Abstract

Christopher Grau argues that the genetic basis for moral agency account of rightholding is problematic because it fails to grant all human beings the moral status of rightholding; it grants the status of rightholding to entities that do not intuitively deserve such status; and it assumes that the genetic basis for moral agency has intrinsic/final value, but the genetic basis for moral agency only has instrumental value. Grau also argues that those who are inclined to hold that all human beings are rightholders should reconsider speciesism. In this paper, I argue that Grau’s objections do not undermine the genetic basis for moral agency account of rightholding, and I also offer criticisms of Grau’s defense of speciesism.

Keywords

moral status; moral standing; personhood; moral agency; speciesism; intrinsic value; instrumental value; rightholding
In “The Basis of Human Moral Status,” I argued that virtually all human beings are rightholders because virtually all human beings have the genetic basis for moral agency, and having the genetic basis for moral agency is sufficient for one to be a rightholder.¹ As I explained, an advantage of this account of rightholding is that it allows virtually all human beings to be rightholders without being speciesist, because the genetic basis for moral agency is an identifiable, physical attribute that non-human entities can also possess. In fact, I argued that if some super artificial intelligent beings were made up of non-genetic, that is, non-carbon-based, isomorphic material, but they still possessed something functionally similar to the genetic basis for moral agency, they would also be rightholders, given that they have the physical basis for the development of moral agency, or, the physical basis for moral agency, for short, even if they did not have the genetic basis for moral agency. In other words, in my view, if an entity has the physical basis for moral agency, then the entity is a rightholder, whether the physical basis is genetic or something else. Nevertheless, since most living things that we know are genetic-based life forms, to keep things simple, I called this the genetic basis for moral agency account of rightholding – henceforth, the genetic account.

In “Moral Status, Speciesism, and Liao’s Genetic Account,”² Christopher Grau offers three objections to the genetic account:

1) It fails to grant all human beings the moral status of rightholding.

2) It grants the status of rightholding to entities that do not intuitively deserve such status.

3) It assumes that the genetic basis for moral agency has intrinsic/final value, but the genetic basis for moral agency only has instrumental value.

After presenting these objections, Grau then proposes that those who are sympathetic to the idea that all human beings are rightholders should reconsider the speciesist option. In this paper, I shall explain why Grau’s objections do not undermine the genetic account. I shall also question Grau’s speciesist option.

1. Virtually all human beings vs. All Human Beings

In my article, I said that:

It might be necessary to concede that there is a theoretical possibility that a human being could lack the genetic basis for moral agency, even if all present cases of deletions are not cases in which human beings lack this basis. In particular, owing to advances in genetic engineering, someone might be able to create such an individual artificially.³

I did not fully concede this point because, as I explained in the paper, “it could be questioned whether such an individual would be a human being at all. This raises the difficult issue of what makes a being human, and whether the genetic basis for moral agency is an essential human property.”⁴ To elaborate, presumably, the genes for moral agency are not just some minor genes such as the genes for toe nails. Indeed, the genes for moral agency may be necessary for the development of a brain generally, and/or for the various capacities necessary for moral agency such as rationality and empathy. Given this, suppose someone tried to create a human being without the genetic basis for moral agency. The resulting entity, if it could survive at all, may turn out to be one without a brain and/or one without the capacities for rationality and empathy.

In such a case, would the resulting entity still be a human being? It is not obvious that it would be. And if such an entity were not a human being, then it would not be necessary for me to concede that there could be human beings who lack the genetic basis for moral agency. Moreover, even though I was skeptical that there could be human beings who lack the genetic basis for moral agency, I argued that even if we accepted this possibility, we can still conclude that for practical purposes, virtually all living human beings we are likely to encounter will have the genetic basis for moral agency.

In his discussion, Grau doesn’t consider whether an entity could lack the genetic basis for moral agency and still be a human being. He simply assumes that this could be the case and he makes four points against the genetic account:

a) “[Liao’s] approach does not justify attributing the status of rightholder to [human beings who lack the genetic basis for moral agency]” (389).

b) Liao “admits it is possible that there really are such human beings: for example, it is an open question whether some cases of anencephaly have the sort of genetic cause that also affects the genes necessary for moral agency” (389).

c) “[Liao] does not deny that there could be cases of severe retardation caused by damage to the genetic basis for moral agency” (389).

d) Liao’s approach gives the wrong answer regarding the Betsy case (390-391). (I shall explain what this case is below.)

Let me discuss each point in turn.

a) is ambiguous. Grau could mean that on the genetic account, human beings who lack the genetic basis for moral agency would not be rightholders, or he could mean that the genetic account is silent on whether these individuals are rightholders. The former would be false,
because, as Grau is aware, the genetic account offers only a sufficient condition for rightholding; it does not offer a necessary condition for rightholding. Indeed, I explicitly said that “suppose it were possible to genetically engineer a being to lack just one gene for the genetic basis for moral agency and still to be human, although this human being would not have the genetic basis for moral agency, this human being could still be a rightholder on other grounds.” So it is not true that these individuals could not be rightholders, supposing that the genetic account were true. If by a), Grau means instead the latter, namely, that the genetic account is silent on whether these individuals are rightholders, this just restates what I have said is an implication of my view and therefore does not constitute an objection, or at least a new objection.

b) rests on a misunderstanding. What I said in footnote 19 of my article, which Grau cites, is that “it is an open question whether anencephaly even has a genetic cause” (my italics). In other words, I was questioning whether anencephaly has a genetic cause at all. To elaborate, what we know about anencephaly is that it is mostly caused by environmental factors such as folic acid deficiency; undiagnosed diabetes; hypervitaminosis A; high temperatures of 102 degrees or higher for more than 5 hours; anticonvulsant medication, especially valporic acid (valporate); or environmental/chemical exposure. Scientists know that some genetic disorders such as Waardenburg syndrome seem to have a higher incidence of anencephaly (they seem to share the pax3 gene mutation, which controls some aspects of the development of the face and inner ear). But this is far from claiming that anencephaly has a genetic cause. If it is not even clear that anencephaly has a genetic cause, obviously it would be even less clear that anencephaly is the result of a defect of the genes that make up moral agency. So, contrary to

what Grau has said, I did not admit that it is possible that there really are such human beings or that anencephaly is an instance of them.

Likewise, c) is a misinterpretation of my view. I questioned specifically whether there are actual cases of severe retardation caused by damage to the genetic basis for moral agency. I did so by distinguishing between genetic defects of the genes that make up moral agency and genetic defects that undermine the development of moral agency, and arguing that actual cases of severe retardation are of the latter kind rather than of the former kind. Here Grau also says that

[Liao] points out that many genetic defects are caused by the mutation of a single gene, and there is the implication that since only one gene is involved, the chances of the genetic material responsible for moral agency being damaged are slim (389).

This is also a misinterpretation. My argument isn’t that because only one gene is involved, the chances of the genetic material responsible for moral agency’s being damaged are slim. Instead, my argument is that in these cases, the brain tissues had developed normally and would have continued to do so except for the abnormal build-up of certain amino acids. Indeed, many of these cases can be treated if one offers the treatment early enough. Given this, I argued that the defect is one that undermines the development of moral agency rather than a defect in the genes that make up moral agency.

In response to this distinction, Grau says that:

I worry that Liao moves too quickly in generalizing here. It may be that some single-gene genetic defects are such that a human possessing them can develop normally if given early treatment, but it just doesn’t follow that we should thus presume (as he does) that all single-gene defects ought to thus be classified as cases in which the development of

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moral agency is “undermined” rather than prevented due to damage to the relevant genes (390).

But I did not presume that all single-gene defects are cases in which the development of moral agency is “undermined” rather than prevented owing to damage to the relevant genes. This is an empirical matter and requires further empirical investigation. What I did (and still do) think is that given my distinction, and given that many single-gene defects are cases in which human beings can develop normally if given early treatment, the onus is on others to show that a particular genetic defect is a defect in the genetic basis for moral agency rather than a defect that undermines its development.

d) Grau argues that my approach gives the wrong answer to the Betsy case. Let me quote Grau’s description of this case in full:

[D]ue to your being exposed to a new and dangerous type of radiation, your child (let’s call her Betsy) suffers from a genetic disorder that has left her alive and conscious but with a level of intelligence that falls well below what is necessary for ever exercising moral agency. This disorder is new, very rare and not well understood, but the doctors, having performed many tests, assure you that, though your child’s genetic damage does permanently undermine her capacity for moral agency, the damaged genetic material is not among the material that makes up “the genetic basis for moral agency.” As a Liaoian, you breathe a sigh of relief, confident that your child is in fact deserving of the moral status we extend to most humans. However, imagine that several months later the doctor calls back: there’s been a terrible mix up, and your child’s test results were swapped with those of another severely disabled child. It turns out that your child does as a matter of
fact suffer from genetic damage to the relevant portion of the genome responsible for moral agency, for she is missing a single highly relevant gene. (“Sorry honey, the new results are in, and it turns out Betsy may not be a rightholder after all!”) (390-391).

Grau argues that “Surely there is a problem with any account of moral status that could (even just theoretically) put you in this position” (391).

Five remarks are in order. First, I fail to see how the case of Betsy is substantively any different from the case I discussed in my article in which someone genetically engineers a human being to lack the genetic basis for moral agency.

Secondly, Grau simply assumes that there could be human beings who lack the genetic basis for moral agency. But, as I argued earlier, this is a questionable assumption. Grau casually mentions that Betsy is missing a ‘single highly relevant gene.’ However, this missing gene is not just a gene for toe nails. It is a gene for moral agency, which means that it may be needed for the development of a brain generally, and/or for the various capacities necessary for moral agency such as rationality and empathy. Importantly, this missing gene may also be sufficient to make it the case that Betsy is not a human being, despite her resembling one. If Betsy turns out not to be a human being, then the case of Betsy would not be one in which a human being lacks the genetic basis for moral agency, but rather, one in which an entity resembles a human being and lacks the genetic basis for moral agency.

Thirdly, whether Betsy is a human being who lacks the genetic basis for moral agency, or an entity that resembles a human being and that lacks the genetic basis for moral agency, as I have said, the genetic account offers only a sufficient condition for rightholding; it does not offer a necessary condition for rightholding. So, even on the genetic account, Betsy could still be a rightholder on other grounds.
In a footnote, Grau criticizes my responding that the genetic account offers only a sufficient condition for rightholding. He writes:

Liao would presumably protest at this point that he’s only offering a sufficient condition, and perhaps some other condition could be introduced that would cover Betsy as a rightholder on different grounds. Perhaps, but until Liao offers a plausible account of such a condition (and that would need to be an account which does not, in the process, make his “genetic” condition for rightholder status appear redundant and thus toothless), the story of Betsy provides a significant challenge to the plausibility of Liao’s approach (391, footnote 4).

Grau does not explain why if I do not ‘offer a plausible account’ to explain Betsy’s moral status, the plausibility of the genetic account would be challenged. In any case, without repeating the arguments above of why the case of Betsy does not undermine the genetic account, here it is useful to point out that at the end of his article, Grau says that “a sensible speciesist will follow Liao’s lead and grant that species membership should best be understood as simply a sufficient, but not a necessary condition for the relevant sort of moral status.” This raises the question of why it is a problem for me to respond that the genetic account offers only a sufficient condition for rightholding, but it is not a problem for Grau to respond that his speciesist approach offers only a sufficient condition for rightholding.

Fourth, Grau argues that ‘there is a problem with any account of moral status that could (even just theoretically) put you in’ Betsy’s parent’s position, but what Grau fails to realize is that he faces a similar problem. Consider the case of Carin:
Owing to your being exposed to a new and dangerous type of radiation, your child (let’s call her Carin) suffers from a genetic disorder that has left her alive and conscious but with a level of intelligence that falls well below what is necessary for ever exercising moral agency. This disorder is new, very rare and not well understood, but the doctors, having performed many tests, assure you that, though your child’s genetic damage does permanently undermine her capacity for moral agency, the damaged genetic material is not among the material that disqualifies her from being a member of the human species. As a Grauian, you breathe a sigh of relief, confident that your child is in fact deserving of the moral status we extend to most humans. However, imagine that several months later the doctor calls back: there’s been a terrible mix up, and your child’s test results were swapped with those of another severely disabled child. It turns out that your child does as a matter of fact suffer from genetic damage to the relevant portion of the genome responsible for her being a member of the human species, for she is missing a single highly relevant gene. (“Sorry honey, the new results are in, and it turns out Carin may not be a rightholder after all!”)

In the case of Carin, one can also follow Grau in arguing that ‘surely there is a problem with any account of moral status that could (even just theoretically) put you in this position.’ In a footnote, Grau mentions that he holds a folk notion of species rather than a scientific notion of species (396). So he might try to argue that on a folk notion, Carin would still be a member of the human species. But Grau needs to say what he means by such a folk notion and how Carin would in fact be a member of the human species on such a notion. Grau may respond instead that his speciesist approach offers only a sufficient condition for rightholding, but not a necessary one. In other words, Grau may say that Carin could still be a rightholder on other
grounds. But this returns us to something I had mentioned earlier, namely, why is it a problem for me to respond that the genetic account offers only a sufficient condition for rightholding, but it is not a problem for Grau to respond that his speciesist approach offers only a sufficient condition for rightholding?

Finally, lest one think that other accounts of rightholding can avoid the case of Betsy, this is not so. For instance, one can easily construct a similar case in which a child appears to have sentience, but the doctor then realizes that the child does not have sentience. The lesson to draw from all this, I think, is that Grau’s case of Betsy proves too much.

2. Aliens and Super Artificial Intelligent Beings vs. Cabbages and Lawnmowers

As I explained earlier, one of the virtues of the genetic account is that it allows non-human entities such as aliens, possibly Great Apes, super artificial intelligent beings, and so on, to be rightholders, if these entities have the physical (usually genetic) basis for moral agency. Indeed, should we one day be able to upload ourselves to some supercomputer, on the genetic account, our moral status could be preserved, if our new, inorganic selves also possess something functionally similar to the genetic basis for moral agency.9

Allowing non-human entities to be rightholders naturally raises the issue of where one draws the line. In my article, I considered someone’s injecting the genes for moral agency into a cabbage, and I asked whether the resulting entity would be a rightholder. I argued that it is important to determine whether these genes are integrated into the cabbage or not. If they are integrated into the cabbage, I argued that the cabbage would no longer be a cabbage, because its nature would have changed. In such a case, the resulting being may be a rightholder if it has the

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genetic basis for moral agency. A real life parallel may be transplanting human genes into a rabbit egg and creating an embryo with human characteristics. Arguably, such an entity may be a rightholder, if it has the genetic basis for moral agency.

Grau tries to put pressure on this aspect of the genetic account by presenting two cases. The first is a variant of the cabbage case in which the genetic basis for moral agency is injected and integrated into a cabbage, but the resulting entity is damaged such that the capacity for moral agency, along with the capacity for sentience and rational agency, is permanently undermined. Grau argues that:

(Like an anencephalic infant that possesses the genetic basis for moral agency, this cabbage would appear to be a rightholder on Liao’s account, even though it lacks both actual moral agency and the potential for moral agency.) While I’m sure intuitions will vary here, I’m also certain that many people will find this exotic, damaged, insentient, rightholding cabbage a rather unhappy consequence of Liao’s theory (392).

The second case involves an artificial lawnmower that has the relevant hardware and software needed to count as “functionally similar” to the genetic basis for moral agency. Grau adds that:

This machine has that hardware and software present and "integrated" but permanently undermined due to damage (like the anencephalic infant). This lawnmower would be a rightholder even though it will forever lack sentience, moral agency, and even the potential for moral agency (393).

According to Grau, in both cases, the genetic account faces unpalatable implications such as the idea that the resulting entities could be morally weightier than, e.g., a turtle (392-393).

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For one thing, the way Grau describes these cases is misleading. As I have said, a
cabbage that has the genetic basis for moral agency integrated into it would no longer be a
cabbage, as its nature would have changed. In such a case, it would be misleading to continue to
call the resulting entity a cabbage. Compare: after transplanting human genes into a rabbit egg
and creating an embryo with human characteristics, it would be misleading to continue to call the
resulting entity a rabbit egg.

Also, Grau has introduced an additional confounding factor into these two cases, namely,
these entities are damaged in a way similar to anencephalic infants. This muddles the issue
because what Grau wants to show is that the genetic account allows strange, non-human entities
to be rightholders. But Grau’s cases are partly playing on the intuition, which some have that
anencephalic infants are not rightholders. If people believe that the entities in Grau’s cases are
not rightholders because they believe that anencephalic infants are not rightholders and these
entities are like anencephalic infants, then the issue with the genetic account for these people
would be that it allows anencephalic infants and anencephalic infant-like entities to be
rightholders. The issue would not be that the genetic account allows strange, non-human
entities to be rightholders.

In fact, as a speciesist, Grau himself believes that anencephalic infants are rightholders.
Given this, it seems disingenuous for him to use cases that play on the intuition that anencephalic
infants are not rightholders.

Finally, once Grau’s cases are described in a less misleading way, i.e., the resulting
entities are no longer called cabbage and lawnmower, respectively; and once the confounding
factor is removed, i.e., these entities are not like anencephalic infants, these cases would
substantively be no different than the case that I have already discussed (in fact, one of them
would be exactly the same as my case). More importantly, it would not seem counterintuitive, at least to me, to hold that these entities could be rightholders and that such entities could be morally weightier than, e.g., a turtle. Compare: it does not seem counterintuitive to me to hold that an alien that has the genetic basis for moral agency or a super artificial intelligent being that has the physical basis for moral agency could be morally weightier than, e.g., a turtle.

3. The Genetic Basis for Moral Agency: Instrumental or Intrinsic Value, or Both?

In my article, I refrained from offering an independent argument for the genetic account. As I explained, there may be no non-circular way of defending any account of rightholding.\textsuperscript{11} Nevertheless, Grau tries to speculate on how I might provide such an independent argument.

According to Grau, “presumably [Liao] thinks that the genetic material relevant for moral agency possesses some sort of intrinsic or final value,” that is, “a sort of value that is not instrumental” (394). Grau argues that if I do not regard the genetic basis for moral agency as having intrinsic/final value, it would be “quite hard to explain why we should grant it the moral importance that [Liao] thinks it deserves” (394).\textsuperscript{12}

Grau then argues that the genetic basis for moral agency must only have instrumental value. According to Grau, to the extent that it is plausible that an appropriately programmed machine could possess the physical basis of moral agency and be a rightholder,


\textsuperscript{12} Grau also says that “Liao has argued forcefully that the genetic material should not simply be valued instrumentally – it is not to be seen as valuable only because it can allow for either actual moral agency or the potential for moral agency. This seems to leave him with the view that the material must be valuable in itself” (394). In fact, I never made the claim that ‘the genetic material should not simply be valued instrumentally’ in this paper. Again, I refrained from offering an independent argument for the genetic account. So I shall ignore this comment.
it is because we naturally think of such a machine as at least potentially capable of *exercising* moral agency: what is valuable about that relevant series of 1s and 0s (embodied in hardware) is that they normally produce moral agency. In other words, that physically-realized stretch of programming code is instrumentally valuable because it normally allows for the entity to possess something that seems valuable in itself: actual moral agency (394-395).

Grau argues that “It seems highly implausible to think that, on top of its obvious instrumental value, that series of code *also* possesses some sort of non-instrumental moral value” (395).

I remain skeptical about whether there can be a non-circular way of defending *any* account of rightholding. So I shall refrain from speculating here on whether the genetic basis for moral agency has intrinsic/final value or instrumental value, or both. What I shall do is explain why Grau’s arguments are suspect.

First, while I am not averse to the idea that the genetic basis for moral agency has some sort of intrinsic/final value, Grau’s reasoning as to why I must think this is not sound. Recall that Grau argues that if I do not think that the genetic basis for moral agency has some sort of intrinsic/final value, it would be ‘quite hard to explain why we should grant it the moral importance that [Liao] thinks it deserves.’ Grau therefore thinks that in order for something to have great moral importance it is plausible to assume that it has intrinsic or final value. But this is false. Many things that are highly morally important have only instrumental value. For instance, water is highly morally important to human beings. Without water, human beings would die. Yet, water only has instrumental value. Same things can be said about air, food, and so on. If this is right, then it is not true that in order for something to have great moral importance it must have intrinsic/final value. It also means that even if it turns out the genetic
basis for moral agency has only instrumental value, it would not follow that it could therefore not have great moral importance.

Secondly, Grau’s argument that the genetic basis for moral agency must only have instrumental value is also questionable. In his example of an appropriately programmed machine that possesses the physical basis of moral agency, Grau argues that the physical basis for moral agency is instrumentally valuable ‘because it normally allows for the entity to possess something that seems valuable in itself: actual moral agency,’ and that ‘it seems highly implausible to think that, on top of its obvious instrumental value, that series of code also possesses some sort of non-instrumental moral value.’ For one thing, Grau seems to think that actual moral agency only has intrinsic/final value. However, not every actual moral agent acts morally. Given this, the value of actual moral agency may in fact be primarily instrumental, namely, it enables some actual moral agents to act morally. More importantly, Grau seems to overlook the fact that something can have both instrumental and intrinsic/final value at the same time. For instance, playing tennis can be an instrumental good (it is good for health) and an intrinsic/final good (it is good for its own sake) at the same time. Given this, even if Grau has shown that the genetic basis for moral agency has instrumental value, he has not shown that it only has instrumental value.

4. Should We Opt for Speciesism?
Grau’s defense of speciesism is brief. So I shall also be brief. According to Grau, speciesism has the following advantages over the genetic account:

i) There are no worries about preventing some humans being such as Betsy from being rightholders (396).

ii) There are no worries about allowing some “exotic cabbages” to be rightholders (396).
iii) Speciesism tracks “something many take to have non-instrumental moral value: membership in the class of human beings” (396).

i) and ii) reiterate the points he has made against the genetic account. So I shall not repeat my arguments of why i) and ii) are not problematic for the genetic account. Regarding iii), as far as I can see, Grau simply asserts that membership in the class of human beings has non-instrumental, i.e., intrinsic/final, value. But why should we believe this? Membership in the class of human beings is not like the parent–child relation, which is typically a relation constituted by love and deep personal relationship. Nor is it like cultural membership, which is typically a relation based on shared values. Indeed, as many have argued, and as Grau is aware, membership in the class of human beings is more like membership in a racial group in being a purely biological relation, i.e., a matter of genealogy, genetics, or capacity for interbreeding, depending on one’s understanding of the concept of a species.13 Given this, it seems that Grau needs to say much more about how membership in the class of human beings has intrinsic/final value, if he wants to argue that it has such value.

Hence, Grau’s objections do not undermine the genetic account and he needs to say much more to motivate the speciesism option. If so, the genetic account remains a real and coherent alternative to present accounts of rightholding.14

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