

I wish to explore whether species egalitarianism, or lack thereof, plays any part in the crisis we are facing today in regards to the planet's environment. If it does have a negative effect due to a general lack of species egalitarianism, what effects would a species egalitarian society have on this planet and the environment? Richard D. Ryder (2000, p. 1), the British philosopher and psychologist who invented the concept of *speciesism*, argues that the discussion of species egalitarianism is of vital importance for the future of the planet we all inhabit. As Ryder (ibid.) claims, "the struggle against speciesism is not a sideshow: it is one of the main arenas of moral and psychological change in the world today. It is part of a new and enlarged vision of peace and happiness." The focus on a more species egalitarian society is important because human beings are currently shaping the environment; we are no longer being shaped by our environment as most other species are. With our development as a species, which includes our technology, we are able to control the weather to a certain degree, we hold the destiny of many other species in the palm of our hands, we destroy rain forests, we pollute the air and the oceans, we are slowly raising the temperature of the planet and we deplete the earth of its oil storages (Ryder 2000, McKibben 2006 and Vetlesen 2008).

Egalitarianism is commonly regarded as aiming at respecting and treating all persons as equal, morally and politically (Blackburn 2008, p. 110). Species egalitarianism then, ought to mean that all species, human and nonhuman animals alike, have equal moral standing, i.e. they are equally worthy of respect for the life they live (Schmidtz 1998, p. 57). It is obvious that all species are not the same and the differences between all the various species are enormous. For example, some can fly, some breathe under water, some walk on two legs, some walk on four legs, some run faster than most cars normally drive and some can see better than any human eye. Therefore, equality in regards to equal treatment is implausible and unnecessary, as each species has different needs. What is plausible, and perhaps contrary to the present discourse, is that all species ought to be treated equally in regards to being respected for the life they live, and the interest they have in living that life to the best of their ability in their natural environment.

Throughout history human beings have had different views and ideas about nonhuman animals and nature. Those different views have been expressed in various ways in regards to both the treatment they have received, and in regards to the idea we have had about animals and nature. Some animals have been revered as gods, and in some parts of the

world some animals are still seen as holy beings.

In his book *The End of Nature* Bill McKibben (2006) argues that there has been a shift in regards to how we view nature. The change in how we view animals and nature, combined with increasing technology, changes nature itself. According to McKibben (2006, p. 40) “we have [even] changed the atmosphere, and that will change the weather. The temperature and rainfall are no longer to be entirely the work of some separate, uncivilizable force, but instead part of a product of our habits, our economies, our ways of life.” For as long as human beings have existed we have had a relationship with nature. This relationship will be an on-going one for as long as nature and man exist together. However, a relationship can change, and they often do. In man’s relationship with nature, nature used to be the strong one, the untouchable one. And though humans always have inflicted various environmental damages to nature, it has been on a small scale; the damage has not been detrimental in any way. McKibben (2006, p. 41) gives a very nice image when he compares humans’ earlier environmental damage to a man being stabbed with toothpicks. But now man has become the strong and untouchable one. We are no longer stabbing nature with toothpicks; our toothpicks have been transformed into big swords.

Though our relationship with nature has changed, even in the midst of our temperature- and heat-regulated houses, our factories, our many means of transportation and our view of nature as something to be utilised for all its resources, we “still feel the need for pristine places, places substantially *unaltered* by man [italics in original text]” (McKibben 2006, p. 47). There is a part of us that still feels connected with nature simply because we are part of nature. “[T]he belief that we are separate from the world, that it is something “out there” (“ in original text), a problem we need to solve” (Vaughan-Lee 2013, p. 1), might be part of the problem we are facing today. We need to find harmony between humans and the rest of nature.

Many perceive themselves as separate from the world, both individually and as a species. We know we are part of the world, but somehow we see ourselves as different. For me, quantum physics provides a good illustration of our unity with the rest of nature. In quantum physics everything can be broken down into wave-lengths. There are travelling waves and standing waves, there are water waves, light waves and matter waves, and while they do behave in different ways, these various types of waves together create the universe and the world we experience today (Rae 2009, pp. 27-67). Perhaps the most fruitful example in this case is the matter waves. What we generally perceive as matter, is in fact mere wave property. Objects like crystals or tables are made up of electrons and neutrons. Within these particles, though

completely unobservable in daily life, wave-particle duality can be seen under certain circumstances. When tested by Davidson and Germer in the 1920s they observed that an electron beam passed through a crystal of graphite yielded the same “interference pattern that was similar in principle to that produced when light passes through a set of slits” (ibid., pp. 40-41). This experiment is important as it illustrates that the interference pattern “is central to the evidence for light being a wave, so this experiment is direct confirmation that this model can also be applied to electrons. Later on, similar evidence was found for the wave properties of heavier particles, such as neutrons, and it is now believed that wave-particle duality is a universal property of all types of particle” (ibid.). Therefore, everything in this universe and on this planet, human beings and nonhuman animals alike, are all made up of the same compilation of types of waves. When broken down to the smallest parts, there is no difference between our own species and any other species. Everything in the universe is the same, so-called living things and so-called non-living things. It is all wave-lengths, electrons, neutrons and atoms amassed in various ways to create a specific entity or species. The only difference between the human species and other species are how the tiny matters are compiled in order to create difference in appearance, needs and functions.

As mentioned above so-called non-living things are also part of the oneness, and though non-living entities such as mountains are part of the whole, they do not need to be respected for the life they live as they do not live a life in the same manner as a bear or a human. Respecting every part of nature, including non-living entities does not mean equal treatment as mentioned earlier in the paper. It is possible to treat living beings with respect for the life they live, and at the same time respect the non-living part of nature for the value it has.

However, in daily life it can be challenging and perhaps slightly aloof to view the world in such a manner. We have to deal with things as they appear to us, and not as wave-particle dualities. To further investigate the sameness or the difference between the various species, I think it is appropriate to establish whether the similarities truly are present on a more visible scale. If there are more similarities than not, species egalitarianism just might have something to offer in regards to the environment and the situation we currently find ourselves in.

The indications are that other human beings and many types of nonhuman animals are like us in regards to feelings of pain and pleasure. This is seen in facial expressions, movements of the body, a desire to move away from whatever causes pain, and sounds produced when in pain. If various actions and sounds I make means that I am in pain, I would assume that the same goes for another human or dog or a cat (Singer 2009, pp. 9-17). As Peter Singer

(ibid., p. 11) argues in his updated version of *Animal Liberation*, it is known that:

The nervous system of animals evolved as our own did, and in fact the evolutionary history of human beings and other animals, especially mammals, did not diverge until the central features of our nervous systems were already in existence. A capacity to feel pain obviously enhances a species' prospects of survival, since it causes members of the species to avoid sources of injury. It is surely unreasonable to suppose that nervous systems that are virtually identical physiologically, have a common origin and a common evolutionary function, and result in similar forms of behaviour in similar circumstances should actually operate in an entirely different manner on the level of subjective feelings.

Lord Brain (in ibid., p. 12), a neurologist, seconds Singer as he claims that “[he] personally can see no reason for conceding mind to [his] fellow men and denying it to animals.... [He] at least cannot doubt that the interest and activities of animals are correlated with awareness and feeling in the same way as [his] own, and which may be, for aught [he] knows, just as vivid.” From the above reasoning it appears we can move on with the assumption in mind that other human beings and nonhuman animals have a nervous system much like our own, and that they too are susceptible to feelings of pleasure and pain. Thus, naturally other beings too have an interest in living their lives free of pain and have the possibility to live their own life according to their natural instincts.

Having said that, let us now turn to the issue of a general lack of species egalitarianism and the effects that has on the numerous beings on this planet and the environment. According to the Intergovernmental panel on climate change, IPCC, a multiple line of evidence shows that human activities are largely what are causing the climate change due to changes in the Earth's energy budget:

The most compelling evidence of climate change derives from observations of the atmosphere, land, oceans and cryosphere. Unequivocal evidence from in situ observations and ice core records shows that the atmospheric concentrations of important greenhouse gases such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) have increased over the last few centuries (Cubasch et al. 2013, p. 121).

Though there is natural variability in climate change, it appears that human activities are affecting climate change in ways that speed up the natural variabilities, and effect climate

change locally in numerous places. The 2013 assessment report states that since the previous assessment report in 2007, “the scientific knowledge gained through observations, theoretical analyses, and modelling studies has continued to increase and to strengthen further the evidence linking human activities to the ongoing climate change” (ibid., p. 123).

The AR5 (assessment report number 5) further states that:

In addition to changing the atmospheric concentrations of gases and aerosols, humans are affecting both the energy and water budget of the planet by changing the land surface ... (Sections 2.5, 7.2, 7.6 and 8.2). Land use changes, such as the conversion of forests to cultivated land, change the characteristics of vegetation, including its colour, seasonal growth and carbon content (Houghton, 2003; Foley et al., 2005). For example, clearing and burning a forest to prepare agricultural land reduces carbon storage in the vegetation, adds CO₂ to the atmosphere, and changes the reflectivity of the land (surface albedo), rates of evapotranspiration and longwave emissions (ibid., p. 127).

From this we know that humans bear causal responsibility for the environmental crisis, and:

It is unequivocal that the current concentrations of atmospheric CO₂, CH₄ and N₂O exceed any level measured for at least the past 800,000 years, the period covered by ice cores. Furthermore, the average rate of increase of these three gases observed over the past century exceeds any observed rate of change over the previous 20,000 years (Ciais et al. 2013, p. 467).

Measuring of carbon dioxide, methane and nitrous oxide reveal that these gases are increasing in the atmosphere at unnatural rates, and that they have kept increasing faster by each decade since 1958 (ibid.). CO₂, CH₄ and N₂O increase are the main cause of climate change, and “altogether [they] amount to 80% of the total radiative forcing from well-mixed GHGs” (ibid.). The increase of these gases mainly derives from burning of fossil fuels and agricultural use of the land. This increase does not only affect our own species, but all other forms of life as well.

Though CO₂ is the main culprit with the most percentage of the three gases, CH₄ has increased most percentage wise since 1750. CO₂ increased by 40%, N₂O by 20% and CH₄ increased by a staggering 150% (ibid.). Due to the massive increase in CH₄ I will mainly focus on CH₄ here on out. There are several causes for CH₄ emissions, such as “natural wetland emissions [-] ... agricultural and waste emissions [and] ... fossil fuel related emissions” (ibid.).

What is interesting is the increase in CH₄ due to “rice paddy agriculture, ruminant livestock, [fossil fuel extraction], landfills, man-made lakes and waste treatment” (ibid., p. 473). Consequently, part of the cause of the increase in the CH₄ emissions is due to our view on, and actions towards other species.

Natural and anthropogenic sources of CH₄ emission have an estimated divide between 50-65% (ibid., p. 475). This means that the anthropogenic emissions might be as much as 65% of the emissions. As this is uncertain, there is no way of knowing whether the natural and anthropogenic emissions are equal, or whether the anthropogenic emissions are greater. Nevertheless, the anthropogenic emissions are at least 50% and these emissions are from the methanogenesis in landfills, livestock manure and waste waters, in addition to the burning of fossil fuels as mentioned above.

India, China, Brazil and the USA are the major regional contributors in regards to livestock, with India at the very top. Clearing of land, enteric fermentation, manure management and waste water are all causing an increased level of CH₄ in the atmosphere. Findings were also made that illustrated that the amount of CH₄ in the atmosphere were higher over areas with denser population and intense agriculture (ibid., p. 475).

This increase in CH₄ can be traced back to the way we think about, and thus how we treat, other species. Even if our treatment of other species is not the entire cause of the increase of CH₄ emissions, it is perhaps as much as 50% of the cause as anthropogenic emissions are minimum a half. By decreasing CH₄ emissions, the short-term goals in regards to decreasing GHGs can easier be met as CH₄ resides in the atmosphere for decades only. CO₂ for example has a much longer lifespan and should be dealt with in the more long term goals. It is estimated “that about 15-40% of CO₂ emitted until 2010 will remain in the atmosphere longer than 1000 years” (ibid., p. 472).

Obviously, there need to be focus on both short and long term goals of reducing the GHGs. Directly or indirectly we affect the lives of millions of beings every single day. We cut down forests which is numerous animals’ natural environment, we breed and raise cattle and other animals for our benefit, we burn fossil fuels that increase the amounts of CO₂ and CH₄ in the atmosphere, our landfills both on land and in the oceans affect many species due to direct contact, such as for example birds eating plastic and slowly dying from starvation, or indirect effects such as increased amounts of GHGs in the atmosphere.

It has been established that humans certainly affect the global climate and induce the environmental crisis, and it has further been shown that part of the problem is the way we think about other species compared to our own, and thus how we act towards them. If we

could find new ways of thinking, and hence acting, in regards to our treatment of other species, perhaps we could drastically reduce the amount of CH₄ in the atmosphere within just a few decades. In regards to longer term goals this would also reduce both CO₂ and N₂O. This would obviously not solve the entire environmental crisis, but it would be one step in the right direction.

I am certain that there are many ways of dealing with the environmental crisis, but I want bring the attention back to Singer, and examine whether his theory of animal liberation can be of assistance. For him species egalitarianism embraces all species who have the capacity to feel pleasure and pain and thus have an interest in their life; the ability “for suffering and enjoyment is *a prerequisite for having interests at all*, a condition that must be satisfied before we can speak of interests in a meaningful way” (italics in original text) (Singer 2009, p. 7).

Singer (ibid., p. 11-17) omits plants from having interests because humans and animals have similar nervous systems from a common ancestry, and share similar reactions to pain and pleasure, while plants do not. Therefore, plants have no interests or intrinsic value; they merely have instrumental value for the survival for humans and animals (Singer 1999, p. 284).

John McMurtry (2010, pt. 6.2.) similarly argues that “whatever does *not* bear thought, feeling or animate movement is not intrinsic value, although it may be of *instrumental* value.” Thus, McMurtry (ibid., pt. 6.3.) agrees with Singer as he further argues that life support systems, such as plants, “have *ultimate* value so far as they are that without which human or other life cannot exist or flourish (italics in original text).”

Thinking in regards to the environment Singer’s argument appears sufficient as it surely is in the interest of humans and animals to preserve the rest of nature in order to maintain survival. Also thinking in terms of CH₄ emissions alone, from clearing of land, enteric fermentation, manure management and waste water, Singer’s claim is adequate as it would help decrease CH₄ emissions based on the interests of animals. By taking animals’ interests into consideration we would not act in ways that would go against their interests, which would also help our interests.

Acting with the interests of animals, as well as humans, in mind, would make it impossible to continue factory farming because animals suffer from birth to death under these conditions (Singer 2009, p. 97). Modern farming’s sole aim is to cut costs and enlarge production. The result is that animals “are treated like machines that convert low-priced fodder into high-priced flesh, and any innovation will be used if it results in a cheaper “conversion ratio” (“ in

original text)" (ibid.). Consequently, by adopting Singer's theory we save numerous animals from a miserable existence and simultaneously vastly decrease emissions of CH₄ and other GHGs such as NO₂ and N₂O.

A philosopher who would disagree with Singer on the question of interests of plants is Paul Taylor. Taylor (2011, p. 19) argues that though animals and plants are not moral agents, they are in fact moral subjects who can be treated rightly or wrongly. His reason for including plants is that plants as well as animals "are creatures whose lives can intentionally be made better or worse by our conduct" (ibid.). Even if plants have no nervous system, they are "seen to be a teleological [...] center of life, pursuing its own good in its own unique way" (ibid., p. 45). Perhaps one can argue that a stronger focus on all living things, as seen in Taylor's thesis, might be more beneficial for the environment because it embraces a wider area and operates from more angles. Because the crisis is believed to be a pressing matter, and more than animals are affected, a wider approach would be the more beneficial.

As stated earlier there is an assured connection between climate change and human activities. The question is whether our activities towards animals are more pressing than our activities towards nature in general. If it is, Singer's arguments are sufficient and there is no need to involve the interests of plants or any other forms of life as involving beings with a nervous system would serve the purpose, i.e. help rectify the environment.

Looking back at the AR5 of the IPCC it was found that the "increase of CO₂, CH₄ and N₂O is caused by anthropogenic emissions from the use of fossil fuel as a source of energy and from land use and land use changes, in particular agriculture" (Ciais et al. 2013, p. 467). The burning of fossil fuel has no more direct effect on plants than on animals, and the indirect effect due to increased GHGs effect plants, animals and humans alike. The escalation of CO₂, CH₄ and N₂O due to agriculture however, is a direct cause of treatment of animals. Whether the interests of plants are taken into consideration or not, does not matter in regards to the main cause of human caused increased emissions of GHGs.

Therefore, Taylor's argument for the interests of plants as well as animals and humans may be a noble one, but in practice it is of no consequence for the betterment of the environment. What is needed is a theory that gives ideas on how to reduce emissions of GHGs as that is the major threat, and Singer's argument does just that, as granting animals the ability to feel pleasure and pain would lead to a change in agricultural practices which in turn would lead to cutting down less forest, less water waste and methanogenesis in landfills and livestock manure. Moreover, a change in farming methods and moving more towards past times' view of animals and nature is beneficial because we would decrease the amounts of GHGs in the

atmosphere, we would save numerous lives and we would increase the quality of life of many beings, including humans. It is thought by many that factory farming is a good solution as it will feed the growing population on Earth. But on the contrary, factory farming is a very bad solution because no matter how much beef, pork, chicken and dairy we produce, it would be more favourable for both humans and the environment to feed that grains we feed the animals directly to humans. Using the cropland to grow food for humans is a vastly better use of the land (Singer 2006, p. 231).

It can be argued that adopting views similar to those of past times would take us back in time as opposed to moving forward, but if we learn from the past and implement that into our current lifestyle, positive changes can be made. To elaborate on the above argument on factory farming, let us look at meat consumption. The United States Department of Agriculture (Mathews 2013) shows that “Americans consume 25, 8 billion lbs. of beef each year.” Since 2002 this number has decreased a little, but the number of lbs. of beef exported has more than doubled in the same period. In addition we consume various other types of meat and seafood, and put together these numbers are staggering. Market research performed by the American Meat Institute (2011, p. 1) indicates that “8.7 billion chickens, 246 million turkeys, 110.9 billion hogs, 34.1 million cattle, [and] 2.2 million sheep and lambs” were produced by American meat companies in 2011. Feeding all these animals in order to feed us, is less beneficial than if we breed fewer animals and feed humans directly with the grains we feed the animals we breed.

If the demand for beef alone decreased we would not only save lives, we would cut down less forests to clear space for agricultural land, the waste treatment would improve and all this would decrease the emissions of CH₄ and other GHGs into the atmosphere. It would also decrease the consumption of natural resources such as water, fossil fuel and topsoil. While it takes 2464 gallons of water to produce 1 lbs. of beef it only takes 25 gallons to produce 1 lbs. of wheat (www.watereducation.org).

Having an attitude of species egalitarianism simply means allowing animals to be treated with the same respect for life as we grant human beings. It entails an awareness of permitting animals to live their lives in their natural environment, and not to take more than we need. Therefore, if we change our demand for meat and seafood, we can slowly change our habits of mass-production. Over time it would be possible to move away from factory farming to a more natural way of hunting that would allow animals to live in nature and to have a better life while they live. This change would also affect us positively as we could live with a lighter conscience and thrive on a healthier planet.

These words of Lawrence E. Johnson (1993, p. 268) brilliantly sums up what I wanted to say in this paper:

The natural world [is] a continuing community to be lived in, not just as a resource to be exploited. To be utilized, yes, but not exploited... The natural world is a community of living entities with moral significance, a community with which, both for practical and moral reasons, we must live in effective balance. That we live in a community of entities, human and nonhuman, that are morally significant, some of which both are holistic in character, is an insight worth retaining. I would observe also that personifying species, ecosystems, and the like as spirits also avoids the error of understanding such entities as mere collections. As we are now starting to appreciate, quite apart from any moral considerations, truth requires that we understand such entities holistically. One cannot even begin to understand an ecosystem in nonholistic terms.

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