Can speciesism be a moral illusion?

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Abstract

The Müller-Lyer figure is a famous optical illusion where we think two line segments have different lengths, although the lengths are in fact equal. If our brains generate optical illusions, we might ask ourselves the question whether moral illusions can exist, how we can detect them and what we can learn from them. In this article we argue that speciesism – the difference in moral status between humans and non-human animals – can be seen as an example of a moral illusion, where one intuitive moral judgment is in contradiction with other, stronger intuitions. We present five arguments why the species boundary is not morally relevant, and another five arguments why sentience is morally relevant. Together with anthropological and psychological knowledge, we arrive at a very coherent picture against speciesism. The analogy between this line of reasoning and the method to detect optical illusions is clarified, which implies that speciesism indeed is a moral illusion.

Key words: speciesism, discrimination, optical illusions, moral intuitions, reflective equilibrium

1 Introduction

A lot of people have the intuitive moral judgment that a human has a higher moral status than a non-human animal. But can we really trust this speciesist intuition? In animal ethics, speciesism is often compared to racism and sexism. Still, why is it so difficult to convince people that speciesism is a kind of immoral discrimination? Do our minds fool ourselves and create a moral illusion, in analogy with an optical illusion? In this article I will argue in great detail why speciesism can be considered as a prime example of a moral illusion. I define a moral illusion as a particular intuitive judgment that is in contradiction with a coherent set of stronger intuitive judgments. As far as I am aware, no animal rights ethicist has pointed out this analogy between optical and moral illusions. This new correspondence between optical and moral illusions might help us disentangle moral problems and construct a coherent ethical system based on animal equality.

I first describe the most famous Müller-Lyer optical illusion. Next, I discuss whether moral illusions might exist and propose a method how to detect them. Third, I present some analogies between this Müller-Lyer optical illusion and speciesism. Several coherent arguments are given why speciesism is a kind of discrimination. The analogy between speciesism and the Müller-Lyer illusion will become clear. Finally, I look at correspondences in the underlying psychological mechanisms between both optical and moral illusions. This latter correspondence makes the coherent picture even stronger: it is fair to say that speciesism is a moral illusion.

2 The Müller-Lyer optical illusion

The Müller-Lyer optical illusion (Müller-Lyer, 1889) consists of two horizontal line segments, with inward and outward pointing arrowheads (see figure). The line segment with the outward pointing arrowheads appears smaller than the other line segment. In other words: we intuitively judge the lower horizontal line to be longer than the upper one.
But how do we actually know that this intuition is illusory? This becomes clear when we make all our optical intuitions explicit, because then we find out that this one intuitive judgment about the lengths is in contradiction with two other, stronger intuitions. The first of those stronger intuitions says that a ruler does not change its length when it is shifted. This seems obvious, and it is impossible to give arguments to prove this idea, so therefore it is a basic optical (or geometrical) intuition. This intuition is translated into the very important geometrical principle of translation invariance. A second intuition says that the length of a line segment does not depend on the presence of other lines around. Also this seems obvious and is impossible to proof, so it is an intuition. This intuition is translated into the very important principle of context independence. The arrowheads are the “context”. This principle of context independence is also related to an intuitive aversion of arbitrariness, artificiality and fuzziness. It seems arbitrary to say that the length decreases when the arrowheads are pointed outwards instead of inwards. Introducing such a geometrical rule would seem to be very artificial. And a context dependence often introduces an extra fuzzy factor: what if we gradually open the angles of the arrowheads? How does this influence the lengths of the horizontal lines?

The two principles of translation invariance and context independence imply that we can use instruments: we can use a ruler, or we can use an eraser or something to cover or erase the arrowheads. With these instruments, we can clearly demonstrate that both horizontal lines are equal.

So we now have two options. 1) We can abandon two of our strongest intuitions (translation invariance and context independence) and try to make a consistent geometrical system without those two principles, in order to save our intuition that the line segments are of different length. As mathematicians often invent some very exotic geometrical systems, this strategy is not necessarily impossible. But everyone would agree that such a procedure to invent a new geometrical system would be very difficult at least. 2) We can acknowledge that our intuition about the length of the horizontal lines is wrong; it is an illusion.

I guess most people would prefer the latter option, because the combination of the intuitions of translation invariance and context independence is very strong, and we do not want to dismiss them so easily. So that is why we speak about an optical illusion.

Another clue that it really is an illusion, is some knowledge about the underlying optical mechanism. We know that the Müller-Lyer optical illusion is created by our brains in order to adapt a 2D retinal image to 3D-vision. Two objects of equal physical length can have different images on our retina, if one object is further away from our eyes than the other. Our brains correct for this difference in appearance. So the underlying optical mechanism is a perspective-adaptation. As we live in a 3D-world, our brains are trained to make 3D-adaptations. They’re stuck when looking at a 2D-image such as the Müller-Lyer image.

Finally, we note that the Müller-Lyer illusion is not inborn. Anthropological studies have shown that the illusion depends on culture (Segall, 1963; Ahluwalia, 1978). Some indigenous people (who do not live in an environment with straight edges of houses, tables,…) are less susceptible to this optical illusion. Another part of the evidence that the figure is indeed an illusion.

So we have two principles that cohere with each other, and knowledge about the underlying mechanism. That is quite some evidence to justify the claim that it is an optical illusion.

Figure 1: the Müller-Lyer optical illusion
We also have to keep in mind that illusions are to be distinguished from deceptions (or mistakes). Deceptions simply disappear after we recognize that they are wrong. But illusions have a property of cognitive impenetrability (Pylyshyn, 1999). This means that even after recognizing that the Müller-Lyer figure is an illusion, it still seems that the lower line segment is longer. As this example shows, it is important to keep in mind that this cognitive impenetrability is not a sufficient reason to give an intuition more credibility.

3 Do moral illusions exist?

If optical illusions exist, we might ask ourselves the question whether also moral illusions exist. One way of arguing is that also all kinds of illusions exist in all kinds of cognitive activities, such as empirical sciences, mathematics, grammar, taste evaluations,…. And some of those cognitive activities (e.g. grammar) have interesting resemblances with ethics, as we will point out. For example in natural sciences we might encounter contra-intuitive judgments in e.g. quantum mechanics and relativity theory. In mathematics, too, we encounter erroneous intuitive judgments such as in the famous Monty-Hall problem or the mysterious Banach-Tarski property. In our judgments about taste preferences, there can also be deception (paint a delicious food item with an odorless, tasteless color and cut it in some special shape, and you might judge it to be bad) and illusions. As an example of taste illusions, psychological biases can influence our taste preferences. Taste evaluation is influenced by what we think we eat and whether that food symbolizes values that we endorse. This is demonstrated for vegetarian and meat products in Allen et al. (2008): meat eaters who value dominance and hierarchy, typically preferred a vegetarian sausage when they thought it was meat and gave lower preference to meat when they thought it was vegetarian.

To speculate further, there appears to be an interesting analogy between ethics and grammar. According to Chomsky (1986), people from different countries have an inborn faculty of language in their brains, which means that they have intuitive judgments about the grammatical correctness of a sentence. The analogy between our language faculty and our moral faculty was proposed by John Rawls (1971) and others (Hauser et al. 2008). The language faculty generates intuitive grammatical judgments about the grammatical correctness of sentences, just like the moral faculty generates intuitive moral judgments about the moral goodness of situations. We intuitively see that an act is morally good and a sentence is grammatically correct. And as with morality, it takes some effort to look for the principle or grammatical rule that expresses the specific intuition. So if moral illusions would exist, then also grammatical illusions might exist. A recent study shows that this is indeed the case! (Phillips et al. 2010) A simple example of a grammatical illusion, is a grammatically incorrect sentence such as: “One out of three children are overweight.” This is a violation of a very simple rule of subject-verb agreement, yet such errors are made quite often.

Just as optical and grammatical illusions can learn us a lot about how our visual perception system and our language faculty works, so could we learn a lot about morality by focusing at moral illusions.

4 How do we recognize moral illusions?

If moral illusions exist, how can we detect them? How do we agree whether some moral intuition is an illusion? One might think that with optical illusions matters were easy, because there is an objective reality to refer to. With ethics, we do not have such an objective reality. And if illusions are characterized by a cognitive impenetrability, it makes matters worse for ethics. However, as we have seen in the case of optical illusions, we did not directly rely on an objective reality to argue that it is an illusion. In fact, we used some basic intuitions, such as translation invariance and context independence. As we do not have direct access to an objective reality, these are the principles we have to agree to accept.

In non-naturalistic ethics, we also start from moral intuitions. For example a utilitarian has the intuitions that well-being and impartiality are important. So how to move from here? First, these intuitive moral judgments about particular situations have to be expressed in particular ethical principles. In the next step, these particular ethical principles have to be universalized to all other similar situations. This process of universalization was stressed by Kant (1993) in his universal law formulation of the categorical imperative, as well as by Hare in his universal prescriptivism (1991).
After formulating universal ethical principles, we have to check whether the resulting system has internal consistency. By testing more and more situations, i.e. by looking whether our moral intuitions in all situations agree with the universalized ethical principles, we get a coherent system where different principles mutually support each other. This is the process of reflective equilibrium (Rawls, 1971). If we arrive at a contradiction, i.e. if a moral intuition is incompatible with our coherent set of universalized ethical principles, we can do two things. First, we could try to adapt the system of universal principles, by refining or restating some principles or introducing a new principle that dominates others. If this approach is possible, we arrive at a new reflective equilibrium that is in one sense better because it incorporates more moral intuitions. If this strategy really doesn’t work, then the second option is that our contradictory moral intuition is wrong. Then two things can happen. First the intuition might simply disappear after gaining this new knowledge. This is called a moral mistake or deception. If the intuition persists (i.e. it is cognitively impenetrable), we call this intuition a moral illusion. 

This whole story of universalization and moving towards a coherent reflective equilibrium also happens in other branches of cognitive activity, such as mathematics and science. Consider geometry. Intuitions about geometry are translated into particular principles, such as “This ruler doesn’t change its length if I move it from here to there”. Then those principles are universalized. For example the principle of translation invariance is expressed as: “all rulers keep the same lengths if we translate them in any direction.” This universalization is nothing but the law of induction in the empirical sciences. The resulting universal principles are checked for their consistency. We see that translation invariance and context independence are both mutually consistent principles, and in fact they cohere with each other: they enforce or mutually support each other. So we arrive at a coherent mathematical system of geometry in reflective equilibrium. Then we encounter the Müller-Lyer illustration. We could try to move to a new reflective equilibrium incorporating this new intuition, but that is way too difficult. So we have the tools to demonstrate that it is a cognitively impenetrable illusion. In the Müller-Lyer illusion we had reliable instruments to demonstrate that it is an illusion: we need a measuring stick or something to cover or erase the small arrowheads. In ethics, our reliable instruments are valid arguments. Arguments are valid if they are based on coherent universalized principles that correspond with strong moral intuitions. So, coherence and correspondence with intuitions determine the validity of arguments, and valid arguments are the reliable instruments to demonstrate that a moral intuition is an illusion. 

In summary, we propose that the process of moving from our intuitions towards a system of universalized ethical principles in a coherent reflective equilibrium, is the way to check whether an intuition is an illusion. This is also the process that people have to follow in empirical sciences, mathematics, taste evaluations, grammar,… Furthermore, to answer the question in the title of this section: we can already expect that we might recognize moral illusions by their context dependence, arbitrariness, artificiality or fuzziness. There might be quite a lot of examples of moral illusions, such as futility thinking and projective grouping (Unger, 1996, p.100), intervention myopia (Waldmann & Dieterich, 2007) or the intransitivity problem (Temkin, 1987). To most people, those examples are clearly seen as illusions. In this article we look at a more debated issue, the difference in moral status between humans and non-human sentient beings. This is to most people an intuitive judgment that lies behind all our uses of animals, from factory farms to pet shops. Can this intuition be a persistent moral illusion?

5 Moral illusions and discrimination

We believe that the Müller-Lyer optical illusion is a very pedagogical analogy of some moral illusions involving discrimination. In particular, the famous Müller-Lyer illusion can be used as a representation of speciesism (Ryder, 1975; Singer, 1975; Regan, 1984). The suggested correspondence goes as follows. The upper horizontal line segment with outward pointing arrowheads represents a non-human animal. The lower line segment with inward pointing arrowheads represents a Homo sapiens. The lengths of the horizontal lines can be interpreted as the moral status (intrinsic value). The longer the line segment, the higher the moral status. Intuitively, a lot of people judge that the value of a human is higher than the value of an animal.
The arrowheads represent what we would call morally irrelevant properties (e.g. specific genes, appearance, skin color, having a tail, ...). From racism, we know that skin color is a morally irrelevant property, just as the presence of the arrowheads is irrelevant in determining the length of the horizontal line segments (context independence). But for racists, skin color does influence their intuitive judgments about the treatment of black people.

The geometrical context independence of lengths, and the idea of irrelevant properties (e.g. arrowheads), can refer to a very important notion in ethics: discrimination. For our purposes, a useful definition of discrimination can be given as: Causing harm or disadvantage to an individual by making a value-laden distinction between individuals based on criteria that are not morally relevant in that situation.

If you judge that the two lines in the Müller-Lyer illusion are dissimilar whereas in reality they are equal, then you discriminate. If the lines are in reality dissimilar, then different judgment is not discrimination.

Discrimination, especially in the form of racism, sexism and speciesism, is based on ingroup-outgroup thinking. Although ingroup-outgroup value judgments occur intuitively, several studies (Kurzban et al., 2001; Cosmides et al., 2003) demonstrated that the choice of ingroup-outgroup (e.g. based on race) is not inborn, but is culturally dependent and can be influenced or changed. Also the intuitive value distinction between humans and animals is not universal: not everyone is equally susceptible to this value judgment. Animal rights activists or Jains are examples of people with other value judgments. Also, as we have seen, the Müller-Lyer illusion is not inborn, but can be dependent on culture and environment.

The basic question that we have to ask is: what are morally irrelevant criteria? In particular: is species boundary (or being a *Homo sapiens*) a morally relevant criterion? In the next section we are going to argue that species boundary is morally irrelevant, and that sentence is morally relevant. And we are going to give several arguments for this.

The ten arguments that we are going to present, depend on some intuitions. If those arguments are valid, and if the underlying moral intuitions are strong, we have a situation which is very similar to the situation we faced with the Müller-Lyer illusion. One intuition (the human-animal value difference in ethics or the length difference in geometry) is in contradiction with several other intuitions (e.g. the importance of impartiality in ethics or the context independence in geometry). We have again two options. First, we could abandon all the arguments and their underlying strong moral intuitions. This would save our intuitive judgment about the human-animal value distinction. Or second, we could admit that this value distinction is an illusion, and we can save the stronger and coherent moral intuitions. We believe that the combination of the latter intuitions is stronger than the one intuition about the value of humans versus animals. So the easiest thing to do is to acknowledge that this human-animal value distinction is an ethical illusion, similar to the optical illusion in geometry. This acknowledgment is furthermore acceptable if we keep in mind that the ingroup-outgroup distinction is – just as the Müller-Lyer illusion – not inborn but culturally dependent.

In the next section we give five arguments against the species boundary, and five other arguments in favor of the sentience criterion. One important remark before we present the arguments: we suppose here that the argument from marginal cases is valid (Dombrowski, 1997), and that mentally disabled human orphans have moral status and basic rights. In other words: criteria such as mental capacities, language, self-consciousness, moral consciousness, social bonds... are already excluded and are morally irrelevant. When we refer to humans, we refer to the species *Homo sapiens*.

6 Five arguments against the species boundary

The arguments that we are about to present, are based on a moral intuition: in order to avoid the risk of opportunism in our ethics, we should avoid adding arbitrary, farfetched or fuzzy criteria. These arguments are strongly based on the biological sciences. As Rachels (1990) demonstrated, especially the Darwinian paradigm undermines some metaphysical beliefs about “humanity”.

1) The biological species boundary is arbitrary. Why select “species” from the list of biological categories to which I belong? I belong to the kingdom of animals, the phylum of chordates and vertebrates, the class of mammals, the infraclass of eutheria, the order of primates, the suborder of dry-nosed primates, the infraorder of simians, the superfamily of hominoidea, the family of great apes, the
genus *Homo*, the species *Homo sapiens*, the subspecies *Homo sapiens sapiens* and the ethnic group of whites. There are different genetic affinities. It is arbitrary to pick out the species. Why adding this arbitrariness in our ethics?

2) The biological definition of species is very complicated and too artificial and farfetched to be used in a moral system. One of the many definitions of species refers to the possibility of interbreeding and getting fertile offspring. But why should this possibility be relevant? It is too farfetched to say that a being has a moral status if its close relatives (parents) could have gotten fertile offspring with some other morally relevant beings. (I refer to its close relatives because the individual itself could be infertile.) It is unfair that an individual gets rights because his parents are able to do something with others. It is unjust to take a principle where non-human animals simply have bad luck having the wrong parents…

Related to this is the issue of ring species such as the *Larus* gulls, the *Ensatina* salamanders or the Greenish Warbler. Such ring species consists of different populations, whereby A can get fertile offspring with B, B with C, C with D, but D not anymore with A. Just as populations of ring species are spatially related to each other, we can say that all species in nature are temporally related in a similar way. Look at the phylogenetic tree. A modern *Homo sapiens* could have got fertile offspring with an ancestor, that ancestor with an older ancestor, and so moving up a branch of the phylogenetic tree until we reach a common ancestor of both *Homo sapiens* and another species. Then we move down the phylogenetic branch of that other species. So there is a chain of populations connecting our species to any other species. The clue is that the higher moral status of A (a *Homo sapiens*) compared to D (an individual of another species) strongly depends on the fact that B and C are dead. Formulated this way, it becomes clear that such accidental dependency on the non-existence of individuals cannot be morally relevant.

3) There is a potential fuzzy boundary: it is not unlikely that a human-chimpanzee hybrid (humanzee or chuman) can be born. A lot of mammal species can form interspecies hybrids. We have seen lion-leopards, lion-tigers, camel-lamas, dolphin-killer whales, sheep-goats, grizzly bear-polar bears and off course the well known horse-donkeys (mules). If these are possible, and if the genetic distance between humans and chimpanzees is not larger than the distance between those interbreeding species, it is possible that humanzees can be born. What would the moral status of this hybrid human be? There is an arbitrariness here as well. And what if the Neanderthal people (*Homo neanderthalensis*) would still exist? And what about other ancestors such as the Australophitecus and the *Homo habilis*? And there is more arbitrariness when we look at the possibility of human-animal chimeras. A chimera is an individual composed of genetically distinct cells that originates from human and animal zygotes. The body cells of chimeras can range from 100% human to 100% non-human. Where to draw the line of humanity? What would the moral status of such chimeric individuals be? And we could also genetically modify humans and animals. All of this blurs the line between humans and non-human animals. Science will not be able to propose criteria to determine whether beings such as ancestors, hybrids, chimeras and genetically manipulated beings should be called ‘human’. This fuzziness is a philosophical issue, not a factual one.

4) Species boundary refers to genes or appearance, and these are not morally relevant, because racism and sexism where also based on genes or appearances. We should universalize the principle that genes and appearance are morally irrelevant for *everyone in all* situations related to basic rights violations. Also, there is no “interest gene” connected to all and only to humans; no gene that makes a being to have interests.

5) Belonging to a certain species instead of another is not something that we can choose, it is not something we achieved, it is beyond our responsibility, so we should not be rewarded for that. We do not deserve special treatment by having some specific genes. Giving a higher moral status to beings who did not chose to be born that way, is in violation of the merit principle. If we are to be rewarded, it is not because we are born in some way rather than another, but because we are able to prefer things (i.e. we have a well-being).

Note that these five arguments are very similar to the principle of context independence of the Müller-Lyer optical illusion. The first, second and third arguments are similar to the arbitrariness, artificiality and fuzziness of introducing a geometrical rule that says that outward pointed arrowheads decrease the length. Also in the fourth argument, bodily appearance of a being is, just like the arrowheads, some external factor, and we have to universalize the rule that no external elements are important. In the
Müller-Lyer illusion, this is the universalized rule that context is never important for determining a length. In daily life, we often (unconsciously) use the rule of context independence. It would be inconsistent to always use this rule, except in the case of the Müller-Lyer figure, because there is nothing really special about this figure. So we should apply context independence consistently. It would be strange that exactly in this Müller-Lyer figure context independence would not apply. Such consistency is also crucial in ethics, otherwise we open the door for opportunism. Now, if we say that skin color (or the genes that generate skin color) is not morally relevant, we should apply this rule consistently (universally) and state that no reference to appearance or genes is morally relevant when it comes down to someone’s basic rights.

In the Müller-Lyer figure, we can argue (based on our intuitions, of course) that the direction of the arrowheads does not determine the lengths of the line segments. Similarly, species membership does not determine moral status. But what does determine moral status? What does determine the lengths of the horizontal line segments? The latter question has a simple answer in geometry: a metric or distance function determines lengths. What is the analogy of a metric in ethics? The next section argues that the level of sentience is a good candidate. (But keep in mind that geometry can be much more complex than good old Euclidean metrics, and ethics can be much more than sentience or well-being.)

**7 Five arguments in favor of sentience**

In this section we present another five arguments why sentience is morally important. The reason that there are different arguments, is that there are different moral virtues (empathy, impartiality, respect) and different normative systems. Different arguments for sentience stem from these different normative ethical systems and moral virtues. All the arguments have the same structure: starting with two assumptions (one factual and one value statement) one can derive that sentience is morally relevant.

1) Welfare ethics (consequentialism) and fairness ethics (contractualism):

**Fact:** Our own well-being matters to us.

**Value:** Impartiality is important. There is a thought experiment to check impartiality: imagine that you might be any other object or entity, but you don’t know who or what you might be. You could be a non-sentient thing without well-being, or a sentient being. How would you like to be treated? If you were non-sentient, this question would not matter to you, because nothing done to you will influence your well-being. So being sentient will imply a different treatment, because well-being matters to you. This argument is nothing but the veil of ignorance of John Rawls’s contractualist ethics (1971), but applied more consistently (more impartially) to all entities in the universe, as was proposed by Rowlands (1997, 1998). This extended contractualism is the end result of a two step process to increase impartiality. As Thomas Hobbes argued, a rational egoist will strive for a contractarian ethics, where all rational beings (with whom one can negotiate) of equal power will become part of the moral community. Using his method of the veil of ignorance, John Rawls deleted the second condition of equality of power, to arrive at a contractualist ethics that include rational people in weaker positions (minorities, …). But why not also delete the first condition of rationality? The least arbitrary and most impartial thing to do is to delete all conditions, which is what Rowlands argued.

2) Virtue ethics and ethics of care:

**Fact:** We can feel empathy (in a meaningful way) with all and only with sentient beings (beings who can feel and have a well-being).

**Value:** Developing the virtue of empathy is important.

3) Rights ethics (deontologism):

**Fact:** A sentient being is a being that has interests and can subjectively feel its interests. Feelings are nothing but affective conscious mental states that indicate that needs or interest are satisfied or not. For example pain indicates that bodily integrity is not satisfied, fear indicates that safety is not satisfied, …

**Value:** Protection of interests by respecting rights is important.

4) Other ethics:

**Fact:** Mental capacities such as consciousness are something very complex and vulnerable in the universe. Perceptual consciousness is an important prerequisite for having a well-being.
Value: We should protect and respect entities that have vulnerable and complex mental capacities. Having a perceptual consciousness is at least something much more remarkable than having the genes of an arbitrary species. If a sentient being becomes a non-sentient being, he loses something valuable and does not gain anything in return. On the other hand, in a hypothetical thought experiment, if a white person becomes a black person, he loses one skin color but gains another; if a man becomes a woman, he loses one sexual organ but gains another; if a human becomes a non-human animal, he loses some physical properties and genes, but gains others (if the human is mentally disabled, he cannot lose mental capacities such as rationality).

5) The argument from marginal cases (Dombrowski, 1997):
Fact: Perceptual consciousness (sentience) is the only mental capacity that mentally disabled humans share with other humans.
Value: Our intuition says that mentally disabled persons are to be respected because of some inherent, mental capacity that they possess. The real reason why we help them is because they can suffer. Other reasons, such as indirect rights or a slippery slope argument proposed by Carruthers (1992), are disrespectful towards those individuals, because they deny their intrinsic value. Saying that mentally disabled persons get rights merely because we are too stupid to see if someone is mentally disabled or not, does not correspond with what most people really value in mentally disabled persons. And a lot of historical examples (cultures that discriminated against disabled humans) and current practices (not giving the right to vote to mentally disabled persons) indicates that we are able to draw lines.

The above five arguments cohere with each other and indicate that sentience (well-being) is a basis for moral concern and moral status. It is not farfetched to see a connection between rights, interests and sentience. This is at least less farfetched than making a connection between e.g. rights and the possibility of getting fertile offspring.

This set of five arguments can be related to the translation invariance in the Müller-Lyer illusion. Just like length is an inherent property of a line segment, these arguments refer to a characteristic value of sentience. The first two arguments, which refer to impartiality and empathy, can be related to the idea that a ruler can be seen as a device to make our length judgments impartial (objective instead of subjective). As the ruler is a device to shift (translate) from one line segment to another, empathy and the veil of ignorance are devices that also help us to “translate” ourselves into the position of other sentient beings and measure how rich their emotional lives are (how important things are for them).

One might argue that the notion of sentience also has fuzzy boundaries, just like the notion of a species. When is a being sentient? What about invertebrates, plants,…? This is first of all a matter of fact (science). The species boundary has an inherent fuzzyness, the sentience boundary is rather a matter of scientific uncertainty. A being cannot be both sentient and non-sentient at the same time, but a hybrid is half human and half non-human at the same time. Scientists do not have and will never find indicators to determine at what point a being (a hybrid, a chimera, an ancestor or a genetically modified person) should be called human. But scientists already do have quite a lot of indicators to test whether a being is sentient. And they will likely discover new indicators when they gain more knowledge about how consciousness works. We are already able to deal with this scientific uncertainty when we look at the human rights ethics applied to abortion or stem cell research.

Second, we can agree that there is a gradation of levels of sentience: some beings have more complex emotional lives than others. However, this gradation is not really a threat to the theory, because also in human rights ethics there is a gradation (look at the discussion on abortion and stem cell research). And it makes sense to couple the gradation of sentience to a gradation of moral status. All beings with a developed, complex central nervous system, all beings with a level of sentience equal or higher than those of (most) vertebrates, human fetuses or mentally disabled humans, have a very high moral status.

Third, in most western cultures, both species membership and sentience are considered morally relevant, as we can see by looking at two examples: animal welfare laws and the moral status of fertilized human egg cells. No-one is arguing to throw away our animal welfare laws on the basis of our uncertainty about the sentience of some invertebrates. So sentience of animals is already taken into consideration to some degree. And fertilized human egg cells are (according to scientists) not yet sentient, so they have a lower moral status in a lot of western countries. If the sentience boundary is fuzzy, why add a second fuzzy boundary, the species? In ethics we should strive to avoid as much fuzzy notions as possible (otherwise we risk opportunism. Referring back to the Müller-Lyer illusion: line segments have a continuous gradation (from short to long), but that is different from the gradation
of the angles of the arrowheads. The former is an inherent property of line segments, the second is something external (contextual). So it is better to drop the species criterion, because the species boundary cannot determine someone’s moral status, just like arrowheads cannot determine the length of a line segment.

8 Human prejudices and essentialism

In previous sections I have argued that moral illusions can exist and I have given one line of reasoning how we can detect them (there might of course be other methods than our coherence approach). But what can we learn from those moral illusions? Scientists are studying optical illusions, trying to find optical or psychological mechanisms behind those illusions, in order to learn how our optical system works. In particular the Müller-Lyer figure learns us how our brains adapt to 3D-vision. So one more thing needs explaining: what is the (psychological) mechanism behind the moral illusion of speciesism? I will argue that this mechanism is “essentialist thinking”.

Essentialism means that there are characteristics that all elements of a specific set (e.g. a species) possess and elements of other sets don’t possess. All elements of that set can be accurately described and defined by those characteristics. That specific set therefore has a unique definition.

In the case of speciesism, we have some well-established psychological knowledge about prejudice, stereotyping, the influence of language and words,… (see e.g. Plous, 2003 for some mechanisms behind prejudices towards animals). It is as if our brains are trained in essentialist thinking to categorize groups. According to Gelman (2003), children and adults intuitively describe biological entities in essentialist terms. People (from different cultures and backgrounds) automatically think that biological categories have invisible essences (Bloom, 2010). Studies about racism also demonstrates that racists think of races or ethnic groups as being essentialized natural groups (Gil-White, 2001). This subtle mechanism of essentialist thinking can be seen in our language. It is amazing how often one encounters human-centric notions in our culture without even noticing. Look at definitions of discrimination: how often are these definitions already from the start restricted to humans (or persons, where a person automatically means a human)? How often in discussions about animal rights do people respond with: “But humans…”? But “the human” does not exist. If it exists, then “the primate” or “the mammal” would also exist. Why does no-one mention them? Don’t they have an essence? If in a discussion about animal rights people respond by saying something like: “But most humans have rationality and the capacity of moral thinking”, the very same statement would be true for the family of great apes or perhaps also primates. Most great apes also have rationality (just count them: more than 6 billion great apes have high levels of rationality).

Does language simply reflect our essentialist thinking, or is our essentialist thinking amplified by our language? Anyway, the first three arguments I presented against the species boundary indicate that there really is no essence related to a species. Essentialism in biology is rooted in ancient philosophical thinking (e.g. Platonism), as well as major religions. In those religions it is believed that there is something special to all and only to humans: all humans, and only humans, have an eternal soul, or are created in the image of God. But since Darwin, the scientific consensus says that there is nothing special about a species. It is just an arbitrary abstract classification with its limits and difficulties (Rachels, 1990). As with racism, it is now well known that there really is no essence related to an ethnic group or race. So the fact that a speciesist or racist tends to think of species and races as essentialized groups does not imply that a species or race has an essence.

Finally, referring back to the Müller-Lyer illusion, we can say that there is no essence related to all line segments having outward pointing arrowheads. They do not form an important category of geometrical objects.

9 Summary and conclusion

In this article I have presented a fairly strong coherent picture that implies that speciesism is a moral illusion. The analogy between speciesism and the Müller-Lyer optical illusion is very instructive. I have given a set of five arguments why the species boundary is irrelevant, and another set of five arguments why sentience is relevant. The first set of arguments (against the species boundary and
essentialist thinking) is analogous to the principle of context-independence in optical illusions. The second set corresponds with the principle of translation invariance.

All these arguments cohere with each other. And there is more: we know that not everyone is susceptible to speciesism (it depends on culture and education), and we do have insights in the psychological mechanisms behind speciesism (essentialist thinking, using language with prejudices, stereotyping,…). Compare this with the Müller-Lyer illusion: we know that not everyone is susceptible to this illusion, and we do have insights in the optical mechanisms behind this illusion (automatic perspective corrections).

In geometry we have a very coherent picture that is much stronger than this one optical intuition about the difference in lengths in the Müller-Lyer figure. I therefore believe that the whole antiespeciesist picture is coherent to such a high degree that it is much stronger than that one moral intuition about the moral status gap between humans and non-human animals. What else would the speciesist need in order to be convinced? That the speciesist intuition is cognitively impenetrable or that essentialist thinking happens automatically, are not sufficient reasons to say that the species boundary is morally relevant.

I expect that this new way of looking towards speciesism can shed a light on why the speciesist intuition is so pervasive and difficult to change. It might help us to argue for a more consistent ethical theory based on equality between all sentient beings.

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References


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