is created primarily for a certain end, it does not mean, to stress this once again, that its inherent value has been neglected or injured. Using Tracy for human purposes does not impair her dignity.

It is more difficult to judge whether or not the dignity of a trout that has been engineered to be extremely large would be respected. *If it is the case*, in contrast to pigs, that no great limitation on any function results, that their sense perceptions, body movements, etc., remain unharmed, then one would hardly speak of an infringement upon dignity. If the living conditions, feeding, and methods of slaughtering are adapted to its larger size, then there appears to be no impairment of its inherent value. An increased size, by itself, is not an impairment of the inherent value of the trout. Giant trout can perform all of the functions that they can normally perform. Their own good is preserved. Here we would contradict the Ethical Studies Commission’s report, which in the case of giant trout found “such a high level of infringement upon dignity, and correspondingly of the integrity of the animals,” and concluded “that in such a case the application of genetic engineering cannot be ethical legitimized.”⁴⁵ It is difficult to understand why the Commission sees a grave infringement of dignity in this case. Perhaps this strict ruling could have been based on an aesthetic judgement. However, this aesthetic judgement is not grounded on the inherent value of the living beings concerned. In order to save “the dignity of non-human organisms” from becoming an empty rhetorical formula, the ascription of an infringement on dignity can depend neither on such aesthetic judgements, nor on expressions of uneasiness in the face of innovations. Here we see the danger that the dignity of non-human organisms could become a declamatory formula, if there are no indisputable criteria supporting it. Given plausible criteria for the assessment of the quality of life of giant trout, it seems to us that no infringement upon dignity is present. This is not to say that other morally relevant reasons, such as the protection of the species, could count against the production of such giant trout.⁴⁶

⁴⁵ Bericht der Ethik-Studienkommission (1995, p. 34).

⁴⁶ For more on these considerations, see Mayer (1995, pp. 127ff.).

As long as a plant's resistance to herbicides does not hinder its growth and reproduction, there is no infringement upon its dignity. Of course, even here, there could be other morally relevant considerations (such as the protection of the species, or the protection of bio-diversity) that could count against the production of such herbicide resistant plants.

All in all, one must realize that in the field of genetic engineering, the criteria for the dignity of non-human organisms are more likely to be relevant to transgenic animals than to plants or microorganisms. Given the release of transgenic plants or microorganisms into the environment, the public discussion is properly focused on an assessment of the risks concerning the protection of health, species diversity, and environment.⁴⁷

If one applies the concept of the dignity of non-human organisms, as it is stated in the Constitution, to plants, then the focus shifts away from the mutations that are brought about by genetic engineering toward certain "side effects" of traditional cultivation methods. If, for instance, cell-cloning leads to mutations that cause sterility or premature leaf loss, one must then, if one follows our results, speak of an infringement on the dignity of non-human organisms. It is necessary to have reasonable grounds to carry out such a program. In view of the hierarchical bio-centric position, that is expressed in the idea of the dignity of non-human organisms, human desire for aesthetic decoration, or better tasting food products might easily outweigh their inherent value.

A violation of the dignity of a non-human organism is then present (microorganisms, plants, or animals), if its own individual good is infringed upon. This is the case if the living being is hindered in performing those functions and capabilities that members of the species can normally perform. Whether the good of a plant or of an animal is preserved in this manner is a question that has to be decided on an individual basis, by competent botanists, zoologist, or veterinarians. If a violation of an individual's good is present, one must ask, in each case, whether or not this violation can be justified by other morally relevant considerations. The idea of a dignity of non-human organisms does not prohibit weighing goods against each other, as it is understood in animal testing commissions, or commissions for biological safety.

Genetic alteration of the genetic make-up of animals and plants is not necessarily a violation of their dignity. It is even possible that genetic engineering is morally demanded, provided that the inherent value of a living being would thereby be increased. But any genetic engineering opens the possibility that a violation of the dignity of the organism may

⁴⁷ For an overall view of ethical discussions about the genetic engineering of microorganisms and plants, see Reiss and Straughan (1996, chs. 5–6).

take place. Especially in the case of animals, genetic engineering, as compared to traditional breeding methods, generates the great danger that this is the case.

REFERENCES

- Attfield, R., "Genetic Engineering: Can Unnatural Kinds be Wronged?" in P. Wheale and R. McNally (eds.), *Animal Genetic Engineering: Of Pigs, Oncomice and Men* (Pluto Press, London, 1995), pp. 201–210.
- Bayertz, K., "Human Dignity: Philosophical Origin and Scientific Erosion of an Idea," in K. Bayertz (ed.), *Sanctity of Life and Human Dignity* (Kluwer, Dordrecht, 1996), pp. 73–90.
- Bedau, H. A., "The Eighth Amendment, Dignity, and the Death Penalty," in M. J. Meyer and W. A. Parent (eds.), *The Constitution of Rights. Human Dignity and American Values* (Cornell University Press, Ithaca, 1992), pp. 145–177.
- Birnbacher, D., "Ambiguities in the Concept of Menschenwürde," in K. Bayertz (ed.), *Sanctity of Life and Human Dignity* (Kluwer, Dordrecht 1996), pp. 107–122.
- Bericht der Ethik-Studienkommission des Eidgenössischen Volkswirtschaftsdepartements zur Gentechnologie im ausserhumanen Bereich* (Bern, 1995).
- Cavalieri, P. and P. Singer (eds.), *The Great Ape Project. Equality Beyond Humanity* (Fourth Estate, London, 1993).
- Cavalieri, P., "Etica and Animal: Special Issue Devoted to the Great Ape Project," *Etica and Animali* 8 (1996).
- Cheney, D. L. and R. M. Seyfarth, *How Monkeys See the World. Inside the Mind of Another Species* (University of Chicago Press, Chicago, 1990).
- Dobson, A., "Biocentrism and Genetic Engineering," *Environmental Values* 4 (1995), 227–239.
- Feinberg, J., "The Nature and Value of Rights," in Feinberg, *Rights, Justice, and the Bounds of Liberty* (Princeton University Press, Princeton, 1980), pp. 143–158.
- Fox, M., "Transgenic Animals: Ethical and Animal Welfare Concerns," in P. Wheale and R. McNally (eds.), *The Bio Revolution, Cornucopia or Pandora's Box?* (Pluto Press, London, 1990).
- Gewirth, A., "Human Dignity as the Basis of Rights," in M. Meyer and W. A. Parent (eds.), *The Constitution of Rights. Human Dignity and American Values* (Cornell University Press, Ithaca, 1992), pp. 10–28.
- Holland, A., "The Biotic Community: A Philosophical Critique of Genetic Engineering," in P. Wheale and R. McNally (eds.), *The Bio Revolution, Cornucopia or Pandora's Box* (Pluto Press, London, 1990), pp. 166–174.
- Kant, I., *Groundwork of the Metaphysics of Morals* (translated by H. J. Patton, 1964) (Harper and Row Publishers, London, 1785).
- Kane, R., *The Significance of Free Will* (Oxford University Press, New York, 1996).
- Massey, St., "Is Self-Respect a Moral or a Psychological Concept?" *Ethics* 93 (1983), 246–241.
- Mayer, S., "Environmental Threats of Transgenic Technology," in P. Wheale and R. McNally (eds.), *Animal Genetic Engineering: Of Pigs, Oncomice and Men* (Pluto Press, London, 1995), pp. 125–132.
- Meyer, M., "Introduction," in M. Meyer and W. A. Parent (eds.), *The Constitution of Rights. Human Dignity and American Values* (Cornell University Press, Ithaca, 1992), pp. 1–9.

- Parent, W. A., "Constitutional Values and Human Dignity," in M. Meyer and W. A. Parent (eds.), *The Constitution of Rights. Human Dignity and American Values* (Cornell University Press, Ithaca, 1992), pp. 47–72.
- Patterson, F. and W. Gordon, "The Case for the Personhood of Gorillas," in P. Cavalieri and P. Singer (eds.), *The Great Ape Project. Equality beyond Humanity* (Fourth Estate, London, 1993), pp. 58–79.
- Perret, R. W., "Valuing Lives," *Bioethics* 6 (1992), 185–200.
- Praetorius, I. and P. Saladin, *Die Würde der Kreatur (Art. 24 novies Abs.3 BV)*. Schriftenreihe Umwelt Nr. 260 (Bern: BUWAL, Bern, 1996).
- Regan, T., *The Case for Animal Rights* (Routledge and Kegan, London, 1983).
- Reiss, M. R. Straughan, *Improving Nature? The Science and Ethics of Genetic Engineering* (Cambridge University Press, Cambridge, 1996).
- Rollin, B. E., *The Frankenstein Syndrome. Ethical and Social Issues in the Genetic Engineering of Animals* (Cambridge University Press, Cambridge, 1995).
- Rolston, H. III, *Environmental Ethics* (Temple University Press, Philadelphia, 1988).
- Rolston, H. III, "Environmental Ethics: Values in and Duties to the Natural World," in F. Bormann and S. Kellert (eds.), *Ecology, Economics, Ethics* (Yale University Press, New Haven, 1992), pp. 73–96.
- Rust, A., *Transgene Tiere. Überlegungen aus ethischer Perspektive* (Gen Suisse, Bern, 1994).
- Schöne-Seifert, B., "Philosophische Überlegungen zu 'Menschenwürde' und Fortpflanzungsmedizin," *Zeitschrift für philosophische Forschung* 44 (1990), 442–473.
- Schweizer, R. P. Saladin, "Kommentar zu Art. 24novies," in J. F. Aubert et al. (eds.), *Kommentar zur Bundesverfassung der Schweizerischen Eidgenossenschaft* (Helbling and Lichtenhahn, Basel, 1995).
- Sitter-Liver, B., "Würde der Kreatur. Grundlegung, Bedeutung, Funktion eines neuen Verfassungsprinzips," in J. Nida-Rümelin and D. von der Pfordten (eds.), *Ökologische Ethik und Rechtstheorie* (Nomos Verlagsgesellschaft, Baden-Baden, 1996), pp. 355–364.
- Skinner, B. F., *Beyond Freedom and Dignity* (Jonathan Cape, London, 1972).
- Spaemann, R., "Über den Begriff der Menschenwürde," in E. Böckenförde and R. Spaemann (eds.), *Menschenrechte und Menschenwürde* (Klett-Cotta, Stuttgart, 1987), pp. 295–313.
- Sumner, L. W., *Welfare, Happiness, and Ethics* (Clarendon Press, Oxford, 1996).
- Taylor, P. W., *Respect for Nature* (Princeton University Press, Princeton, 1986).
- Westra, L., "'Respect,' 'Dignity' and 'Integrity': An Environmental Proposal for Ethics," *Epistemologia* 12 (1989), 91–123.
- Westra, L., *An Environmental Proposal for Ethics. The Principle of Integrity* (Rowman and Littlefield, Lanham, 1994).
- Wolf, J.-C., "Die Würde der menschlichen Zygote," in H. Ganthaler and O. Neumaier (eds.), *Anfang und Ende des Lebens* (Academia, Sankt Augustin, 1997), pp. 37–71.

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