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The Market Paradigm, Kaldor Efficiency & the Encouragement of Factory Farming: Overlooking the Intrinsic Value of Farm Animals and the Environment

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The Market Paradigm, Kaldor Efficiency & the Encouragement of Factory Farming:
Overlooking the Intrinsic Value of Farm Animals and the Environment

by

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A Thesis

Presented to the Graduate and Research Committee

of Lehigh University

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in

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Abstract:

Current law and policy regarding animal agriculture is guided by the market paradigm. The market paradigm fails to consider the intrinsic value of animals involved, and encourages factory farming that causes significant environmental degradation. In order to right the wrongs associated with factory farming, we must address the system that justifies these practices which is the market paradigm and its operating principle of Kaldor efficiency. Drawing on Paul Taylor's biocentric environmental ethic, I propose an alternative paradigm for policy argument about regulation of animal agriculture. This paradigm is based on the core principle of *being-egalitarianism* and is grounded in an attitude of respect for nature.

Introduction:

In part one, I will argue that the Market Paradigm, with its core principle of Kaldor efficiency, is inadequate in designing policy and law for the regulation of animal agriculture because it fails to consider the intrinsic value of the animals involved, and because it encourages factory farming which causes environmental degradation. Given these inadequacies, in part two I propose that we should appeal to an alternate paradigm for making policy decisions about animal agriculture. This is Paul Taylor's biocentric environmental ethic, which is based on the biocentric core principle of being-egalitarianism, and is grounded in an attitude of respect for nature. I will argue that the approach of Paul Taylor, with its principle of biocentrism, is more adequate for designing policy and law for the regulation of animal agriculture because it fully considers the intrinsic value of the animals involved, and because it discourages factory farming and hence, the environmental degradation it produces.

Part I: Evaluating the Market Paradigm's Adequacy in Regulating Animal Agriculture

Is the Market Paradigm adequate for designing policy and law that regulates the environment in the context of animal agriculture?

I will argue that the Market Paradigm, with its core principle of Kaldor efficiency, is inadequate for designing policy and law that regulates animal agriculture because it fails to consider the intrinsic value of the animals involved, and because it encourages factory farming which causes excessive environmental degradation.

The twentieth century saw rapidly increased industrialization, especially in the realm of agriculture. This industrialized agriculture is now referred to as factory farming, and consists of keeping huge numbers of animals in tight quarters of factory-type settings to be raised to fulfill increasing human demand for things like meat, dairy, and eggs. Even though it has been less than a century since this method of raising animals and growing plants took off, because of the rate of technological advancement it has permeated most of today's animal agricultural farming processes, in part because it is difficult for smaller farmers who raise their animals in more natural environments to compete with these industrial farms. Many have argued that this agricultural system is unethical in the way it treats animals, and it is becoming increasingly apparent that this system is also environmentally unsustainable. The ways in which thousands of animals are housed in close quarters deny them expression of even their basic natural instincts,

but addressing these practices requires looking at the underlying system that has allowed industrialized agriculture to outcompete all other forms of agriculture, including small-scale farmers and free-roaming animals.

The policy problems allowing the proliferation of factory farming in the United States are not going to change unless the change alters fundamental aspects of the market paradigm, which is the meta-policy or core logic of concepts (Gillroy et al. xi) behind factory farming. A meta-policy contains a core principle and periphery, the principle being that which sets a standard for judgment and evaluation, and the periphery being the actual institutions and laws based upon the core principle (Gillroy et al. 206). A paradigm is a set of ideas and principles that “defines and synthesizes the beliefs, ideals, observed facts, and normative principles of a worldview” (Gillroy 9). The most significant piece of a meta-policy is the foundational core principle, which is the basis for whether or not each meta-policy is justified and actualized by the paradigm in question (Gillroy 26).

Industrialized agriculture, which is a form of agriculture that grows the majority of plants and animals in the U.S., is a system based upon a paradigm that values the functioning of markets above all else. Factory farms are perpetuated by the market paradigm’s foundational operating principle of Kaldor efficiency. Efficiency within markets is defined by the Pareto condition, which holds that a new state of affairs is more efficient if at least one person is as well or better off (Gillroy et al. 164) and no person is worse off. As a policy outcome, producing a situation in which no person is worse off is not practical, so instead a more practical principle of Kaldor efficiency is used. Kaldor

efficiency occurs if those financially benefitting from a market outcome gain enough that they could—hypothetically—compensate the losers, those who are not acquiring and/or are losing wealth (Gillroy 21). Kaldor efficiency justifies the cost benefit method of policy evaluation which requires that a policy's total benefits are greater than its total costs. This method of policy evaluation assesses whether or not a given law and policy is working toward the goal of wealth maximization or net positive benefits. Cost benefit analysis assesses a situation monetarily, where a good outcome is based solely on the increase of wealth it produces. The wealth distribution doesn't matter here, because the focus is on the total amount of collective wealth, and the assumption that those most fortunate will benefit those least fortunate. In a self-interested society, however, this often does not come to fruition. In this approach to policy assessment, environmental value lies solely in the benefits the environment provides as an economic resource that maximizes wealth (Gillroy et al. xi) regardless of the wealth distribution or environmental degradation that occurs.

The market paradigm and Kaldor efficiency define one normative approach to the subject of animal agriculture. However, different ethical systems define what is valuable, and what should be included in a moral community, in different ways. The ethical system of a society deeply affects the lives of the people, animals, and ecosystems within it. Different environmental ethics each have different ways of defining what should be considered valuable, or what to include in a moral community. For the purpose of this research, I will consider three different ethical systems: anthropocentrism, biocentrism, and ecocentrism. Anthropocentrism places all moral value within the human community,

biocentrism extends this community to include plants and animals, and ecocentrism further extends this to include whole ecosystems.

Today's industrial agricultural system is anthropocentric in that it distributes food to and feeds people, but at the expense of the lives of the animals living on the factory farms and often the lives of people involved in or affected by the production process. Though this may be the case, feeding people is still not the end goal of the agricultural industry, which is ultimately concerned with wealth maximization for corporate shareholders instead of the people they are feeding. Thus it is important to remember that even though industrial agriculture today is anthropocentric, its greatest benefits go to a select number of humans, while it harms others in various ways. For this reason, while contemporary animal agriculture operates within an anthropocentric ethical system, it is not necessarily socially just. Furthermore it is not an ethical system that is either biocentric or ecocentric, as the animals' lives and the environment they degrade hold value solely in how they will efficiently produce meat, animal products, and profit. Farm animals do not have any sort of legal standing, and are not protected under anti-cruelty laws made for animals like pet cats and dogs. The minimal animal welfare laws in place to protect the environment from factory farming are rarely enforced due to the power of the animal agriculture industry. Consequently, animals and the environment are only protected for their purpose as instruments in a process of wealth maximization.

As suggested above, the market paradigm operates within an anthropocentric ethical system but its failures point us toward a biocentric or an ecocentric philosophy for guidance. Gillroy explains paradigm change as occurring when a paradigm that defines

our reality cannot be verified in reality anymore, or becomes obsolete so to speak, after which it becomes obvious there is a need for a new paradigm to replace it (Gillroy 9). While the market paradigm increasingly permeates every aspect of our culture in the United States, it is becoming apparent that this paradigm must be reevaluated and eventually replaced with a new paradigm in order to sustain any value that is left in the lives of people and animals today. In part two of this paper, I will draw on the biocentric paradigm found within Paul Taylor's being-egalitarian philosophy. This ethical system created by Taylor values all living beings equally, and requires moral agents to have a multi-faceted respect for nature. For Taylor all living beings have intrinsic value, or value in and of themselves, as individuals each with their own ends and purposes. Every being is part of an interdependent ecosystem in which all lives should be considered equal, including humans. This perspective can be used to modify contemporary law and policy that promotes factory farming so that it considers the intrinsic value of animals, and prevents environmental degradation.

Some may argue that Kaldor efficiency is an appropriate justification for animal agriculture, because human welfare is the only important value, because humans need factory farmed animals to sustain themselves, and because animals in factory farms have adequate living conditions that should not warrant our concern.

This perspective holds an anthropocentric point of view, which is that human welfare should not be compromised in order to relieve the suffering of animals caused by animal agriculture. Humans benefit from the factory farming process, and it is efficient,

or it would not succeed as an industry. Kaldor efficiency encourages economies of scale, which is the increase in monetary benefits that occurs from an increase in production. Factory farming is a process that has drastically grown over the last century and has taken over the majority of other forms of agriculture to create a mostly industrialized process of animal agriculture. This process maximizes wealth for people, who—to repeat—are the primary concern from within the market paradigm. From an economic or market perspective, although the wealth being created goes to those who are leaders and shareholders in the animal agriculture industry, this collective increase in wealth eventually benefits the economy overall, helping a larger number of people. Additionally since consumers are also benefitting from the meat being produced at a low cost, it should be considered significant for the welfare of humans that 99% of the meat and animal products consumed in the United States come from factory farms. In other words, this statistic is enough to show that factory farms play an important role in sustaining human life on the planet. People consume factory farmed meat for low prices, while still creating wealth for the animal agriculture industry, which should qualify this form of agriculture as being morally justified from an anthropocentric perspective.

Factory farming plays a necessary role in feeding a population of nearly seven billion people, and for that reason the suffering of animals is a minor cost when there are people who depend on the products of industrialized agriculture for protein. “At a time when a fast-growing world population needs all the help it can get to deliver sufficient food resources, assailing ‘factory’ farms and urging a return to a nation of small family farms seems almost suicidal” (Miller 26) explains Chuck Jolley, president of the *Meat*

Industry Hall of Fame. As has been mentioned, factory farms supply a significant amount of food to humans all over the planet, and the population only continues to increase. If small-scale farming will produce smaller yields, this is unacceptable and will not adequately feed a growing population. Based on this argument, the suffering of animals can be overlooked, because factory farming is necessary to feed people. Policies supporting industrial scale animal agriculture meet conditions of Kaldor efficiency in that they produce mass amounts of food for mass numbers of people maximizing wealth when compared with other forms of agriculture. People have been consuming animals for thousands of years, and as the population drastically increases, it only makes sense that more and more animals must be processed, regardless of their suffering.

In addition to the idea that the suffering of animals can be overlooked because of the welfare and wealth benefits they create for humans, it has been argued that the animals are not conscious of the maltreatment, but actually benefit while alive from the protected conditions on factory farms. Just because humans view factory farm as embodying a way of life they would never want to live, doesn't mean that animals have the same level of consciousness or perception (Miller 83). The Animal Agriculture Alliance claims that before factory farming, animals were raised outdoors which did not allow farmers to protect them from things like bad weather conditions, predators, and disease (Miller 32). Thus, farm animals benefit from the safety provided to them through the indoor living facilities of factory farms. Factory farmed animals also have veterinarians and animal scientists to take care of them; therefore, their suffering must only be temporary. Factory farming considers the quality of life for animals as much as it

can, while still using them in the process of meat and animal production. I contend, however, that this is not the case.

Human welfare is important and needs to be considered, but this cannot be at the expense of the animals involved in creating this welfare, because their lives have intrinsic value as well. Taylor explains that “wild communities of life” deserve our moral consideration because each life has intrinsic value (13). All living organisms have a worth that they possess inherently because they are members of the “Earth’s community of Life” (Taylor 13). Earth’s community of life includes all living organisms, which humans do not have superiority over as we are just also members of a community of living entities. A way to know if something has intrinsic value, or a good in of itself, “is to see whether it makes sense to speak of what is good or bad *for* the thing in question” (Taylor 61). For example, it is possible to observe a farm animal like a chicken and determine what allows it to flourish in at least a somewhat autonomous way, and what prevents it from this. Taylor argues that if we can understand what is good or bad for a specific living entity from the perspective of its own good, then we can assess what is best from its perspective, even if the entity itself can neither more nor understand those judgments” (Taylor 67). Each individual life on the Earth’s community of life has a good of its own and needs to be respected as long as this respect does not interfere with another individual’s own good.

As members of the Earth’s community of life, animals are a significant part of our interdependent ecosystems, which mean their lives also have value as cogs in

communities of living things (Taylor 100). This does not mean to say, though, that their individual lives can be sacrificed for the sake of a whole ecosystem. Individual lives matter, as I have explained above, and the worth of an ecosystem comes from the worth inherent in each member of the ecosystem's community. The interdependence of living things within an ecosystem means each member's actions will affect the ecosystem, and consequently its members.

Animals in factory farms are not treated as intrinsically valuable. Countless research, as well as pure observation, shows animals do not enjoy the conditions provided to them in factory farms, and that these conditions actually cause severe levels of suffering. The suffering of animals living on factory farms is not justified by the fact that the system is used to provide food for people. Animals used in animal agriculture cannot be denied their intrinsic value simply because they possess instrumental value to the process of creating meat and animal products for humans. This respect for life that is warranted is not provided via the market paradigm. Under the market paradigm, law and policy is guided by Kaldor efficiency. Kaldor efficiency is satisfied as long as the winners of the situation gain enough wealth that they can hypothetically compensate the losers. Here there is no consideration of the intrinsic value of the animals involved in the factory farming process. They are instruments in the process of wealth maximization, and possess no intrinsic value as subjects of a life whose own good we can understand and protect.

Although it can be argued factory farming is essential because humans currently consume large amounts of meat produced by factory farming, this meat is not necessary.

Studies today are proving that organic as well as smaller-scale animal agriculture farms can yield more products over time, while maintain the integrity of the animals and the soil (Rotz et al.3972). This is sustainable and actually the most beneficial to humans as well as animals. Factory farming not only causes animal suffering, but also produces severe environmental degradation, damaging the lives of people through climate change and soil degradation. Thus, getting rid of industrialized agricultural processes that disregard the intrinsic value of animals in order to improve human welfare would protect the intrinsic value of both people and animals. In other words, human welfare is eventually compromised by factory farming and, for this reason, Kaldor efficiency is not adequately guiding law and policy in protecting the intrinsic value of animals or people. A paradigm guiding the design of law and policy for animal agriculture must consider the intrinsic value of both animals and people, as all are living beings with their own ends and purposes.

The lack of respect for animals and their intrinsic value is partly the consequence of law that gives preferential treatment to large farming corporations. In the United States, corporations are given legal protections equivalent to people, whereas farm animals are given no legal protection. With the only foundational moral principle being Kaldor efficiency, cruelty toward animals is acceptable under the market paradigm as long as it does not interfere with wealth maximization. There are anti-cruelty laws that exist regarding animals like pet dogs and cats, but these protections do not extend to farm animals. There are laws regarding the humane slaughter and transportation of animals in the United States like the “The Humane Methods of Livestock Slaughter Act” (aspc.org)

pg. 1), but this is the only protection provided to animals being used in animal agriculture. Even these laws, which are not uniformly applied, do not reflect a consideration for the intrinsic value of animals under the market paradigm, but instead only reflect their instrumental value to the agribusiness industry.

The criticism of factory farming's treatment of animals because the lives of animals have intrinsic value does not condemn all consumption of animals. In cases where subsistence hunting and fishing are necessary for human survival, both are morally permissible (Taylor 293). If neither humans nor non-humans are given superiority, humans are then not required to sacrifice themselves for the sake of an animal, just as a bird is not required to sacrifice itself for the sake of a worm. Biocentrism, which holds that all species have equal inherent worth, differentiates between basic and non-basic interests, where eating for survival is a basic interest, and killing elephants for their ivory tusks is a non-basic interest (Taylor 274). Humans can retain a respect for nature while pursuing these basic interests and also doing minimum harm. Pursuing non-basic interests like hunting elephants for their tusks does not respect the intrinsic value of the lives of the elephants, but instead instrumentalizes them in order to commoditize the products their bodies produce. Earth's Community of life is a system of organisms that are dependent on other organisms, and it is possible to respect this without completely condemning the consumption of plants and animals by human beings. Factory farming, however, because of the maximum efficiency encouraged by the principle of Kaldor efficiency does not insure minimum harm is done to animals while continuing to consume them for survival, nor is it the only option for raising animals that is possible.

Factory farming dismisses the suffering of animals and only considers their value in generating profit for the agribusiness industry. The Kaldor standard maximizes wealth, so the animals are kept alive for slaughter and nothing more. All animals involved in the factory farming process suffer in the crowded conditions they are forced to live in because stuffing more animals into one factory means that more meat products can eventually be produced and sold.

Animals living in factory farms are denied use of their basic instincts, as they live in overcrowded indoor areas without experiencing changes in daylight, the feeling of ground underneath their feet, and having normal interactions with the other animals. These animals are fed unnatural diets, and then live in their own waste which leads to various health problems at the time of slaughter. The animals live lives designed without consideration of their suffering because all that matters under the market paradigm is that they are creating money for the industry. Policy and law will not change under the market paradigm, because Kaldor efficiency does not acknowledge the suffering of the animals unless a failing to prevent such suffering interferes with wealth maximization.

Overall, when law is guided by the core principle of Kaldor efficiency, the lives of animals involved in the factory farming processes possess only instrumental value in creating wealth for the agribusiness industry. The priority of Kaldor efficiency maximizes wealth for the industry, without consideration for the suffering of the animals whose lives are mere instruments in the process of creating saleable products. The suffering of farm animals is permissible within the market paradigm as long as they are working under the normative direction of the Kaldor efficiency principle. A sound moral

constraint linked to intrinsic value is lacking under this principle, and the result is an unethical level of suffering experienced by animals that are commodities in the industry. If the lives of animals, who are sentient beings, have no intrinsic value under the market paradigm, then the paradigm is not adequate for designing law and policy that regulates animal agriculture because it will never consider the suffering of animals as wrong as long as it prioritizes the goal of maximizing wealth for the industry.

The lives animals lead before turned into meat or before they produce various animal products like eggs and dairy are determined by a market system that values only what is good for humans. Federal law allows factory farming in spite of its unethical aspects through a lack of policy preventing cruel treatment of farm animals. Legally, farm animals have no standing and no rights. There are two federal policies addressing the treatment of farm animals, but they only have to do with proper treatment during transport, and humane killing methods. The only federal law that protects farm animals is the Humane Methods of Livestock Slaughter Act (HMLSA) which was enacted in 1958 (Miller 59). Issues with these laws are that they do not cover poultry animals, and that there is nothing preventing the animals from being forced to live in high-stress conditions that provide no opportunities for thriving before their deaths. Also, on a state level, the overwhelming majority of states exempt farm animals from their anti-cruelty laws (“Legal Protections for Farm Animals” 1). If agribusiness corporations worked under a better guiding moral principle than Kaldor efficiency, one that considered the lives of the animals as valuable apart from their instrumental value to the business, this lack of legal

protections wouldn't necessarily be such a problem. Because that is not the case, animals suffer from not being given the same protection as pets like dogs and cats.

It has become acceptable to allow factory farmed animals to suffer as long as it is done mostly behind closed doors, and it is backed by a corporation effectively seeking wealth maximization. Corporations are given legal standing as entities apart from the people that are associated with them, while animals are classified as legal property (Ibrahim 92). A society functioning within the market paradigm seeks to protect what will promote wealth maximization. Corporations are protected as they promote Kaldor efficiency, where farm animals are commodities having only instrumental value and are therefore not protected by any laws. Harrison eloquently speaks of this observation in the 1960s, and this has become even more of a norm today as seen in the following quotation, “[i]n fact if one person is unkind to an animal it is considered to be cruelty, but where a lot of people are unkind to a lot of animals, especially in the name of commerce, the cruelty is condoned and, once large sums of money are at stake, will be defended to the last by otherwise intelligent people” (Harrison 175). The government is in place to protect the rights of what is considered valuable. But even the people working at factory farms are not fully protected because they are not considered valuable unless uninjured and able to work. Farm animals are only valuable in what they provide for the humans willing to buy and consume their products, who are often unaware of what is going on pre-purchase. It has become the norm to allow factory farming animals to live in heinous conditions because it is being done by corporations and as Harrison explains, money is at stake.

Although many people are becoming increasingly aware of the harms experienced by animals living in factory farms, it is important that this information become pertinent to the policy decision process when considering what the ethical way to treat animals is. The lives of animals are only made comfortable enough for them to stay alive, even though it would be inaccurate to say they are truly living when their most basic instincts are taken away from them. Their lives are stripped of any sort of enjoyment or expression of natural instincts, and replaced with pain, boredom, and the inability to live healthy lives. As Harrison explains, “the animal is not allowed to live before it dies” (Harrison 37). Animals in factory farm settings are deprived of natural instincts like choosing their own food, having motherly attachment, having a normal sleep cycle, and living on solid ground instead of metal slatted floors (not surrounded their own waste). Animals in both the wild and traditional farm-type settings will forage and browse looking for their own food. They like the feeling of solid ground under their feet as well as the ability to look for food. In the wild pigs will spend up to six hours a day foraging for food and exploring the world around them. They are physiologically and gastronomically the farm animals closest to human beings (Johnson 124), and yet they are often deprived of expressing the natural behavior of even being able to turn around, because this would diminish the amount of money that can be made by those in the industry who profit from them.

Pigs, as well as chickens and cows, are also exposed to terrible air quality that negatively affects their health during their purposefully shortened lives. High levels of ammonia and what is basically air-borne urine cause as many as 70 percent of hogs to be

afflicted with pneumonia when they are killed (Kallen 34). Cows and pigs on farms that are not set up like industrial factories will roam and eat grass while distributing their waste in a way that makes it possible for them to avoid it, and such that farmers don't have to create toxic lagoons to store it.

Cows are also forced to eat a diet that is abnormal for them, causing further health issues. In factory farms today these animals can only eat what is given to them, which is a grain-based diet, and not the normal diet for a cow. At the time of slaughter over 13 percent of cows are found to have abscessed livers (Imhoff 99). These abscesses emerge because the digestion system of a cow is meant to eat grass, not mass amounts of antibiotic-filled grain. The health and well-being of all factory farm animals is compromised in order for factory farmers to be able to reap the most meat and animal products in the shortest amount of time.

Pigs and cows have already been mentioned, but the lives of chickens under the industrialized agricultural model are unacceptable as well. The effects on chickens due to trying to produce as many animals or eggs as possible are only negative. The close quarters chickens are forced to live in have disastrously negative effects on their physical and psychological health. Painful ulcers and skin problems as a result of ventilation problems, or a moist environment caused by things like water spills or diarrhea from bad nutrition, affect up to 20 per cent of broiler chickens (Johnson 122). They are forced to live in a controlled yet overcrowded environment that encourages rapid growth, but also feather pecking and cannibalism. (Johnson 122). The unnatural environment of having to live almost on top of each other is not conducive to any level of flourishing. They are

also often faced with problems of bone disintegration from lack of exercise, which people can even experience with proper calcium intake. The terrible environments chickens are forced to live in cause them to act “as if they are bored to death,” (Johnson 123), which is often not far from the truth. Beak trimming is a practice that must be done to chickens and turkeys when they are kept in constantly lit, crowded environments, which cause negative psychological effects that can make them turn on each other. The Farm Animal Welfare Council says this practice should only be a last resort according to Johnson (131), but it is a common and painful practice in the industry. Research shows the pain experienced by debeaked hens is long lasting, and comparable to the post-amputation (‘phantom limb’) phenomenon felt by humans (Johnson 131).

Although the lives of chickens have been shortened so much by breeding, antibiotics, and indoor living conditions, even one day or week of this life is unethical. Working off a model of cost benefit analysis, it seems costly to allow a lot of birds to die from the psychological trauma or the physical stress of living in such an environment. Some chickens simply won’t even eat due to their lack of motivation to live; in fact, “[t]wenty-eight thousand birds a year have to be killed simply because they are unhappy when caged” (Harrison 181). This statistic was recorded fifty years ago. It is most likely the case that this number has increased, considering the number and size of factory farms has increased along with the population. The fact that thousands of chickens die a year from the factory farming process shows that their lives are disposable if they are not providing the value of making money for the agribusiness industry.

Overall, the reality of the agricultural system working within the market paradigm is that the lives of animals and the environment are only as valuable as the money they can make the industry. Allowing animals to live in such deplorable conditions is unethical, but becomes an externalized cost that is not taken into account by Kaldor efficiency. Farming has even turned into a problem when it comes to the fishing industry, where many fish and animals are caught in nets and have to be disposed of, with their lives not having any value. Foer argues that a label for trawled shrimp from Indonesia should say “26 pounds of other sea animals were killed and tossed back into the ocean for every one pound of this shrimp” (49). The lives of these sea animals that are killed as bycatch are not considered to have any intrinsic value, as they can be disposed of as simply instruments in the process of fishing for saleable products. This is the reality of factory farming in the U.S. and many other modernized parts of the world today. It is guided by Kaldor efficiency which is an inadequate principle when it comes to guiding how humans interact with people, animals and the environment in the context of animal agriculture.

Besides the lack of consideration of intrinsic value, some may also argue the market paradigm does not encourage factory farming, and even if it does, that factory farming does not create environmental degradation. This argument maintains that Kaldor efficiency provides an imperative to maximize wealth through the process of food production. But this is true of any scale of farming. Smaller-scale farmers also want to make money off their products, but factory farming takes this inclination to extremes. It

was acceptable a century ago to have all people rely on localized, organic food production, but with a rapidly growing population of people who must be freed from the agricultural process due to the demands of industrialization, the argument is that factory farming has become a necessity. People have strayed away from proper animal husbandry to find new jobs, and it is a relief for not everyone to have to grow their own food. This allows people to pursue varied interests, and innovate in ways to better human livelihoods in more ways than in the field of agriculture. Factory farming has limited the number of people needed in the food production process, while still providing the amount of meat and animal products necessary to feed a global population near seven billion people. The market paradigm creates the context for the encouragement of factory farming, because it both creates and then satisfies a demand for cheap meat and animal products.

Kaldor efficiency also encourages economies of scale; large corporations have therefore taken over the animal agriculture industry in the United States. This conversion also has to do with the efficiency of fewer and fewer people wanting to farm while there is an increase in the need for food. Large corporations have gone into contract with smaller-scale farmers in order to keep these farmers afloat in an industry that seeks to produce cheap meat and animal products. Going into contract with these large corporations allows farmers to get out of debt and work at an economically viable farm again. In this way, corporations have worked with farmers and have created an efficient process in the pursuit of producing as much food as possible. These agricultural methods have been around for decades and have been providing food for people of the U.S.

efficiently, but the resultant factory farming produce a unique environmental situation that presents new challenges in dealing with pollution.

While factory farming may create some environmental degradation its advocates claim all farm processes do the same? Some level of environmental degradation is inherent in any agricultural process. Topsoil is used to grow crops for both plants and animals, and this will continue in the future. Much of earth's land is used for livestock grazing. There is also plenty of open space left in the world if factory farming processes should create a need for more land, as they probably will. Any kind of agricultural process will create environmental degradation; therefore, to question factory farming alone also brings into question the environmental aspect of any kind of farming. From this perspective, it is irrational to assume all people will abandon our agricultural processes and become foragers, thus it is most effective to view factory farming as just a step in the evolution of animal agriculture.

Furthermore, in order to prevent any sort of environmental degradation that may be specific to the process of factory farming, the EPA and DEP have standards and regulations that factory farms must follow in order to stay in business. For example, factory farms must have nutrient management plans, ensuring that the large amounts of waste created by factory farms are used to fertilize crops of various kinds of plants. Waste is going to be an issue regardless of the size of the farm or the number of animals being kept there, but these plans make sure it can be used toward a purpose. At a smaller-scale farm, the waste is absorbed back into the soil upon which the animals are living. With nutrient management plans, the waste can be put into use to fertilize crops

(pennfuture.org 8). There are people working toward insuring that factory farms fall in line with the policies that have been created to prevent any sort of serious environmental harm, and for this reason, so long as farms comply with laws, Kaldor efficiency is adequate in guiding treatment of animals in factory farms. I contend, however, that this is not the case.

The dominance of the market paradigm does in fact encourage factory farming. Factory farming is a streamlined process managed by large agribusiness corporations with the main focus of producing as much meat and animal products as possible, in order to maximize Kaldor efficiency and make the greatest possible profit. Large corporations own all parts of the production process, and therefore are able to control them. Corporations, each which can have the legal standing of a person due to the laws created in the U.S. that protect the imperative of wealth maximization, have been able to gain extensive control over the animal agriculture industry, specifically they control both the means of production as well as the prices put on meat and animal products. The market for meat depends on the fact that when many people do not have excess income, they will buy the less expensive food option. Small-scale farmers are trying to compete with agribusiness companies that can make the prices much lower than the small-scale farmers can compete with. Often then, small farmers who want to continue farming, have the land, and want to stay in business, end up doing contract work with agribusiness corporations as their only economically viable option.

Being under contract means they are not able to control how they treat the animals and land, as they don't really own them anymore. Although the farmers often disagree with the standards of care defined by the agribusiness corporations who contract them, they must comply if they want to work for them. They must compete within the market as determined by the principle of Kaldor efficiency. This is a tough decision for farmers who may have been working in the agricultural industry for many years and want to continue, but must comply with demands they morally disagree with in order to maintain their farming way of life. Often these farmers become so indebted to agribusiness corporations that they barely make enough money each year to get by, and have little hope of ever getting out of debt as farmers.

Agribusiness corporations are often run by businessmen, not farmers, who, because Kaldor Efficiency is the sole operating principle by which they measure success. They are not at all concerned with environmental and animal ethics but only making a profit through maximizing wealth. For this reason, they pay veterinarians and animal scientists enough money to find out how many animals can be squeezed into factory farm settings in order to stay alive and produce the most meat and animal products as possible, regardless of their living conditions. These conditions created are in fact decent enough to keep the animals alive, but allow them no sort of thriving. At the time of slaughter animals are often riddled with uncomfortable health problems, and during their shortened lives some even die from a lack of stimulation and observable interest in living that results in the animal stopping all eating and movement. Although this seems morally

wrong to most people, the regulations of the market paradigm allow it, because it does not hinder the functioning of Kaldor efficiency in promoting wealth maximization.

The allowance of this industrialized form of agriculture with little regulation under the market paradigm has also led to serious environmental degradation in the United States. Factory farms are the leading cause of water pollution in the U.S., and also contribute to air pollution, greenhouse gas emissions, and soil degradation. The main environmental issues that result from factory farming have to do with the feed and waste aspects. Considering the majority of meat and animal products in the U.S. come from factory farms, a massive amount of animal feed is needed. Much of the agricultural land in the U.S. has been devoted to growing corn and soybeans to feed to livestock. A quarter of the earth's land is used for livestock grazing, and even more is used for this intense monocropping of genetically modified corn and soybeans, all of which lead to the degradation of topsoil, which is decreasing in quality at an alarming rate. The pesticides and fertilizers used to continue the growing of monocrops on depleted soil also leads to runoff that goes to waterways and leads to things like ocean dead zones.

Keeping unnatural numbers of animals confined indoors creates unfathomable amounts of waste that cannot be absorbed by natural processes. This waste has to be dealt with in some way. One way is for the farmer to create a nutrient management plan that uses the waste to help fertilize fields. However, even when these plans are created though they are simply not followed, or much more waste is used on crops than is necessary, leading to more runoff and water pollution. Another option is to create large pits that become waste lagoons. These lagoons create toxic fumes, horrible odors, and

the waste in them often seeps into the ground. They are also known to be over-filled, and then if something like a hurricane and/or flooding occurs, the integrity of the pits is severely compromised, contaminating surrounding community and water supply. The odors and toxic fumes caused by the mass amounts of waste are not only unbearable for affected communities and those working on or near factory farms, but contribute to greenhouse gas emissions. Animal agriculture is responsible for 18% of all greenhouse gas emissions that are caused by human activity, as factory farming is a human construction. This is not only referring to CO₂, but methane and nitrous-oxide as well.

Agribusiness gets away with their unfair treatment of animals and significant environmental impacts because there are few laws preventing their practices, and the laws that exist are not enforced. The agribusiness industry has so much control that it is nearly impossible for agencies like the EPA or the state departments of environmental protection to enforce the laws that are in place. The laws that regulate factory farms do not provide adequate protection against the environmental harms produced by factory farms. Without adequate enforcement and stronger environmental protections, the goal of Kaldor efficiency will eventually override these concerns.

Biocentrism can again be a way to correct environmental problems resulting from the role of Kaldor efficiency. If we understand all as species important elements of a large interdependent system and don't assume human superiority, the environmental problems of factory farming are unethical. People are going to continue living in the kind of societies we have created, so, there is going to be some level of environmental degradation. Our laws can be guided by a much more justifiable core principle than

Kaldor efficiency. A guiding principle here would be that of “minimum wrong” (289), which seeks to create as little pollution and environmental degradation as possible.

Considering factory farming is an industrialized process that has only been around for about a century, it is not the only option and it is definitely not the option that produces the minimum wrong for all species involved. Taylor argues if industrialized processes are hurting people, animals, or the environment, they should be scaled back in order to respect the value of all species being affected (290). Factory farming is harming the environment in significant ways, and therefore those living within the environment.

The market paradigm, with its core principle of Kaldor efficiency, is inadequate for designing law and policy for the regulation of animal agriculture because it encourages factory farming and the environmental degradation it produces. Under the meta-policy of the market paradigm the state is minimal and has two functions: “to police and adjudicate contracts and to provide a surrogate decision process that can substitute when markets fail and allocations cannot be made without the involvement of government” (Gillroy 19). Wealth maximization is the maxim or imperative of policy makers working under the market paradigm. Because of this, the state tries to regulate factory farming as a precursor to market exchange as little as possible in order that the industry can make as much money as possible, regardless of how much environmental damage it causes.

Often the pressure for low production costs in the agricultural industry is attributed to individual farmers and a demand for cheap food by consumers, but the drive

toward concern for economic efficiency happened around the time of World War II, as the country sought cheaper and more abundant food, which created market-driven competition among producers and among retailers to sell food as cheaply as they possibly can. In the United States it is estimated that only 19 cents of each dollar spent on food by the consumer goes to the farmer (Appleby 233-234). Farmers' incomes have not gone up in spite of the improvements in efficiency when it comes to producing a greater number of animals. This is also because of the massive subsidies from the government.

Specifically, the overwhelming amount of money for agriculture goes toward promoting factory farming through subsidizing corn and soybeans, which are mostly grown for livestock feed. Researchers at Tufts University estimate that in the United States alone, between 1997 and 2005 animal agriculture industry saved over \$35 billion because of federal farm subsidies that lowered the price of the feed they purchased (Imhoff 65).

With these feed discounts, farmers are able to purchase corn and soybeans for less than what it takes to make them, and it amounts to a 5 to 15 percent reduction in operation costs (Imhoff 68). A significantly smaller portion of subsidies goes toward things like organic vegetable farming, which is also reflected in the price of organic food. Constant monocropping of corn and soybeans takes nutrients from the soil without replenishing them, causing these farmers to use mass amounts of fertilizers that then end up in runoff and cause water pollution.

The market paradigm defines a minimal role for the state and consequently, government regulation of agribusiness industry's massive factory farming operations is minimal. Subsidies also promote the status quo by making it easier for corporate farmers

to grow corn and soybeans that provide cheap feed for factory farms. Seventy percent of the grain produced in the United States is fed to animals (Miller 46). Transforming much of the remaining U.S. farmland into crops of corn and soybeans, often genetically modified, is risky. Today's industrial agricultural crops rely on genetically engineered monoculture crops. They produce commodity crops like corn or soybeans to be sold in the open market, "which is actually controlled in every sector, by a handful of giant corporations, who drive down the prices paid to farmers" (Kallen 18) These giant corporations lobby the federal government to provide these subsidies, which allows them to control the market without regulation. This monocropping that leads to soil degradation and water pollution through overuse of fertilizers is also risky because if something were to wipe out one strain of corn or soybeans, the effects could be as disastrous as those that caused the Irish potato famine. An argument could also be made that the mass amounts of grain that go toward feeding livestock (whose natural diet is not even grain) could go toward feeding people, without losing the energy lost when feeding it to animals and then feeding the animals to humans. Almost every farm in a largely agricultural state like Pennsylvania is either corn or soybeans, and the state is not regulating this, but promoting it because the interests of those benefitting from it are paramount.

Much additional environmental degradation is caused by industrialized agriculture. Arguably the most important part of growing food is the soil itself. With almost one third of land on the planet dedicated to livestock, this is a concern. In the United States croplands are mainly grown to feed animals and this intense monocropping

erodes soil. This soil depletion is taking place at a rate of at least two billion tons of soil a year, and in 1970 the National Academy of Sciences found the United States had already lost one third of its topsoil (Johnson 170). It can take up to 500 years to form one inch of topsoil through natural processes. This destruction of topsoil in the U.S. is alarming as it is integral to growing food, and the incessant monocropping of corn and soybeans only degrades the soil further because it doesn't return the proper nutrients to the soil.

Because of the already immense amount of land taken up with crops devoted to livestock as well as just livestock, people have misguidedly turned toward rainforests. Millions of acres of tropical rainforest are burnt down each year, wasting the timber completely, to make room for livestock. As Johnson argues, "This may be economic sense, but it is ecological insanity" (Johnson 171). The life of the rainforest is in the plants and animals living on top of the soil, and the soil itself is not nutritionally sound for agriculture. The soil of a rainforest like the Amazon is nutritionally poor, and even fertilizing the soil will not be effective enough to grow things for many years. Grazing cattle on this land depleted the nutrients and the soil can be degraded by the animals compacting it. Cutting down all the rainforest to make way for crops and cattle is insanity, but again the countries allowing this are also being driven by profits and influenced by the dominance of the market paradigm.

The proliferation of factory farming has also increased our carbon footprint on the earth. Agriculture is 18% of our carbon footprint (Miller 132). Just the methane produced from the bodily gases of cows adds to our carbon footprint. One animal

requires many more gallons of water to produce a pound of meat than it would to produce a pound of grain. Something that also may be overlooked here is that it takes fossil fuels to grow corn and soybeans, transport fertilizers and animals, and then ship the products. Michael Pollan bought one cow and watched its journey in the factory farming industry until it was killed for its meat, in order to calculate its personal carbon footprint. The results are surprising. He calculated that his cow, No. 534, ate 25 pounds of corn a day eventually reached a weight of 1,250 pounds, and consumed in its life 284 gallons of oil (Imhoff 102). During a time when climate change is a serious concern and fossil-fuel use needs to be regulated in order to cut carbon emissions, if a cow is basically a fossil-fuel machine then this industry needs to be regulated, not subsidized. Industrialized agricultural is contributing significantly to environmental destruction in many ways, and is not being regulated because the state is minimal under the market-paradigm, and the only objective of policy makers is wealth maximization which ultimately is not distributed in a fair way.

The biggest environmental issues that factory farming causes regard the feed and waste involved. *Factory Farm Nation's* report explains how the merging of agricultural firms over the past 30 years has aggregated decision making power in increasingly fewer hands, allowing feed to be sold at extremely low prices while doing little to address waste management (17). The process of growing mass amounts of inorganic corn and soybeans, along with the production of mass amounts of animal waste, creates a problem of nutrients, chemicals, and waste. The run off from agricultural crops pollutes waterways, groundwater, and eventually can end up polluting oceans as well. Agricultural

production is the number one source of groundwater contamination in the United States (Miller 108). Ineffective waste management due to the state not wanting to interfere with the business of industrial agriculture presents many serious problems. The Clean Water Act that was passed in 1972 doesn't allow any discharge of pollutants into public water, but the law is not enforced. Different state agencies under the authority of the EPA set specific limits and conditions' on how factory farms are supposed to discharge waste into local bodies of water (*food&waterwatch* 19). The Department of Environmental Protection (DEP) for example is authorized by the EPA to regulate CAFOs, but these regulations are inadequate. CAFOs have to apply for a National Pollutant Discharge Elimination System (NPDES) permit because they are a potential source of severe water pollution, and farms can get approved for a Nutrient Management Plan (NMP) which involves handling waste by using it as fertilizer for crops, etc. (Snell-Zarcone 4). This may seem like a good plan, but factory farms produce too much manure, and when it is spread on crops, there is so much excess that it ends up in runoff. One significant issue with this is that 85% of the nutrients in the waste are not dealt with and just end up in runoff (Snell-Zarcone 5). Even though manure makes good fertilizer in small amounts because it contains nitrogen and phosphorous, in high concentrations like this it becomes a toxic pollutant (Miller 22). These nutrients eventually have a detrimental effect. Specifically, when this waste is sprayed on farmlands or leaks onto the ground, concentrated levels of nitrogen and phosphorus enter the water supply and spur on mass amounts of algae that choke off oxygen and therefore kill aquatic life (Kallen 50). The

dead zone in the Gulf of Mexico, which comes from both chemical fertilizers as well as manure fertilizer, covers over 5,000 square miles.

In addition to the fact that this permitting process is ineffective when the nutrient management programs do not work, in 2011 only 41% of CAFOs actually had permits (Snell-Zarcone 19). A study done by the nonprofit group *Citizens for Pennsylvania's Future* on CAFOs affecting the Chesapeake Bay watershed, found that even though the Lancaster County Conservation District tried really hard to bring livestock operators into compliance with their nutrient management plans, 59 percent of the farms were still in violation of their plans ("A Barrel Full of Holes 4). Their research looked at farms affecting the Chesapeake Bay watershed, and of the 19 farms big enough to count as CAFOs, six of them don't even have CAFO permits ("A Barrel Full of Holes" 12). It seems there is an obvious need for enforcement of the policies that are in place to keep public water clean, but this does not happen because it requires going against business-as-usual operations of massive agribusiness corporations. With the federal level agriculture policy supporting growth of corn and soybeans to feed to livestock along with ill-enforced waste policies, factory farming is able to persist and ends up being easier and more lucrative than smaller scale farming. Federal policy favors wealth maximization and factory farming as it is a lucrative industry.

Another practice used on factory farms that is not regulated in any substantial way is the overuse of antibiotics, which leads to the risk of disease spreading. This potential risk has been actualized before, and been discussed for a long time. The 1918 pandemic caused by an avian flu killed 24 million people, and the World Health Organization

expects a flu like this will occur again as a result of factory farming. “The relatively conservative WHO suggests ‘a relatively conservative estimate – from 2 million to 7.4 million deaths’ if bird flu jumps to humans and becomes airborne (as swine flu—H1N1—did)” (Foer 126), and could potentially be much greater. H1N1 originated at a factory farm in North Carolina. In a book written in 1964, Harrison discusses the fact that scientists were very much aware of the potential for factory farms to be breeding grounds for bacteria, and then antibiotic-resistant bacteria when the animal feed is filled with antibiotics. Scientists had noted that broiler units were the biggest single risk of disease spreading (Harrison 50). If such risks were recognized when the Ministry of Agriculture spokesman addressed it in 1962, why was nothing done to ameliorate the problem? Now the overuse of antibiotics is even more of an issue with the rise of antibiotic resistant diseases, and it has been proven that these diseases have affected millions of people. Many believe a pandemic from something like an avian flu does not raise the question of “if it will occur” but “when it will occur”. In response to new antibiotic resistant strains of staphylococci, a Farmer and Stockbreeder Vet warned, “Let us abandon oral antibiotics before it is too late” (Harrison 156). This warning was in 1964 but nothing was done to curtail the industry’s expansion or to regulate its practices. Policy makers working under the only maxim of wealth maximization did nothing to try to alter the industry’s practices before the risk of antibiotic-resistant disease became even greater.

Although there are clear, documented ways today’s industrialized agriculture degrades the environment, they continue without adequate regulation. If factory farms in

the U.S. are considered agricultural, these farms can receive immunity from different regulations like the Clean Air Act and Clean Water Act, but if they were instead considered industrial enterprises, they would be subject to industrial regulation of their pollution and obligated to pay the cleanup costs that result from their farms (Imhoff 72). Because these factory farms are technically producing food like the agricultural industry does, they often receive these immunities. Factory farms, though, function more like industrial factories than farms and should be forced to be regulated as such. Imhoff explains how the EPA is now legally required to develop new regulations that necessitate issuing discharge permits for large-scale animal agriculture facilities similar to the types of permits that are issued to urban factories (Imhoff 212). The question is are they really working? Imhoff explains how an evaluation report found these discharge permits are not working. “After reviewing all regional EPA offices, the report concluded that large CAFOs were escaping oversight via regulatory exemptions” (Imhoff 216). Factory farms are receiving these exemptions without paying for the environmental costs they are causing. People trying to document these environmental and political problems are silenced in many different ways, because policy makers aren’t interested in fighting with agribusiness corporations that are doing well at maximizing wealth for themselves while feeding their constituents.

The Pew Commission funded a two-year study to assess the effects of factory farming but couldn’t complete the review because of obstacles. For example, representatives from the industrial agriculture industry were discouraging “authors from assisting [them] by threatening to withhold research funding for their college or

university” (Foer 87). The industry is dependent upon people having no access to what actually goes on, and reveals this when it extends expensive resources to keep its flaws hidden. Even President Obama, who had empowered his secretary of agriculture to work with the USDA to do something about the concentration of power among a few giant agribusiness corporations in the industry, could not succeed against corporations that put millions of dollars and teams of lobbyists toward defeating the “biggest effort to reform the meat industry since the 1930s” (Foer 12). When it is even difficult for the president to have an effect on policy, it is clear the state is playing a minimal role on regulatory policy, while the agribusiness giants are having more power than they should.

The consequences of a lack of environmental regulation are further exacerbated by the immense difficulty faced by people negatively affected by the agricultural industry in fighting back. These people are forced to have to fight the industry because of minimal regulation of the industry which leads to environmental concerns. When the EPA pursued a case where a person who organized a grassroots group opposing factory farming in her community called CLEAN, the EPA was told by White House officials to withdraw from the case and never take on another of its type. Two of the chief EPA officials involved in the case resigned because they found it to be such an incredible injustice (Kirby 196). When it comes to factory farming, people like those in CLEAN are discouraged from participating in the decision-making processes in their towns when it comes to the building of new factory farms. In some states it is legal to file a SLAPP (strategic lawsuit against public participation) lawsuit which is a strategic lawsuit against public participation. This is a way to censor your opponent by forcing them to face the

cost of a legal defense. Corporations and large developers use these SLAPP suits against grassroots type groups that try to get in their way. SLAPP lawsuits are illegal in some states, but not all (Kirby 131). Because policy makers work with the primary goal of wealth maximization in mind, these SLAPP lawsuits aren't even illegal in all states. People who even misuse one of these corporations' logos could be put in jail, but a corporation is legally allowed to file a lawsuit that has the sole purpose of silencing people who try to protest its actions (Foer 94). The aim of the agricultural industry "is not to grow food, but to maximize cash" (Miller 161). The aim of the policy makers is to allow the industry to maximize its wealth, which they accomplish through inadequately regulating the industry and allowing the significant levels of environmental degradation it produces.

In conclusion, the market paradigm is not adequate in designing policy and law for the regulation of the environment in the context of animal agriculture, because it fails to consider the intrinsic value of the animals involved, and because it encourages factory farming which produces significant environmental degradation.

Part II: Paul Taylor's Biocentrism as an Alternative to the Market Paradigm

If the Market Paradigm is not adequate in designing policy and law for the regulation of the environment in the context of animal agriculture, what paradigm should guide how law and policy are designed for regulating animal agriculture?

I will argue that Paul Taylor's principle of biocentrism is more adequate for designing policy and law for the regulation of animal agriculture because it fully considers the intrinsic value of the animals involved, and because it discourages factory farming and the environmental degradation it produces.

Because the policy paradigm drives the acceptable decisions within a policy space and since the principle of that paradigm is core to this process, then, since the market paradigm and its core principle of Kaldor efficiency is inadequate to protect the intrinsic value of animals and the environment, we must look toward new paradigms to replace the old one. A paradigm that would consider the intrinsic value of animals and also discourage factory farming with its inherent environmental degradation would be one based upon Paul Taylor's biocentric paradigm (Taylor 99). The core principle of this biocentric paradigm is being-egalitarianism, and it is grounded in an attitude of respect for nature.

Paul Taylor's biocentrism is a life-centered, as opposed to human-centered, ethical system where living organisms including humans, animals, and plants, are valued

as worthy of respect. The core principle of being-egalitarianism holds that all living beings are equal: all living organisms have equal intrinsic value, or value in of themselves, as ends. This is different from instrumental value, which means something has value as a means to something else. From this principle that all living organisms have inherent worth, Taylor derives two moral judgments: one being that it is deserving of moral consideration as a moral subject, and two being that all moral agents have a prima facie duty to promote this being's good for the sake of the being whose good it is (Taylor 75). Moral agents include humans, and a few mammals, who have the capacity to make rational decisions. Plants, animals, and humans who do not have this capacity are considered moral subjects, and therefore must be respected by moral agents (Taylor 19). All moral subjects are deserving of our concern, because they have their own inherent worth as members of the Earth's community of life (Taylor 13), not because they can be useful for humans in pursuing their own actions, which would be a human-centered perspective.

Taylor's biocentrism can best be described through his four core beliefs. The first core belief states that humans are members of the Earth's Community of Life "in the same sense and on the same terms" with all other living things that are members of the same community (Taylor 99). This establishes all beings having a membership in a moral community. Although there are in fact differences between humans, plants, and animals, these differences must be respected in order to maintain environments where each individual can flourish. The second core belief is that all species, including humans, are vital elements in an interdependent system "such that the survival of each living

thing, as well as its chances of faring well or poorly, is determined not only by the physical conditions of its environment but also its relations to other living things” (Taylor 100). These relationships among living things will determine the physical conditions of the environment, where a respect for nature or lack of this respect can have drastic consequences for the members of an ecosystem. The third core belief states that all organisms are “teleological centers of life,” which means each organism is an individual pursuing its own good (Taylor 100). Lastly, the fourth core belief states that “humans are not inherently superior to other living things” (Taylor 100). A moral agent can then practice this set of beliefs through a respect for nature.

Taylor’s attitude of respect for nature consists of four dispositions, the first and most foundational being the valuational. The valuational dimension of a respect for nature is the disposition to “regard all wild living things in the Earth’s natural ecosystems as possessing inherent worth” (Taylor 81). The three following dispositions stem from a basis in the valuational disposition. The second disposition is the conative dimension, which is the disposition to “aim at certain ends and to pursue certain purposes”, these ends and purposes being to avoid harming or interfering with the natural status of living organisms and to preserve their existence as part of the order of nature (Taylor 81). The third dimension is the practical dimension, which has to do with a moral agent’s practical reason. A person has to be able to consider the different options and outcomes regarding a decision, and use his or her will to make the decision that best aligns with Taylor’s four core beliefs (Taylor 82). The fourth dimension is then the affective disposition, or the disposition to have certain feelings as a response to different events in the world (Taylor

83). Although this seems the most abstract of the dimensions, it can be assumed this affective disposition would flow naturally from embracing the core beliefs, which together create a biocentric approach to animal agriculture.

Although it could be argued ecocentrism could instead provide an adequate basis for a paradigm, a holistic view like this with the major emphasis on ecosystems does not include the idea of moral agents having duties to other individual organisms because each organism has individual inherent worth (Taylor 286). One can imagine a high-tech factory farming system that keeps an ecosystem in check environmentally, but still completely disregards the well-being of the animals being used in the process. This would not fix the problem of Kaldor efficiency finding no intrinsic value in the lives of animals. Biocentrism, as defined by Taylor, on the other hand is an ethical system that believes all living things have inherent worth. This ethical system says each individual organism does possess inherent worth, which is important in the criticism of animal agriculture. Biocentrism values the environment as ecocentrism does, but because it consists of significant interdependent individual organisms.

My argument is that a paradigm based on Paul Taylor with the biocentric core principle of being-egalitarianism would be adequate to guide law and policy for animal agriculture, which has been misguided by the market paradigm up until now. Taylor's biocentrism would require policy and lawmakers to fully consider the intrinsic value of the animals involved in the process of factory farming, and would discourage factory farming because of its inherent environmental degradation.

All of Taylor's biocentric core beliefs support the idea that animals have intrinsic value and should be treated as such through his dispositions based on this respect for nature. Taylor explains how his biocentrism supports that humans and animals are equal members of the Earth's community (Taylor 99). All species are "integral elements in a system of interdependence" (Taylor 100) where the good of each living thing is dependent upon the health and well-being of other living things that make up its surroundings and environment. This ethical system supports the idea that animals, including farm animals like those being used for factory farming, are important members of a system but also have a good of their own. The welfare of one organism is dependent upon the welfare of the other organisms, and for this reason it is important to respect individuals in order to take care of both the individuals and the whole.

Taylor's system also supports the idea that each organism on the Earth should be allowed to pursue its own good (Taylor 100). This means every farm animal as a living being has its own good apart from its instrumental value to provide subsistence for humans that it should be allowed to pursue with a reasonable level of autonomy. As I have discussed, at present humans maintain complete control over the lives of factory farmed animals without allowing them to express even their most basic instincts. These animals thus are not allowed to pursue their own good or exercise their own autonomy, as they are subjected to unfulfilling lives with no consideration of what is normal behavior to their species. An animal on a small farm that is allowed to roam and live its life in a natural way still has its intrinsic value considered, even if its instrumental value is also being considered when used for some kind of meat or animal product.

All of these core beliefs are then substantiated by the fourth one that says “humans are not inherently superior to other living things” (Taylor 100). This belief requires that the life of an animal cannot be used as an instrument and inflicted with severe levels of suffering simply to provide food for a human, because the human is not superior to the animal. As was previously discussed, such a belief need not require humans to avoid consumption of animals (or plants), because the interdependence of all organisms on the earth requires some to eat others, and humans are not required to sacrifice their lives for animals as animals are also not required to do so for humans.

This appreciation for the intrinsic value of each animal would change the practices of factory farming. Taylor provides four dispositions (Taylor 80) that if a person possesses give moral status to all organisms without employing a concept like rights. As he explains:

“Everything which people hope to achieve by such an extension of the concept of rights can equally be accomplished by means of the ideas of respect for nature and the inherent worth of living things, along with the structure of thought that supports and makes intelligible a person’s taking the attitude of respect and regarding living things as possessing inherent worth” (Taylor 226).

The first dimension of these dispositions is the valuational dimension which requires an attitude of respect for nature that regards all living things as possessing inherent worth (Taylor 81). This inherent worth is attributed to living things, including nonhumans, like farm animals. The second dimension requires to avoid doing harm to or interfering with the nature status of wild living things (Taylor 81), and “the purpose of preserving their existence as a part of the order of nature” (Taylor 81). Because factory farming interferes with the order of nature as it disregards any natural aspect of life for farm animals in order to make the most product and profit, Taylor’s standards would require subsequent

policy change that would discourage the practice of factory farming and its consequent environmental degradation. The third dimension, the practical dimension, means using our will to make the right decisions based on the biocentric core beliefs. Although a policy maker may cause less controversy approving a factory farm in a certain area, he or she would need to disallow the process as it does not respect the inherent worth of the animals involved.

Again, intrinsic value forces policy. Animals have inherent worth according to Taylor, and this must be considered when approaching a problem like how to deal with animal agriculture. According to the core principle of being egalitarianism, it is not more wrong to eat animals than plants because all species are considered equal, but this does not make any form of conscious suffering any less of a bad occurrence for a sentient creature, “[f]rom the standpoint of the animals involved, a life without such experiences is better than a life that includes them” (Taylor 295). Factory farming as practiced under the market paradigm becomes impractical when considered from this biocentric paradigm, but getting rid of factory farming would not mean humans would be sacrificing themselves for the lives of animals, as Taylor does not condemn animal consumption when it is necessary for survival. Factory farming does, though, cause a mass amount of unnecessary suffering, and the minimum wrong here would not be to continue factory farming, but to instead end it all together due to a consideration for the inherent worth of the lives of farm animals.

A consideration for the lives of animals as well as the environmental degradation caused by factory farming could be achieved by federal or state level protection,

equivalent to what is given to animals like house pets. Standards that protect the livelihood of farm animals by allowing them to live natural lives where they can pursue their own good for the majority of their lives, while also having instrumental value as meat or animal products, could also be considered. The most important part here is that law guided by the core principle of being-egalitarianism would *necessarily* have to acknowledge and protect the intrinsic value of all species, including farm animals.

A paradigm based on Taylor's biocentrism with the core principle of being-egalitarianism would also discourage factory farming with its inherent environmental degradation. Because the core beliefs that have already been explained maintain that all species are equal members of an interdependent community, environmental degradation to the degree created by factory farming is considered unacceptable. If humans are not superior to other species including plants as well as animals, it is not acceptable for humans to create mass factory farming operations that cause serious harms to the beings that make up ecosystems. This degradation negatively affects humans as well as nonhumans. A biocentric paradigm does not allow humans to harm nonhumans when there are other options that would produce less harm. An organism's chance of living well or poorly is dependent upon its environment because Earth's organisms are interdependent (Taylor 100), and any action that is going to cause some to live poorly when there are other options is not supported by Taylor.

Having respect for nature requires taking different actions, one of which is the conative dimension that maintains we must avoid doing harm to or interfering with the natural status of living things, and instead work toward preserving the order of nature

through minimal degradation of the environment (Taylor 81). Factory farming contributes to greenhouse gas emissions, and causes severe water pollution, and it creates health risks for people living near or working on factory farms. Using our will to make the right decision would here require humans to adopt more environmentally friendly forms of animal agriculture, because the lives being negatively affected by factory farming have their own inherent worth and purpose that needs to be respected.

Taylor's paradigm establishes a new standard for judging environmental degradation, as he explains, that to pollute the environment is to degrade its quality, and "the test of degradation is the capacity to be harmful to living things, human or nonhuman" (Taylor 289). Because all pollution is undesirable to living organisms, it should be minimized. To live with a respect for nature therefore requires doing what we can to minimize harm to all species, human and nonhuman (Taylor 289). We have already established that factory farming causes environmental degradation, so Taylor's paradigm would require we move away from this method of agriculture and toward methods that respect all organisms while maintaining a healthy environment. We must be willing to make changes for the good of all individuals, human and nonhuman, and this includes what Taylor refers to as using appropriate technologies. Taylor explains appropriate technologies as well controlled, small-scale operations that are energy-efficient and environmentally clean (Taylor 290). While I cannot here explore how this can be accomplished, the principle itself involves discouraging an environmentally unfriendly process like factory farming.

Further research will have to be completed to see how a paradigm such as this could be operationalized, but philosophically, a paradigm based on Taylor is more adequate to addressing the problems associated with basing animal agriculture law and policy on the market paradigm and Kaldor efficiency. Taylor's biocentric ethical system provides a basis for respecting the intrinsic value of animals, as well as reasons to protect the environment from severe environmental degradation like that caused by factory farming today. To successfully change today's factory farming processes a paradigm change must occur, creating a new foundation upon which to change law and policy. Taylor's biocentrism recognizes the importance of intrinsically valuing animals and protecting the health of the environment for all living beings.

In conclusion, the approach of Paul Taylor, with its principle of biocentrism, is more adequate for designing policy and law for the regulation of animal agriculture because it fully considers the intrinsic value of the animals involved, and because it discourages factory farming and the environmental degradation it produces.

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