

THESIS

HOLDING AGRICULTURE ACCOUNTABLE: MORAL OBLIGATIONS IN THE DAIRY
INDUSTRY

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ABSTRACT

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The present social attitude towards agriculture is in disarray. The average person has developed more robust opinions about the ethical implications of agriculture; yet remains more removed from the actual practice itself than in any other time in history. Meanwhile, the growing popularity of “ethical” foods such as organics, GM-free, etc., show the public’s growing concern with food. This tension has introduced several misconceptions and failed judgments about agricultural products, putting greater social and governmental pressures on the industry as a whole. Because of this, it is important for philosophers to consider the ethical obligations of agriculture and its associated responsibilities to incorporate moral values into its future practices. The goal of this thesis is to confront these issues by developing a historical account of the industry and its guiding paradigm, engaging the paradigm’s moral instability, and then offering a means of creating adequately pragmatic, yet ethically rigorous solutions.

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INTRODUCTION

The present social attitude towards agriculture is in disarray. The average person has developed more robust opinions about the process and ethical implications of agriculture than previously; yet remains more removed and estranged from the actual practice itself than in any other time in history. As of the latest census, less than 1% of Americans engaged in agriculture for their livelihood.¹ Meanwhile, the growing popularity of specialty foods such as organics, GM-free, hormone free, local, and seasonal goods show the public's growing particularity and education about food. This tension, however, has brought up several misconceptions and failed judgments about agricultural products, putting greater social and governmental pressures on the farmers and the industry as a whole. Ethical questions such as the welfare of food animals, the longterm sustainability of the industry and its practices, and the genetic makeup and health benefits of what is being harvested and raised, are now at the forefront of applied ethical works. However, unlike many other industries in this country, agriculture must balance the raising of actual living beings, and all of the associated complications that brings, with a market that demands the highest yields at the lowest cost. Other industries need only focus on market demands and have near complete control over the quality or

¹ US Environmental Protection Agency, Agriculture Census Overview. Retrieved from <http://www.epa.gov>

build of the product². Not so with agriculture, at least not fully. The farmer must ensure the continued health of the product she is raising, as well as develop advanced managerial skills to survive financially. This balance makes ethical discussions so much more complicated than they are presently construed, and demands that we address all of the varied aspects of agriculture. To ignore one aspect is to commit a fallacy of oversight and to make one's ethical demands of the industry shortsighted and irresponsible. I believe the economic factors that influence the value set of agriculture, and the economic climate that drives the industry is one such aspect of ethical agriculture that is ignored with disastrous repercussions.

It should be the job of the philosopher to confront such ethical tensions that arise in society and certainly those that affect as central a role in human life as food production. A good ethical assessment must be broad enough to account for competing claims and complex situations, and endure criticism from varying angles. To be relevant, it must necessarily be pragmatic and situated in the time and culture we find ourselves in. An ethical theory that does not lend itself to real-world application would be about as useful as a university degree in Pig Latin. As Dr. Bernard Rollin succinctly puts it,

“Those of us who work in applied ethics, i.e., who try to use ethical theory to help us change behavior or decide among real world choices or make the actual world a better place, cannot rest content with... theoretical formulations that don't hook into reality. For us, as it were, ethics must be an interpreted calculus, not an uninterpreted one.”³

² In the of automobiles, for example, the producer can rely on relative uniformity of raw materials and must account for very little variation between final products. This is due in large part to the amount of control and precision available in manufacturing materials that are relatively stable in both extraction and manipulation.

³ Rollin, B. (2005). Reasonable Partiality and Animal Ethics. *Ethical Theory and Moral Practice*, 8(1/2), p. 106.

An ethical theory should also be open to modification as more information is available and situations change. A static ethical theory is typically unable to account for paradigm shifts or unforeseen consequences of certain actions. Finally, a good ethic must also be able to develop and explain value sets and to regulate behavior in a way that allows for the best moral outcome.

This is partially my goal in this work at least insofar as I will provide critiques of present ethical theories in agriculture and suggest future goals. Broadly, however, I hope to simply provide insight into the moral responsibilities in agriculture and hopefully confront those instances where it falls short. For the purposes of this work, I will focus only on the US dairy production and trends, although my conclusions could, with manipulation, be applied to all areas of agriculture. Given the purview of this work, and in the interest of keeping focus on the most important problems, I will not attempt to construct a complete ethical theory here, or spend much time on the metaethical implications. However, I do want to examine the current value set that undergirds the dairy industry in contrast to those of traditional husbandry. There is a great deal of evidence that suggests our current ethical system fails the aforementioned requirements.

It would be difficult to argue that the *modus operandi* of agricultural development since the very first seed was planted or animal domesticated has not been to produce enough food to stave off hunger. Specters of community-wide starvation still elicit a primal, basic fear response in us; the loss of such a basic and necessary commodity as food would put the entire social order into disarray. The basic value in food production is thus, “not enough nutritious food is bad.” Another value that can be generally agreed upon, at least traditionally, is the idea of gratitude and symbiosis in our relationship with that which provides food. Such traditions as American Thanksgiving, the ubiquitous pre-meal prayers in every major religion, and husbandry practices speak

to this value. More recently in human history, as societies moved from mostly agrarian to mostly urban modes, food affordability has joined this list. In general, people no longer barter for food (and very few can produce their own) and must obtain it through a monetary transaction. Many social scientists have argued that this economic version of the “non-starvation” value has become the primary concern in approaches to agriculture since the industrial revolution, the subsequent depressions, and world wars⁴. A segment of the speech from President Roosevelt on the passing of the Agricultural Act of 1938 proves just this:

“Gradually, through these years, the basic principles of national farm policy have become clear. By experience we have learned what must be done to assure to agriculture a fair share of an increasing national income, to provide consumers with abundant supplies of food and fiber...We are agreed that the real and lasting progress of the people of farm and city alike will come, not from the old familiar cycle of glut and scarcity, not from the succession of boom and collapse, but from the steady and sustained increases in production and fair exchange of things that human beings need.”⁵

In general, the priorities and values which guide our present agriculture practices have certainly afforded us greater yield and low-cost food, but at what price? Aside from the traditional “Malthusian fears” which will be discussed later, there is another set of values that have replaced tradition, and should be examined. I argue that, especially in the case of dairy, these values have stripped the animal and the farmer of longevity and significantly weakened the constitution and integrity of the system and its parts—quite contrary to the goals of the New Deal. For example, the modern dairy cow, as compared to her counterpart only 40 years ago, averages only two and a half lactations (2.5 years of production) before she cannot produce enough to make a profit for the farmer and is

⁴ Q.v., Thurman & Kilman (2009) *Enough: Why the World's Poorest Starve in an Age of Plenty*, Ferguson, J. (2006) *Global Shadows*, and Browne, K.E. (2009) *Economics and Morality: Anthropological Approaches*.

⁵ Roosevelt, F.D. (1939, February 16). Statement on Signing the Agricultural Adjustment Act of 1938.

sent to slaughter.⁶ In contrast, her ancestors were ranked and valued for their ability to produce offspring and for the number of her production years. An entire section in a 1940's introductory husbandry textbook is devoted to celebrating "record cows," a theme in many of the older textbooks I perused. Two excellent examples mentioned are Ionia Sadie, a 13 year old Holstein cow that produced over 230,000 pounds of milk in her lifetime, and Barclay's Betty, a 21 year old Ayrshire breed with a life-time record of 200,131 pounds of milk produced and was the dam of 16 calves that produced 1200 descendants.^{7,8} This could only be accomplished by great care and attention to the cow and an emphasis on quality of life and welfare of the animal in addition to production capability. In fact, much of traditional husbandry emphasizes the care and kindness necessary for proper dairying⁹.

The average yearly production of Ionia or Betty would now be considered below average by almost 4,000lbs of milk yearly, but their longevity would be an anomaly. Interestingly, traditional husbandry had taught for generations that a dairy cow does not reach full maturity until five years of age (usually coinciding with the third lactation) and reaches full lactation potential by seven years of age;¹⁰ however, average productive life for today's dairy cattle is just over two years. Temple Grandin and many other animal scientists have attributed this great loss in longevity to the genetic and physical pressures

⁷ Anderson, A.L. (1943). *Introductory Animal Husbandry*, p. 276.

⁸ As an interesting aside, the record producer now is a three year-old Holstein, Ever-Green-View My 1326-ET EX-92, who produced 72,170 pounds of milk in 365 days, completing her record in February, 2010 (Holstein USA publication, February 2010).

⁹ Q.v., Baker, A.H (1911), Henderson (1917), and Anderson, A.L. (1943).

¹⁰ Ibid. These results were also published in 1923 by C. H. Eckles and his team at UC Davis; provided as a historical marker. Results of a DHI (a leading dairy and herd management firm) study in 1990 reconfirmed this account (Atkins, G.A. "*Advances in Dairy Technology, Volume 2, 1990*).

with which we saddle these animals.¹¹ The social and ethical consequences of this trend are manifold and must be considered. However, this shorter number of lactations is not just an ethical dilemma, but an economic one as well. At present there are around 9.1 million head of milking dairy cattle, which means that every year each of these cows mother a calf and thus there are also 9.1 million heifers ready to be put into production. If longevity of the milking cows is increased, there would therefore be a dramatic increase in the total milking cow population—which is both unnecessary *and* does not ensure the welfare of the animals as overcrowding would surely follow. This ethical knot is not easy to untangle. It is right for the public to begin to question the integrity of our agricultural system, but it remains of great importance to engage these problems with the most rational and pragmatic of philosophical insights so that both the public and the farmer can flourish without impediment.

Dairy farming, in particular, has very distinct ethical dilemmas built into the practice. As in all agriculture, dairy is built on the extraction of food from a biological system—obviously, the cow in our case. Thus, how the farmer cares for and maintains her herd is ethically relevant and directly related to the production of goods. Unlike most other food animal industries, however, the dairy cow must be maintained much longer than its initial production. With meat-animals, the animal is raised until it is fit for slaughter, and then fulfills its production “contract.” The contract between the farmer and the dairy cow goes much further as, hopefully, the production life of a dairy cow exceeds its first lactation. The required maintenance creates another level of ethical consideration, especially in terms of the ability of the farmer to manipulate the cow's physiology to maximize its production value. Our impact on the genetic constitution of

¹¹ Grandin, T. (2008). A Major Change. *Animal Ethics Reader*, 2nd Ed. p. 229.

the cow is of supreme consequence for the purposes of this paper, has implications on animal welfare, and is closely related to the economic fitness of the industry.

Directly connected to animal care for dairy is economic viability—dairy farming is after all a business, and carries with it far more subtle ethical considerations than the treatment of animals. Business practices have a direct effect on societies in a way that human-animal relations do not. The participation of business or corporate interest in domestic affairs is well documented in the social sciences, and should not be overlooked. The food industry has an even more intimate relationship with society for quite obvious reasons: they provide a necessary good and directly affect the health and wellbeing of their consumers, in addition to stimulating the economy and participating in global trade and safety. The combination of welfare and economic factors, and their mutual influence on each other, presents us with an ethical knot. There is a conflict of interest in agriculture between those of traditional husbandry and the needs of industry and the values that entails (i.e. industriousness, efficiency, and frugality). The bigger question I will ask in this work spins around this axis: when other issues of ethical import are mixed with those of business, is it inevitable that such ethical issues become subsumed under business? And if so, is that a problem? I will argue that it was when husbandry practices and the values that underlie them were replaced or made lesser than the concerns of industry, we began to see the degradation of animal welfare in return for dramatically higher yields. As one example among several, the increased culling that results from weak cows hurts the farmer as she must constantly account for replacement cows, introducing higher costs among other issues. Such examples, paired with a market system that does not favor the farmer in the first place, raise a more succinct version of the axial question I just proposed: is the current industrial system of dairy farming ethically acceptable?

CHAPTER 1: The History of Dairy

1.1 Husbandry and Industry

To make any claims against the current dairy industry, it is first important to have an adequate understanding of its historical roots. From here we can observe the transition of values and the process which led to the corporatization of dairy. Even from the beginning of written history, the dairy cow has been a part of social livelihood. There is some evidence that the precursor to the cow and goat (another domestic, ruminant animal) was domesticated before any permanent settlements, with the earliest written records dating back to Indian Vedic times as long ago as 3,000 BCE.¹² Since then, the cow has slowly evolved to the beast we presently recognize. Significant changes in milk production capacities of *Bos Taurus* happened slowly over many generations and almost imperceptibly. It wasn't until the 19th century when the great social migration from the land to the cities and scientific breeding studies emerged, thanks to Mendel and Darwin's work¹³, that dairy took a sharp turn.

Traditional animal care associated with agriculture, dairy included, was termed “husbandry” and included specific practices, values, and a decision-making tools. As Bernard Rollin, philosopher and animal ethicist, characterizes it, husbandry “means ‘good care’ associated with mutual self-interest...or the ancient contract between humans

¹² Pirtle, T.R. (1926). *History of the Dairy Industry*, p. 2.

¹³ Many early dairy texts reference the growing acceptance of Mendel's Law of Heredity (published 1865) and Darwinian theories on evolution gave precedence to heredity research as revolutionizing breed registry organizations and breeding practices (Pirtle (1926), Yapp & Nevens, (1911), Anderson (1943), Roberts (1920) to name a few).

and agricultural animals.”¹⁴ The metaphor of the biblical shepherd and his flock reinforces this idea and can serve as a reference for the undergirding values of husbandry. Rollin continues by explaining, “The concept of animal husbandry represented a very powerful ethic that was sanctioned by prudence and self-interest.”¹⁵ In the absence of the exacting scientific measurements we now possess, the overall welfare of the animal was assumed from its ability to produce well and gain weight, interact socially, and other directly observable measures. It was common knowledge that rough handling, cruelty, and overwhelming stress negatively affected all of those characteristics. A paradigm example of this can be found in a section on “handling the herd” in a prominent dairy cattle feeding and management manual from 1917,

“To keep up the production of a cow one must always treat her with kindness. The beating of a cow should never be tolerated under any circumstances. It is not only cruel but it cuts down the production of milk. A man that cannot control his temper will never make a good dairyman. Any excessive disturbances should be avoided for the sake of the more sensitive animals.”¹⁶

Maintaining welfare standards for the animals, and thus how they were cared for, was symbiotically good for the farmer and mutually ensured the best interest of the animal.

A rather interesting historical publication on the practice of husbandry dated 1799 by the gentleman and land owner Richard Parkinson¹⁷ associates those who treat animals without respect as “idle, drunk fellows” and “barbarous,” and should be “shunned from the profession” because of lack of respect showed to the animal and its “contribution to society.”¹⁸ Another interesting historical note can be found in the

¹⁴ Rollin, B. (2006). *Animal Rights & Human Morality*, p. 330.

¹⁵ Ibid. 331.

¹⁶ Henderson, H.O. (1917). *Dairy Cattle Feeding and Management*, 3rd ed. p.234.

¹⁷ The opening of the work begins with a dedication to the recently deceased George Washington, which Parkinson signed as his “most devoted, obedient, and humble servant.” This was perhaps the end of the age of the “Gentlemen Farmer.”

¹⁸ Parkinson, R. (1799). *The Experienced Farmer: In Two Volumes*, p. 116.

introduction to Yapp and Neven's 1926 "Dairy Cattle" compendium, titled, "Shall I be a Dairyman?" Gender inequities aside, it is a rather sweet introduction. For them, the characteristics of a good dairyman are (1) A love of cattle, (2) Willingness to work hard and for long hours, (3) Capacity for attending to details, and (4) Ability to overcome disappointments. The first point is especially interesting and is elaborated,

"Occasionally a man will be successful with livestock without possessing any particular fondness for animals. But in order to derive a satisfying pleasure out of working with animals, one must have a real love for them. A liking for animals, which will make it a pleasure to go to the barn at night to see if they are comfortable and which will make one's "blood boil" to see an animal abused, is invaluable to the dairyman."¹⁹

Such requirements on the feeling and values of the farmer should not be considered mere historical novelties or remnants of a pastoral idyll long since abandoned. Inevitably in conversing with a farmer in any field, to the question, "why do you do it?" the response is always something to the effect of, "It is a lifestyle choice. I find satisfaction in the work and love what I do." This kind of deep-set value for the profession and what it entails should not be ignored.

Around the end of the 19th century, the production of butter and cheese (those dairy products that could be stored and shipped with relative ease) moved off-farm and was overseen by production companies. This was aided by advances in creamery systems and tests for purity.²⁰ Around this time (1888 to be exact), the refrigerator train car was invented, thus supplying farm-fresh dairy to the growing urban centers.²¹ New technology and industry allowed distributors to meet the demand of the new urban-dwellers who now lived too far away from the dairy farm to buy directly from them,

¹⁹ Yapp, W.W. & Nevens, W.B. (1926). *Dairy Cattle: Selection, Feeding and Management*, p. 13.

²⁰ Pirtle, T.R. (1926). *History of the Dairy Industry*, p. 8, 78.

²¹ ARS Timeline.

streamlining the process. This is a significant change in market structure and is the most distinct beginning point for the shift in value sets for dairymen in general. As distributors gained greater economic hold on dairy for cities, mostly because of the advent of these refrigerator trucks, reliable pasteurization, and more intelligent company marketing, the consumer now had very little need to directly interact with the farmer. The market was now primarily in the control of the distribution companies. Thus the demands of the distributor took precedence over the decisions of the farmer. The farmer was encouraged to produce more and more, while marketing schemes reinforced the health benefits of dairy consumption to increase demand. The burgeoning science of breeding and “dairy improvement” projects at the time, however, could only subtly manipulate production. Care of the animal and the need for longevity still held precedence, with the industrializing of creameries merely laying the economic groundwork for a transition away from husbandry practices.

Shortly following World War I and II and the intervening Great Depression, the resurgence of Malthusian fears recaptured the imagination of the public, further pressuring food producers to increase their yields. Economist Thomas Malthus determined in the late 18th century that food production was increasing at a far slower rate than was needed for the growing human population²². Although this was immediately criticized by his contemporaries and considered generally false and

²² "The power of population is so superior to the power of the earth to produce subsistence for man that premature death must in some shape or other visit the human race. The vices of mankind are active and able ministers of depopulation. They are the precursors in the great army of destruction, and often finish the dreadful work themselves. But should they fail in this war of extermination, sickly seasons, epidemics, pestilence, and plague advance in terrific array, and sweep off their thousands and tens of thousands. Should success be still incomplete, gigantic inevitable famine stalks in the rear, and with one mighty blow levels the population with the food of the world."

—Malthus T.R. (1798). *An Essay on the Principle of Population*, (p.61). J Johnson, London.

irrelevant²³, the world wars reignited these fears. After the great wars, population continued to grow and economic straits affected most of the population, causing Malthusian apocalypse theory to again rear its head—with widespread consequences. As political scientist and agriculture ethicist William Browne asserts, “Malthusian fears have led at least indirectly to massive government intervention in agriculture over time.”²⁴ We must remember at this time that America was in the throes of an obsession with industry and technology. The unparalleled success of Ford’s production line and the growing fascination the government had with scientific and technological answers to large social problems saw the US government taking an increased interest in scientific answers to food production, safety, and distribution issues. New Deal programs such as the Farm Security Administration, which provided incentives for coalescing farms and efficiency measures, and the Agricultural Adjustment act of 1938, which mandated low prices for food and fiber products and created “commodity programs” to respond to supply and demand issues, are two examples of such changes. These measures effectively paved the road for corporate management to take the reins of agriculture production as “good farm management practices” grew to include social mandates.

Another important social incentive towards industrializing agriculture came in 1953 with the formation of the US Agriculture Research Service (ARS). During World War II, the USDA’s various research components were brought together into the Agricultural Research Administration, which in 1953 was reorganized into ARS. As the official website proclaims,

“The Agricultural Research Service is the U.S. Department of Agriculture’s chief scientific research agency. Our job is finding solutions to

²³ William Hazlitt (1807), John Stuart Mill (1829), Henry George (1879), Ester Boserup (1965), and Julian Lincoln Simon (1981) are a few notable opponents.

²⁴ Browne, W.P. (2000). Agricultural Biotechnology, Law, and Social Impacts of Agricultural Biotechnology. *Encyclopedia of Ethical, Legal, and Policy Issues in Biotechnology*, p. 49.

agricultural problems that affect Americans every day, from field to table...Our scientists frequently collaborate with research partners from universities, companies, other organizations and other countries.”²⁵

One can safely translate this to a reliance on private research companies to find solutions to perceived agricultural problems. Interestingly, these “private research companies” are all owned or funded by the distribution companies. Since its original inception, it has become far more congenial to social needs and pressures, but in its original inception took a much more paternalistic approach.

The involvement of the USDA in farming is of course complex and cannot, barring the lunacy of certain reactionary groups, be said to have a wholly negative or reproachable effect on the formation of present-day agriculture. In reading their official timeline I did notice, however, that especially after the turn of the century and WW1 especially, the type and form of research being conducted (either by ARS or derivative departments) was focused on producing commercially successful products instead of traditional husbandry values, including individual farmer needs or animal welfare. In the dairy industry, we see this in the research in pasteurization and improved taste and shelf-life in 1902 and 1917; a long-term study of dairy improvement (1917) which increased production per cow from 542 pounds of butterfat in 1920 to more than 720 pounds two decades later; and later the creation of the first artificial breeding cooperative organized for dairy cattle in 1938.²⁶ This can be compared to the protocols pre-1900: the eradication of bovine pneumonia in 1892; research into cattle ticks in 1893; work projects organized for farm youth (later called 4-H); and finally the Lacey Act in 1900, which prohibited importation of injurious animals, birds, and fish²⁷ to protect livestock. The research measures after 1890 were in large part influenced by government

²⁵ ARS Timeline.

²⁶ ARS Timeline.

²⁷ Ibid.

initiatives aimed at making US agriculture a profitable industry²⁸. As these interests now represented a significant monetary investment and source of capital, these were the interests focused on in research. These new technologies were expensive and not applicable to all methods of farming, leading to a natural selection in farm types and economic status where commercial farms were favored over smaller, lower producing ones. The cycle continued: the country saw a decrease in the percentage of people involved in agriculture (43% in 1890, 11% by 1950, less than 2% at present), and an increase in tenant farming,²⁹ showing a trend in farm consolidation and fewer people controlling more of the agricultural sector. By the same token, productivity in all areas of agriculture skyrocketed despite the reduced farmer population.

In dairy, although slower to respond, a dramatic shift is seen in both productivity of cows individually, and the number of cows on farms. From 1900 to 1940 total milk production nearly doubled and then changed dramatically after 1960³⁰. The average cow now produces almost six times more than the average yearly amount compared to her 1900s counterpart. Similarly, total production has now tripled from the 1900s accounts, and yet from the same data we see the number of cows in the US has shrunk by almost sixty percent over the same time period³¹. Keeping with the other trend of farm consolidation, the US Census of Agriculture historical reports show that in 1920 there were 710,694 dairy farms with average of less than 80 head of milking cows,³² while

²⁸ This can be deduced from the growing number of acts and laws passed regulating food/fiber trade and federal incentives in efficient production, q.v. 1894-Carey Land Grant Act, 1897- Tea Importation Act, 1901-Bureau of Plant Industry established, 1917-Federal Farm Loan Act, (ARS Timeline).

²⁹ Ibid.

³⁰ (figure 2), can be found at the end of the chapter.

³¹ (figures 1 and 2), can be found at the end of the chapter.

³² United States Department of Agriculture. (2009). The Census of Agriculture, Historical Census Publications, 1920.

presently there are less than 75,000,³³ with an average of 130 cows per farm (depending on the region) with many farms exceeding 20,000 head. This means that more cows populate fewer farms and produce more milk than ever. Economically this would seem to be a wild success.

This process is in part due to what ecologist/sociologist William Lacy, UC Davis, calls the “treadmill process.” As new production technology allows farmers to produce more while reducing the costs of production, early adopters of the technology are the ones reaping substantial profits. They produce more than their neighbor can with a comparable investment of time, labor, and capital. Lacy explains that:

“As more and more people adopt the new technology, total production rises and prices begin to fall. Those operating with the old technologies find themselves operating at a loss, and they often go out of business. On the other hand, those who adopt the new technology, find that higher profits disappear and they are producing more food to retain the same income level.”³⁴

This partially explains the cycle previously described in terms of technology development and the consolidation of farms nation-wide. Typically in any industry only those who have enough financial buffers can afford new profit-increasing technologies. Those who cannot afford to make the upgrades eventually fall by the wayside; however those who do make the changes find themselves having to produce greater quantities to stay in business. The mechanism for change in farming is thus self-selecting and fast paced, while also being largely economically based. What this leads to is a dairy industry populated by only those farms that shared the same goals that the ARS and similar research groups were promoting, and those research groups in turn catered only to those farms able to support them. I believe this economic and technological model for change,

³³ Ibid, 2006.

³⁴ Lacy, W. (2000). Agricultural Biotechnology, Socioeconomic Issues, and the Fourth Criterion. *Encyclopedia of Ethical, Legal, and Policy Issues in Biotechnology*, p. 80.

while keeping in mind the social climate of the times, accounts for most of the reasons behind the dramatic shifts in dairy farming and the dominant value-systems that still influence it. It is in this trajectory that we see many of the inconsistencies and issues in agriculture, especially dairy, which need evaluation.

1.2 Technology and its Effects in Dairy

A very brief examination of some of the dominant technologies and advancements in dairying is necessary before a value assessment can be undertaken. Foremost in importance for our discussion is the practice of trait-specific breeding for high production, ubiquitous and excessive chemicals such as Bovine Somatotropin (bST) use, and overpopulation in environmentally deficient conditions. While there are different concerns that others have introduced which may carry import, a study of these select issues will provide adequate evidence for the inconsistencies I hope to show in the values held by the industry and the results produced. While I will be taking a mostly negative approach to the use and application of these technologies, I hope to avoid the accusation of being a Luddite—it is not my intention to disparage the ability of science to confront and potentially solve problems in agriculture, which it has certainly done on occasion. I intend only to point out that many of the most prevalent of such technologies has had unintended and reprehensible effects, and that this has happened because of substantial and systemic mistakes in value judgments and the subsequent goals of the industry.

1.2A Breeding Science:

Temple Grandin, a noted animal scientist, has suggested that the breeding practices of modern stockmanship are creating a number of problems in welfare and farm management including a plateau in production levels, the increasing need for and costs of drug and specialized food inputs, and shorter productivity lifespan of animals.³⁵ Furthermore, increased incidents of lameness in dairy cattle due to early-onset bone loss and poor muscle development have required excess culling of cows that are otherwise high producers.³⁶ Historically, breeding in dairy cattle focused on the promotion of several traits through generations; the most important being high quality and quantity of production (total amount of milk and percent butterfat) and the physical attributes associated with this, a vigorous constitution and strong physique (measured by longevity), psychological disposition, quickness of maturity and growth, and ability to produce calves expressed as early dates of first parity (pregnancy) and success of long-term reproductive cycles.³⁷

For the farmer in rural antiquity, the constitution, vigor, and longevity of the cow were just as important as productivity, as the loss of one cow could mean ruin to him. Thus, balancing all of the aforementioned traits was of great consequence to the farmer. While some improvements were badly needed, inadequate knowledge of genetics kept breeding practices at an elementary level with the adage, “like makes like” as the guiding principle. Inconsistencies in herd make-up and unpredictability of traits in new generations slowed the development of dairying, and could only be addressed as new

³⁵ Grandin, T. (2008). A Major Change. *Animal Ethics Reader*, 2nd Ed. p. 229.

³⁶ Ibid.

³⁷ Baker, A.H. (1911). *Live stock: A Cyclopedia for the Farmer and Stock Owner*, p. 644.

developments in genetic research were accomplished. Gregor Mendel's findings in genetics and heredity, as was already discussed, did just this and farms were able to slowly correct these issues. This meant greater control over the genotypic makeup of a herd, improving overall production and efficiency immensely. As farm systems progressed to house greater numbers of milking cows, the loss of individual cows affected the herd and production less, making vigor and constitution an ancillary or intermediate concern. A review of breeding practices from the beginning of the 20th century onward show an increased pressure to breed for productivity and growth rate above all else. While this may be a natural, economic transition for the dairy industry, it is obviously not in the best interest of the cow.

As early as 1923, husbandry texts begin to speak in greater length on selecting for production traits, with considerations of other traits occupying footnotes at best.³⁸ Emphasis on consulting production records of sires and dams and establishing pureness or "homozygosity" of a productive genotype in herds is treated as a best practice by the end of the World Wars.³⁹ This was done to ensure greater predictability of genotype in the offspring, allowing farmers to have better control over the success of their herd. Pedigree and progeny records of this time, the tools farmers used when selecting sires for breeding, included only the number of offspring, production comparisons between dams and offspring, and butterfat content of milk.⁴⁰ Research protocols in "dairy improvement" consisted of only those studies which aimed at improving these traits.⁴¹ Consequently, there was a sharp decrease in genetic lines of the various breeds, selected based almost exclusively on the traits outlined above. This happened especially after the

³⁸ Pirtle, T.R. (1926). *History of the Dairy Industry*, p. 31.

³⁹ Anderson, A.L. (1943). *Introductory Animal Husbandry*, p. 309.

⁴⁰ *Ibid.* 310.

⁴¹ ARS Timeline.

creation of the first artificial breeding cooperative organized for dairy cattle in 1938.⁴² In 1990, for example, only two sires accounted for nearly 25% of genes in the Holstein breed.^{43,44} This level of trait-specific selection and control of genetic lines is an industry unto itself and has had the most wide-spread and deep effects on the dairy industry compared to any other practice. Even the definition of “welfare” changed in this time from the generally common sense view that good welfare is the same as a “happy cow” to the now common definition that welfare is measured by production capacity. A 1981 industry report from the Counsel on Agricultural Science and Technology (CAST) serves as a paradigm example:

“The principle criteria used thus far as indexes of the welfare of animals in production systems has been rate of growth or production, efficiency of feed use, efficiency of reproduction, mortality and morbidity.”⁴⁵

While production levels for the dairy cow have never been higher, scientists are beginning to question the goals of the breeding practice as many complications are arising. General heritability research, as noted by scientist Alois Essl, University of Vienna Natural Resources and Life Sciences, has shown for years that, “reproductive traits are non-linear due to directional dominance and recessive deleterious mutations, with heritabilities being higher on the lower fitness side.”⁴⁶ This means that if reproductive traits are not sufficiently considered in artificial selection, subsequent generations will show an increased unfitness in reproductive abilities. It has been well

⁴² Ibid.

⁴³ Cassell, B. (2009). Inbreeding. Virginia Polytechnic Institute and State University Extension, publication, p. 2.

⁴⁴ This translates into millions of head and can account for an entire operation’s population as many farmers tend to seek homozygosity in their herds.

⁴⁵ From: Rollin, B. (2006). *Animal Rights and Human Morality* (3rd ed). Prometheus Books. New York.

⁴⁶ Essl, A. (1998). Longevity in Dairy Cattle Breeding: A Review. *Livestock Production Science*, 57, p. 80.

documented that reproduction rates of the dairy cow have been steadily decreasing over the past fifty years, with current studies showing a decrease in fertility rates of nearly 35% since 1950⁴⁷. It is believed that physiological adaptations to high milk production may explain part of the reproductive decline, in addition to greater incidences of such reproductive diseases as metritis and cystic ovary.⁴⁸ Supporting this belief, several studies suggest that there is a significantly positive correlation between disease or complications and high-production traits, especially in udder health, reproduction, and lameness⁴⁹. It is not out of the question to believe some of this is due as well to the reduction of genetic strains that make up her populations—minor susceptibilities to disease or mutation in the origin strains can be exponentially magnified in subsequent generations as the gene pool continues to shrink, causing stronger expressions of these traits.

The physiological adaptations to higher production are important to recognize as well. A faster growth rate but poor muscle and fat development, and the constant gain and loss of nearly 15lbs of milk every day are a strain on the cow. It is no wonder that average productive life of the cow decreases as average milk production increases. Related to the studies of poor reproductive ability is the now accepted scientific tenet of negative correlation between early reproduction (due to a faster rate of maturity) and a shorter lifespan⁵⁰—another of the primary selected traits discussed above.

⁴⁷ For a list of relevant studies, q.v. Lucy, M C. (2001). Reproductive Loss in High-Producing Dairy Cattle: Where Will it End? *Journal of Dairy Science*, 84(6).

⁴⁸ Metritis is the inflammation of the walls of the uterus. Cystic ovary is a condition where abnormally large ovarian follicles form that fail to ovulate. While neither of these diseases preclude an ability to reproduce, they do reduce it and cause severe physiological problems.

⁴⁹ Van Dorp, et al (1998) provides a literature study.

⁵⁰ The tenet that “mammals with long life expectancy tend to be late in maturing” is one exhaustively researched. See literature study by Finch (1990) for greater detail.

The decrease in the average productive life of dairy cattle is less studied, mostly because it has not been extremely profitable to keep a cow past its fifth lactation since improved breeding and large-scale herd management was developed, making calving and “replacement cows” less expensive. Early husbandry texts up to modern practices affirm this because, as Essl later asserts,

“Livestock animals have to both stay alive and reproduce regularly to be of economic interest for the breeder. Therefore, the average lifespan of livestock animals is far below their biological potential and disposals due to old age are rare. The lifespan of a female farm animal is often partitioned in two time periods, (i) the costly period from birth to first parity and (ii) the following productive period until disposal.”⁵¹

The problem scientists are now seeing is not that the cow no longer reaches her biological potential, for she was never allowed to, it is that the second period “from productivity until disposal” is becoming shorter. As a general rule, a dam must give birth every season to maintain milk production. It was typical pre-1950 for a cow to last into its 5th lactation and still maintain consistent production and reproduce.⁵² This is still a couple years off of its biological peak, but far closer than present statistics. Less than half of all dairy cows now reach their third parity or lactation due to either inconsistent production or lack of fertility.⁵³ As discussed earlier, the physiological mutations and increased incidence of disease due to high production are prime causes in both of those problems.

In terms of disease prevention and reproductive viability, the research is tending towards a rejection of single trait selection for high productivity. All of the studies just mentioned suggested a selection bias for physical strength and reproductive health over

⁵¹ Essl, A. (1998). Longevity in Dairy Cattle Breeding: A Review. *Livestock Production Science*, 57, p. 81.

⁵² Anderson, A.L. (1943). *Introductory Animal Husbandry*, p. 266.

⁵³ Hare, E. (2006). Survival Rates and Productive Herd Life of Dairy Cattle in the United States. *Journal of Dairy Science*, 89(9), p. 3716-9.

high production as the most promising solution. If only to be exhaustive, scientists have drawn the obvious parallel between a genetic predisposition to disease and an increased use of antibiotics and other drugs—an expense that is quickly increasing for dairy farms—which has raised environmental concerns of an overabundance of antibiotics and pollutants seeping into ground water and adversely affecting the surrounding area, including increasing drug resistance.

From an economic perspective, these results do not bode well for the farmer. The cow's resilience in the face of production stress directly affects the farmer's overall ability to maintain a consistently profitable enterprise. Increased maintenance costs in the form of antibiotics and drug therapy, a greater demand for specialty foods that improve declining health, and the cost of breeding more replacement cows at a faster rate due to a shorter production life, are just a few examples of how lessened resilience can affect the economic health of a dairy farm. It seems that these practices, while profitable in the immediate future, fail to be so in the long term.

More recent studies and initiatives in the industry show a greater understanding of these problems and offer solutions based on trait selection for the length of productive life (PL). These studies are finding positive results in increased fertility rates and stronger overall constitution of the animal, but the effects of these studies are uncertain and acceptance is presently limited⁵⁴. In general, we can safely conclude that the welfare of the cow—and thus the livelihood of the farmer—are significantly diminished due to short-sighted breeding practices. Continued genetic pressure on the animal to produce at a higher level will only exacerbate these problems. Perhaps a focus on increasing the productive lifespan rather than just production would be a viable solution. One may find it interesting that an edited version of the traditional correlation between welfare and

⁵⁴ (Weigel, 327)

productivity is reemerging, serving as a reminder of the symbiotic relationship between man and the farm animal.

1.2B Drug use and bST:

We have already seen that an increased reliance on drug use in dairying is the result of a weaker overall physiology from genetic pressures, but there are other uses for agricultural medication that are relevant to our discussion. Jeffery Burkhardt, professor of biotechnology ethics at the University of Florida has called the use of feed or injection administered drugs the “second tier” of biotechnology, with the first being genetic manipulation. As he explains it, “For animal agriculture, the second tier in biotechnology is: organisms or chemical substances that might be injected or added to feed in order to help prevent disease, augment nutrition, and increase control of milk or egg or meat production.”⁵⁵ There are obvious reasons why such technology would be developed, especially in light of our previous discussion. Larger farms began needing a replacement for the labor-intensive methods of traditionally dealing with diseases, nutrition and slow milk production—an increased number of cows in a given system made each of these issues exponentially larger and harder to manage. The use of production-enhancing drugs, one form of 2nd-tier biotechnology, has been controversial since their inception, and none so much as Monsanto’s Bovine Somatotropin (bST).⁵⁶

⁵⁵ Burkhardt, J. (2000). Agricultural Biotechnology, Ethics, Family Farms, and Industrialization. *Encyclopedia of Ethical, Legal and Policy Issues in Biotechnology*, p. 15.

⁵⁶ While Monsanto has sold the rights to bST in 2008 to Lilly-Elanco, they are the research machine responsible for its creation and initial distribution.

The purpose of bST is to greatly increase the efficiency of milk production while only marginally increasing animal feed intake. This is done by “a series of orchestrated changes in the metabolism of body tissues so that more nutrients can be used for milk synthesis.”^{57,58} Increased ovulation and reception during artificial insemination has also been reported.⁵⁹ The first official studies on the effects of using bST on dairy herds were done in 1982, but the ubiquitous use of it in a majority of dairies in the US didn’t occur until the 1990s.⁶⁰ Presently, it is common practice to give a consistent, injected dosage of bST to all cows. Private companies and industry titans have put much effort and research into proving the beneficial use of bST, and present-day introductory livestock textbooks celebrate its use.⁶¹ Many farms have adopted similar practices of ubiquitous use with antibiotics and other drugs as a preventative measure, supposedly ensuring the health of the cattle while requiring less hands-on and detailed management. Official reports by the product’s creator, Monsanto, assure producers that the use of bST has no detrimental effects on cattle or the consumer, and deny claims that increased milk production is linked to reduced production life or reproductive decline.⁶² Additionally, production increases have been reported to double when it is used.⁶³

In opposition to many of Monsanto’s official reports, noted scientists have found competing evidence. While bST’s ability to increase production and stimulate ovulation

⁵⁷ Bauman, D E. (1992). Bovine Somatotropin: Review of an Emerging Animal Technology. *Journal of Dairy Science*, 75(12), p. 3432.

⁵⁸ It is worth noting that Bauman’s article and much of the research used were sponsored by Genetech and their parent company, Monsanto. This was deduced from his references.

⁵⁹ Ibid. 3437.

⁶⁰ Ibid. 3435.

⁶¹ Gillespie, J.R. & Flanders, F.B. (2009). *Modern Livestock and Poultry Production*, 8th ed. p. 225.

⁶² Bauman, D E. (1992). Bovine Somatotropin: Review of an Emerging Animal Technology. *Journal of Dairy Science*, 75(12), p. 3441.

⁶³ Peel, C. J., Hurd, D. L., Madsen, K. S., & G. de Kerchove. (1989). In Proceedings, Monsanto Technical Symposium, Oct. 24

is undeniable, its effect on the cow is questionable. Reports that the use of bST treatment “was associated with an increased culling rate presumably as a result of increased stress associated with higher milk production,”⁶⁴ should give bST users pause. Other reports have found that as the amount of bST increased, the total body condition score decreased, producing more emaciated cows.⁶⁵ Still others associated bST use with increased incidence of lameness and poor musculature.⁶⁶ These findings were confirmed more recently as the result of a long-term study of effects in Canada, where they found a nearly 25% increase in the risk of clinical mastitis, a 40% reduction in fertility and 55% increased risk of developing clinical signs of lameness.⁶⁷ One of the results of the early findings of this study was the banning of bST use in Canada in 1999.⁶⁸

An equally hard look should be given to all antibiotic and drug usage for dairy cattle, and decisions carefully considered as to not commit the same errors of shortsightedness that we see here. As with our conclusions about breeding practices and their effect on animal welfare and economic irresponsibility, similar aspersions are cast upon the present use of bST and similar drugs. The European Union effectively banned the use of bST in 2000, joining Canada, Japan, New Zealand, and Australia. A similar practice may be the most reasonable course for US policy.

⁶⁴ Kennelly, et al. (1991). Somatotropin Treatment of Three Consecutive Lactations of Dairy Cows. *70th Annual University of Alberta Feeders Day Report*, p. 32.

⁶⁵ West, J W. (1990). Effects of Bovine Somatotropin on Milk Yield and Composition, Body Weight, and Condition Score of Holstein and Jersey Cows. *Journal of Dairy Science*, 73(4), p. 1067.

⁶⁶ Grandin, T. (2008). A Major Change. *Animal Ethics Reader*, 2nd Ed. p. 229.

⁶⁷ Dohoo, I R. (2003). A Meta-analysis Review of the Effects of Recombinant Bovine Somatotropin: 2. Effects on Animal Health, Reproductive Performance, and Culling. *Canadian Journal of Veterinary Research*, 67(4).

⁶⁸ Health Canada (1999, January 14). News Release: Health Canada rejects bovine growth hormone in Canada.

1.2C Environmental Conditions:

In addition to the first two categorical changes in practice we have covered, the way in which dairy cattle are now kept presents a point of interest to our conversation. Although broadly a welfare issue rather than a genetic or production issue, environmental factors and their effects on cattle have long been studied and commented on in both traditional husbandry and the practice today. Regional variations aside, it was generally believed that cows should be pasture fed when seasonally appropriate, and barn protection and grain feeding provided during inclement weather or severe cold. The reasons given for pasture grazing early on were manifold and ranged from health concerns that arose from continued close confinement, the benefits of (some) exercise, selective feeding and self-care that cattle exhibit when allowed to graze, and general welfare related to an expression of their “natural behavior”⁶⁹. However, even the earliest texts make mention of the economic costs associated with providing pasture land (including cost of land and the labor and time required to move cattle for milking), especially as the herd numbers increased. The sentiment of one early textbook expresses this quite succinctly, “In order to make a dairy profitable the farmer must keep a large number of cows in the smallest space possible, and still have ideal conditions, even though under unnatural circumstances.”⁷⁰

This view of how cattle should be kept came to dominate the industry to such an extent that it has become ridiculous to even consider pasturing cattle in a conventional operation. Improvements in nutrition, barn construction, stall formation, waste management, and holding contraptions (tie-stalls, circular stalls, free stalls, etc) are all

⁶⁹ Roberts (1920), Pirtle (1923), Yapp & Nevens (1926), and Anderson (1943) offer some perspective on traditional housing of cattle.

⁷⁰ Roberts, M.H. (1920). *Feeding and Management of Dairy Cattle for Official Production*, p. 122.

aimed at creating these unnatural but still “ideal” conditions that would keep the overall operation economically feasible. This has allowed for unprecedented growth in some dairy operations, with several dairies in California and the Pacific Northwest milking upwards of 20,000 cows under these systems. Because of this, nutritional science is perhaps the most developed area of improvement. Modern nutritionists have formulated concentrated rations that are so specific to the needs of a cow’s milk production that farmers can control what mix of feed to give down to the gram.

There are several concerns raised in response to this. Many animal scientists associate the unnatural environmental constraints imposed on cattle with the problems we mentioned earlier. Matthew Lucy, professor of Molecular Endocrinology in the department of animal sciences at the University of Missouri, concluded that the decrease in reproductive health and efficiency in dairy cattle today can be partially attributed to increasing herd size, a greater use of confinement housing, and corresponding labor shortages.⁷¹ This is due to increased risk of spreading disease, competition over limited space and feeding, and general anxiety produced by overcrowding. Cows are naturally range animals living in social herds which forage and graze for food. Domestication has largely changed this, accompanied by certain genotypic and phenotypic adaptations. Tarjei Tennessen, an agrologist at Nova Scotia Agricultural College, has argued that while some of the latent urges and behaviors natural to cattle can be overcome by good management and effective technological replacements (a diverse and holistic feed, allowing for free movement in the barn and some retention of social structures), cows must still learn to cope with an unnatural environment.⁷² Often, however, these situations are not always positive and lead in many cases to detrimental welfare results

⁷¹ Lucy, M C. (2001). Reproductive Loss in High-Producing Dairy Cattle: Where Will it End? *Journal of Dairy Science*, 84(6), p. 1290.

⁷² Tennessen, T. (1991). Can Animals Cope with High-Tech Husbandry?. In *High Technology and Animal Welfare*. p. 8.

because the environment is so severe as to “limit the ability of animals to use their coping strategies”⁷³. A long-time advocate of pasture-raising, Bernard Rollin also makes a similar point in *Farm Animal Welfare*, contending that most welfare problems seen in the dairy industry spring from confinement systems, and that they should be altogether eliminated.⁷⁴

Tennessen believes that major problems related to concentrated ration feeding and barn confinement include increased social conflicts, boredom, and other emotional issues.⁷⁵ Although at a cursory glance this seems like a ridiculous critique, there are deeper consequences involved. Tennessen explains that eliminating the need to forage for food, which often accounts for over a third of a cow’s normal daily activity when allowed to do so, leaves the cow with little else to do in a barren environment than, “pace their cage and chew on bars,” as well as increase the likelihood of aggressive conflicts over food or territory.⁷⁶ These competitive and territorial behaviors drastically increase with group confinement and can lead to increased incidents of injury or other management problems. If we are to conclude that welfare is an important value for the dairy industry, which we have up until now, then these issues must also be addressed.

1.3 A Shift in Value

The great shift in dairy practices is laden with historical interest and ethical concerns. Notions such as animal welfare were never specifically or overtly studied in the

⁷³ Ibid.

⁷⁴ Rollin, B. (1995). *Farm Animal Welfare: Social, Bioethical, and Research Issues*, p. 105.

⁷⁵ Tennessen, T. (1991). Can Animals Cope with High-Tech Husbandry?. In *High Technology and Animal Welfare*. p. 9.

⁷⁶ Ibid. 8.

early history of the field, but were most often assumed to be an integral part of what it meant to be a successful farmer. As a result, when dairying became industrialized, many of these assumed values were forgotten or, more correctly, subsumed under the more pressing economic ones. This transition of values is far less straightforward than the mechanical transition of the industry and resists quantification like the economic shifts it has seen, with complex results.

It would be helpful to reiterate our definition of husbandry: to enter into a contractual and symbiotic relationship with the animal, constituting substantial care in return for production of food. In the early stages of the shift in dairy practice, welfare of the animal was still a priority. This symbiotic valuing of the animal is still very much alive in some aspects of dairy farming, though it always has been, and is still, measured in terms of productivity⁷⁷. High production, historically, was always and only seen in conjunction with good welfare for the animal. As a result, proper management taught farmers that welfare was *reducible* to productivity. It was in collapsing these two measurement scales that the first ethical error took place, and where we see the reason certain values have been subjugated to others. More fundamentally than an ethical mistake, this kind of reduction is a simple error in logic. The proposition that “all A’s are B’s” is not the same as “all B’s are A’s”. The fact that all cows are mammals does not mean that all mammals are cows. The fact that good welfare conditions in dairy lead to generally high production rates does not mean that high production rates result in satisfactory welfare conditions.

Additionally, the ubiquitous use of new technologies has altered the “constant conjunction” (to use a Humean notion) of productivity and welfare even when correctly

⁷⁷ My experience on a small, “mom and pop” 50-cow dairy in Maine one summer proved this. Each cow was named and taken care of on an individual basis. A sick cow was a momentous occasion, and taken care of even at high cost to the farmer. From conversations with other nearby farmers, this level of intimacy and concern is standard practice for farms of that size.

construed. New technologies were aimed at decreasing many of the costs of dairying: labor was reduced through more efficient milking machines and feeding machines, traditional veterinary care was replaced by antibiotics and preventative medicine, pasturing and open-spaces were made inefficient with “better” feeding and barn systems, allowing for more cows to be kept in less space, and new breeding techniques and selected traits eliminated the need for excess care given to low-producers⁷⁸. However, as we have seen, this has not necessarily led to high standards of animal welfare; often it has been the obverse.

To review: the dairyman can now produce more milk with less labor (or interaction with individual cows), less land, and less time addressing low-producers. The result is a system that can support an incredible number of mostly barn-confined cows that are maintained based on mechanized feed and production schedules, with little deviation. The level of advanced management skills required to maintain such a large operation is astounding. The timing and infrastructure needed to milk (twice daily) thousands of cattle alone requires an immense level of efficiency, never mind juggling feed requirements, veterinary needs, waste removal, and seasonal factors⁷⁹. As the farmer automates or replaces traditional “hands on” practices, the call to take an active role in ensuring the wellbeing of an individual animal becomes nearly impossible to address. It is now apparent that despite dramatic increases in productivity, the condition of the cow is not thereby assured.

⁷⁸ As outlined in the same 1943 husbandry text cited earlier, “improved management and breeding practices” called for immediate culling of all low-producing cows as replacement costs were lower than continuing to feed the cow hoping for higher production (Anderson, 268). This suggests that it was a new practice that must replace older methods.

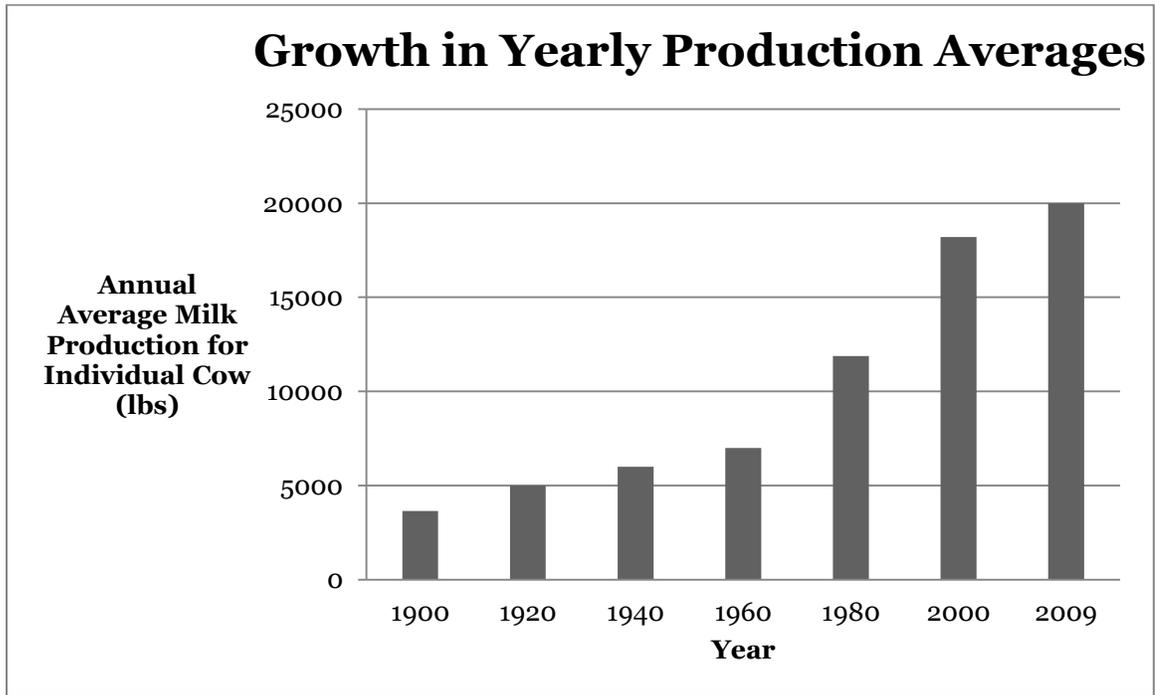
⁷⁹ Many modern dairies in California house an excess of 20,000 head in several loafing barns of 2,000+ cows that are milked by rotating machines in adjacent parlors and fed in bulk stalls. Maddox Dairy (one such operation) employs “50-99” people (including management) according to their public business profile. Technically, that is “only” around 300 cows per employee to tend to; however it is more likely that each employee works in an industrial system where each person only occupies one arena (feed, maintenance, milk parlor operation, etc).

Furthermore, the dramatic increase in production achieved by the dairy industry has not necessarily been economically intelligent, apart from hurting the welfare of the animal. Market pressures are constantly in flux, and simple economic theory demonstrates that the amount of goods in a market has a great impact on the price and profit of such goods. Currently, the market is flooded with excess milk because of the high production in the dairy industry. This means a great loss for the farmers because not only are they losing money increasing production unnecessarily—which means more, expensive feed, expensive bST treatments, etc.—but they are also reducing their profits as the price of milk falls to reflect the supply and demand balance. Economists call this the “point of diminishing returns.” A heedless practice of increasing milk production without limit is therefore economically irrational. Typically, the industry has taken the stance that in every case when stronger moral values (animal welfare, etc.) are imposed, efficiency and economic success decreases; a kind of negative slope relationship. Based on my previous discussion, this notion is being called into question. Moral values may very well be a kind of economic insurance for the dairy industry in addition to making it a stronger ethical organization.

From an outside perspective, the present state of the dairy industry is a far cry from the “Good Dairyman” of Yapp and Neven as outlined earlier, but it is not entirely so. Valuing the agricultural lifestyle and welfare of the cows, and being a “good dairymen” are still prioritized; however the old measuring stick (high production = good welfare) has been rendered obsolete. Growing scientific evidence suggests that the past 100 years of intensive, trait selective breeding for production, increased use of growth hormones and drugs that funnel digestive nutrients to the mammary system, and cattle holding systems that limit physical exercise, have resulted in a constitutionally weak cow with plummeting genetic, and thus physical, resilience—despite record high, short-term productivity. The future of the cow is uncertain, and it would seem that the system as

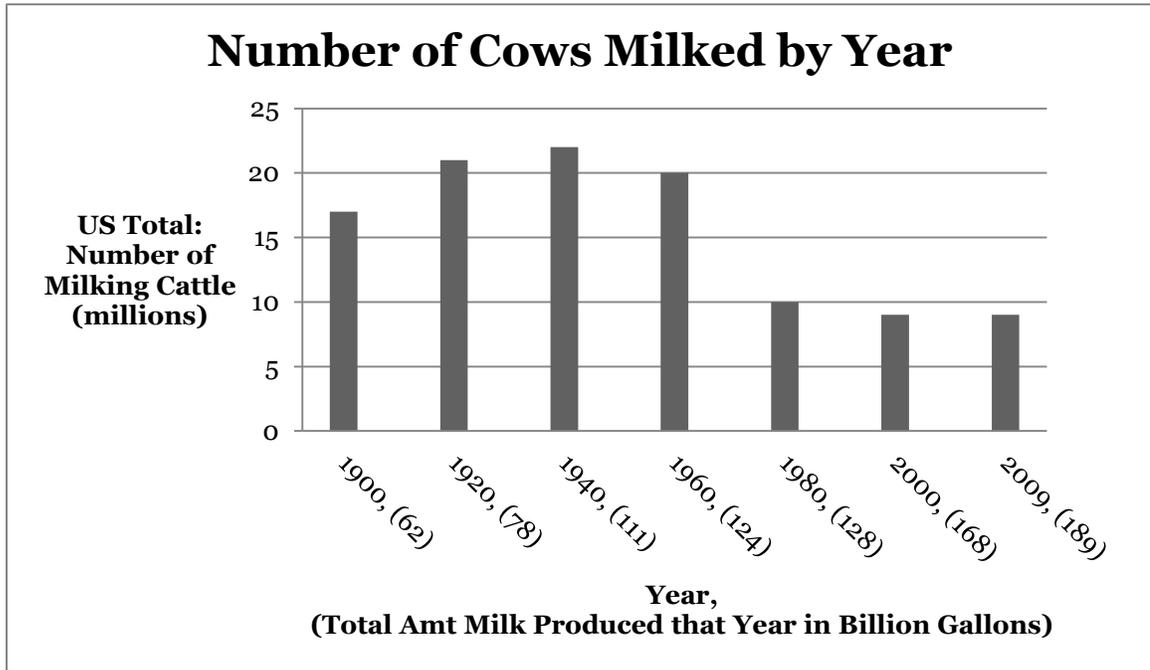
such is failing. These results show a significant conflict in values, and therefore fall under the auspices of the philosopher to examine. The repercussions of this failure extend into economic, political, and social fields, with ethical issues pervasive throughout. Having now an adequate understanding of the issues, and having defined the relevant values and mechanisms that precipitated the present situation, a critical look at the competing ethical theories that have proposed solutions is necessary.

Figure 1



(Source: USDA census information: The Census of Agriculture (2009), and US Bureau of Agricultural Economics from Pirtle (1926)).

Figure 2



(Source: USDA census information: The Census of Agriculture (2009), and US Bureau of Agricultural Economics from Pirtle (1926)).

CHAPTER 2: Ethics and Agriculture

Based on the evidence given in the previous chapter, I have suggested that many of the more difficult problems facing dairy, including health failures in cattle and the overall decline in dairy farm viability, are the byproduct of reducing the traditional measurement of acceptable animal welfare to the animal's production ability. Writ large, this translates as an industry error that has reduced what it means to have a successful dairy industry to measures of short-term economic yield and profit. In fact, I will contend that almost every ethical issue facing the dairy industry, and arguably agriculture in general, can be characterized as a problem of reducibility. This is a kind of economic calculus for ethical acceptability, and is used universally by the industry to determine most of its decisions. It is my argument that this way of making industry decisions, especially in agriculture, is not robust enough to account for animal welfare, or even the long-term viability of single operations, and is thus ethically unacceptable. If the means by which a group makes decisions cannot ensure that the most important ethical concerns are sufficiently addressed, then that group is sure to be morally deficient. I return here to my original axial concerns and argue that it is in reducing, and thereby ignoring, non-economic value judgments and moral obligations out of preference for the economic "bottom line" where we find significant cause to question the efficacy of animal agriculture.

Agriculture, although now a global industry, is by virtue of its work and relationship to the society of which it is a part, a provider of a necessary social good. As such, it is inherently different from other industries, especially from the more mechanistic ones that it attempts to emulate. Providers of necessary social goods, e.g. health care, education, scientific research, etc., are held to much higher ethical standards because of the intimacy of their relationship to society. These standards are generally seen as being necessary, even in the face of higher economic costs and financial burdens it requires to enforce them. Agriculture not only produces necessary social goods, but behind their production they also rely implicitly on living beings who have a significant and important moral standing. Dairy cattle, as will be argued presently, are objects of moral concern making our relationship with them vested with very real moral obligations. Agriculture, including animal agriculture and thus dairy, is not fulfilling this obligation, nor is it being regulated in a way that would ensure this responsibility is met. I believe this exception is a fundamental mistake of our society, and represents the real-world translation of my original, although theoretical, axial concern of reducibility.

However, before we can dive into a discussion of moral economic and social theory, we must make an argument for the importance and relevance of animal welfare for its own sake as a requisite concern for agriculture. Many argue that ensuring the wellbeing of farm animals should be a requirement beyond economic foresight or political accountability, and should be done because the animal *deserves* our consideration and protection. This has been a significant assumption so far in our discussion, and can now be adequately addressed.

Without spilling too much ink unnecessarily reviewing the philosophical literature on the subject, I hope in the following sections to outline why we have this responsibility, and relate it to my original theoretical concerns. I will do this through a

progressive argument with three main premises and a conclusion: (Premise 1) Animal welfare is morally relevant and necessary in animal agriculture; (Premise 2) If animal welfare is ignored, the agriculture industry will be forced to comply with social pressures, resulting in legal constraints that limit the autonomy necessary for successful agriculture; (Premise 3) Allowing an economic ideology to dictate the future actions of animal agricultural practices precludes the industry's ability to account for moral obligations such as animal welfare; and finally (Conclusion) The dairy industry *must* change on ethical grounds. Again, if we can show that the dairy industry is subject to premises (1)-(3), we should conclude that it is more similar to social-wellbeing operations such as healthcare or education, rather than purely mechanistic industries like automobile or widget manufacturing. Therefore, such an industry *must* be subject to greater ethical standards than those other counterparts. Furthermore, if the dairy industry continues to allow economic pressures to set its goals, these questions of value and moral obligation will be ignored and the industry will continue to suffer, being even further laden with legal constrictions. Put simply, whether or not the industry takes initiative to move toward moral acceptability, it will be forced to change through external pressures that may cause a broken industry to struggle even more. It is important to emphasize that the conclusions of this discussion are applicable to animal agriculture in general, not just for dairy—although it is a paradigm case⁸⁰. Following this chapter, I will consider possible solutions to these issues and competing arguments.

⁸⁰ For the remainder of this chapter, excepting those instances where the mention of dairy cattle or the dairy industry serves as an important distinction from other agriculture animals or production types, I will subsume “dairy cow” or “dairy industry” under the general term “animal” or “animal agriculture” as the arguments forthcoming apply equally to all cases of animal agriculture. This will hopefully lessen any confusion or nuisance while reading for both the reader and the author.

2.1 Animal Welfare is an Ethical Responsibility for Agriculture

I have given sufficient evidence to demonstrate that neglecting the welfare of cattle in dairy production has and will continue to lead to negative economic and farmer-relative consequences; but what about ensuring the welfare of the animal for its own sake? Given enough time and resources, animal scientists could possibly breed a beast that would be able to sustain extreme levels of production and environmental strain without the economic costs presently accompanying the practice. This does not, however, answer a more basic ethical concern that is attached to the original worry, i.e. the moral standing of animals. This has been a fairly unworked problem for philosophy, in part because the belief that animals exist solely for the pleasure and sustenance of humans has long dominated traditional Western thought from Biblical times onward. Most arguments for this view share a common premise that animals are unconscious and are more like machines than living beings, incapable of being harmed. Descartes' notorious position on the cognitive emptiness of animals and later the behaviorist school of modern psychology and their similar theory certainly reinforced the opinion that animals are merely instruments at our disposal.⁸¹

If this is true, there is no place for ethical consideration of the wellbeing of animals beyond our own self-interested concerns. Over the past three decades, however, there has been a growing awareness that animals possess far more complex cognitive lives than was previously believed, calling into question the historical precedent. In ethical theory this has awakened a debate over whether or not animals should be counted as "objects of moral concern" and whether ensuring their wellbeing should be a

⁸¹ For a full exegesis, q.v. Rollin, B. (2007). Animal Mind: Science, Philosophy, and Ethics. *The Journal of Ethics*, 11(3), 253-274.

moral obligation. I think it would be helpful here to consider the question of whether animals are objects of moral concern fully. If they are, it would then give even more reason to improve the welfare of animals in agriculture beyond the economic effects it has on the farm industry—with substantial social implications.

First of all, we must understand what it means to talk at all about “an object of moral concern.” A brief explanation of the concept is necessary. The statement itself already supposes a relation between two things; fundamentally, there can be no “object” at all without a referent, even more so when that object elicits concern. An “object” cannot exist in a vacuum because simply by counting it as a singular thing we already delimit it from other objects, giving it boundaries. At the very least, we must separate it from the point of reference that defines it, or the observer. Therefore statements, e.g. “That is a tree,” always already suppose an observer or referent in addition to the object. This is even more clearly so when we speak of an object of *moral concern*. What has “concern” if not another object/person that can be concerned about such things? Moral considerations are thus relational at their base and even more importantly *directional* in that the concerned party is concerned *for* an object.

My point in this quasi-Kantian exposition is to make the case that, when considering whether or not animals count as objects of moral concern, we must first define both sides of the relationship: what constitutes such an object, and what it means for a person to have “moral concern.” The latter variable is slightly less complicated. In discussing any object of moral concern, we are already putting ourselves and our capacity to act morally into the discussion. What this means is that there is something about a “moral object” that elicits (or should elicit) a special kind of concern from us. Infanticide, rape, and other unquestionably heinous acts are considered such because they are actions which harm objects of moral concern—we condemn the acts because we

have the ability both to have concern for the suffering parties, and because we can see that such suffering is in some sense “wrong.” If someone rapes a rock (were such a thing possible), there would be little reason to condemn the act because the affected object does not concern us morally. Typically, philosophers have called those with the capacity for moral concern and an understanding of right and wrong “moral agents.”

Aristotle may have been the first Western philosopher to define what it means to be a moral agent and provides a compellingly simple account of it. In the *Nicomachean Ethics*, chapter III. §1-5, Aristotle spends a great deal of time on this matter, concluding that of the beings which act voluntarily (including most animals, although not for Aristotle) and thus count as agents, only a certain kind qualifies as a moral agent. A moral agent is one that is subject to ascriptions of responsibility and can be properly praised or blamed for her actions. This requires not only that she can act voluntarily (the cause of her actions are not all from external influences), but that she has the capacity to understand what is “good” and then *decide* to act in a certain way. Defined further, this decision is born of a particular kind of desire resulting from deliberation, one that expresses the agent's conception of what is good.⁸² Obviously, how we define what is “good” makes a difference, but there is strong reason include concern for others in this category. Accounting for all of the elements in this definition supposes a certain level of cognitive ability for an agent to be properly labeled as a Moral Agent.

The second variable is more difficult to define, as an object of moral concern has several characteristics. Broadly, an object is considered morally relevant if one's actions toward it can be judged on moral criterion, i.e. right or wrong, good or bad, just or unjust, etc. This is only a definition from the perspective of the moral agent, however, and considering the question from the perspective of the object itself offers other

⁸² Aristotle. (1985). *The Nicomachean Ethics*. Terence Irwin (trans.), § 1111b5-1113b3.

characteristics. Chief among them is that it can suffer or flourish in a way that matters to it (i.e. it has the cognitive ability to experience these and is a significant motivator of its behavior). Simply put, such an object cares what happens to it. Whether or not it possesses moral agency, the fact that it can suffer or flourish in a way that self-referentially matters defines it as an object that should elicit concern from other moral agents. This is why rock-rape does not elicit moral condemnation—the rock cannot suffer, nor does it have the ability to care about what happens to it, making any such condemnation *non sequitur*. Deeming what constitutes a right or wrong action toward a true object of moral concern must be situationally evaluated, but the fact that one's actions toward it carry moral weight stems from its capacity to suffer or flourish in response to one's actions.

This is shown explicitly in Bernard Rollin's article "Reasonable Partiality and Animal Ethics" (2005) when he explains the moral significance of why we should respect the interests of beings capable of suffering. He does so in terms of the Kantian 'locus of moral attention' criterion for those beings which are ends in themselves versus merely a means to an end. A being is a locus of moral attention, according to Kant, if what is done to her matters to her—that she values her own life constitutes her moral standing as valuable in her own right. Rollin characterizes the moral standing of his plumber in a similar way, "Built into him is the positive and negative valuing of what is done to him, such valuing is intrinsic (built into him), rather than merely a result of how well he serves me or how much or how little I value his usefulness to me (his instrumental value). Thus, he is an "end in himself."⁸³ Later on, Rollin elaborates on this further,

"Surely any sentient or conscious being has states that matter to it in a positive or negative way - pleasure matters to an animal in a positive way, pain or fear in a

⁸³ Rollin, B. (2005) Reasonable Partiality and Animal Ethics. *Ethical Theory and Moral Practice*, 8(1/2). p117

negative way. Since it can value what happens to it, it has intrinsic value. Given the logic of morality, we should extend our moral attention to those states that matter to it when our actions affect that being.”⁸⁴

With this perspective as a guiding point, we can consider how this could be used in evaluating a proper attitude toward animals. In order for animals to count as objects of moral concern, it will require that we provide evidence for their cognitive ability to suffer and flourish and also to care about what happens to it. Until quite recently, it was an accepted “scientific fact” that animals were incapable of experiencing pain and were more like machines or bundles of instinctual, involuntary behaviors, making any attempt at defining an animal ethic a laughable endeavor from the start. However, the staggering amount of research and academic literature that has since provided evidence to the contrary (and the acceptance of animal cruelty laws like the one cited earlier) makes this an antediluvian view and deserving of nothing more than our collective disdain for its conclusions⁸⁵. Given these conclusions (and common sense) that suggest the existence of greater animal consciousness, there is sufficient cause to conclude that most animals count as objects of moral concern. This means that animals can suffer and flourish and that these experiences matter to them. As such, they should elicit concern in moral agents and obligate these agents to consider actions against them as morally relevant.

However, even if one accepts that animals are objects of moral concern, one could still argue that our concern for them is far outweighed by our concern for ourselves and our need to use them for food. Any slight wrong committed by causing an animal to suffer is of less importance than the good created by feeding ourselves. This is effectively the argument that the animal agriculture industry uses in defending its own practices

⁸⁴ Ibid.

⁸⁵ Q.v.: Bateson, P. (1991). Assessment of Pain in Animals. *Animal Behaviour*, 42(5), 827-839; for a historical perspective on this issue and more current evaluations of animal pain and animal consciousness.

(although they usually don't acknowledge that the animals suffer at all). The continuation of such a view allows the industry to maintain their present M.O. and avoid making any progress in improving animal welfare. There are several reasons the industry should abandon this view, and considering general philosophical positions on cruelty as well as arguments from classic ethical theories on proper animal use will hopefully show this.

A common critique by many animal activists in response to evidence showing animals suffering overwhelming pain and disfigurement under agricultural systems, is to condemn this as extreme, unnecessary suffering and therefore cruel and unacceptable⁸⁶. The truth or falsity of this belief is of secondary concern for me in this section. I am more interested in what constitutes the perceived connection between wrongness and the occurrence of extreme, unnecessary animal suffering.

As a preliminary step in my explanation, I need to define what counts as cruelty. Deciding what constitutes this will never escape academic controversy, so I will use the official Colorado State laws on animal cruelty to provide a benchmark on which to base further discussion. To quote the law:

“A person commits cruelty to animals if he or she knowingly, recklessly, or with criminal negligence overdrives, overloads, overworks, torments, deprives of necessary sustenance, unnecessarily or cruelly beats, allows to be housed in a manner that results in chronic or repeated serious physical harm... or otherwise mistreats or neglects any animal...”⁸⁷

Serious physical harm is defined by the law as: “(a) Any physical harm that carries a substantial risk of death; (b) Any physical harm that causes permanent maiming or that

⁸⁶ Proliferation of the inflammatory images found on many PETA or HSUS publications about the treatment of animals in agriculture has come to dominate the work of many animal activists.

⁸⁷ Colorado State Law (2005): Title 18. Criminal Code. Article 9. Offenses Against Public Peace, Order, and Decency. Part 2. Cruelty to Animals § 18-9-201.

involves some temporary, substantial maiming; or (c) Any physical harm that causes acute pain of a duration that results in substantial suffering.”⁸⁸ The appropriateness of this law for our purposes has not been missed and will be the subject of later reflection. I will also take the liberty of concluding that pain, separated from any further consequences, is an experience that is generally avoided by living things capable of feeling it—and thus a “negative” and even “bad” experience, despite the evolutionary benefits associated with pain.

Common sense, and nearly every ethical theory, would tell us that causing extreme and unnecessary pain to a person is unacceptable and constitutes abuse. Different theories offer different reasons for why this is an acceptable conclusion, but most would agree that it is simply because causing an innocent to suffer is *wrong*—there is something definitively abhorrent about it. Can we make an analogous conclusion for causing the same harm in non-human animals⁸⁹? And if so, what are the possible conditions under which it would be acceptable to inflict this harm?

Equating the moral implications of causing human versus animal pain is a complex task that is not without controversy, but one that is necessary if we are to say anything with confidence about the moral relevance of animal welfare in agriculture. Even with the scientific advances that demonstrated rudimentary animal sentience, there is still a large burden of proof to show that they have the requisite cognitive abilities to count as moral objects.⁹⁰ Proving that animals feel pain was only the first hurdle. For Tom Regan, philosopher and animal ethicist, the mental abilities of a living being, insofar as they are capable of a number of morally relevant capacities, establishes

⁸⁸ Ibid. For the full statute, q.v. appendix 1.

⁸⁹ Hereafter called “animals.”

⁹⁰ Q.v., Bateson, P. (1991). Assessment of Pain in Animals. *Animal Behaviour*, 42(5), 827-839.

its moral standing.⁹¹ These capacities include: an ability to feel pleasure or pain, to have desires, preferences, or memory, to have a sense of the future, and even the ability to have beliefs, to speak, or to reason.

In his essay, “The Case for Animal Rights,” (2008) Regan delineates sentient beings into two categories: “moral agents” and “moral patients.” Improving on Aristotle’s definition, Regan defines moral agents as, “individuals who have a variety of sophisticated abilities, including in particular the ability to bring impartial moral principles to bear on the determination of what ought to be done,”⁹² and to then choose to act in the right or wrong way as they define it. This ability, he continues, allows them to be held morally accountable for their actions. Moral patients, on the other hand, “lack the prerequisites that would enable them to control their own behavior in ways that would make them morally accountable for what they do” yet still possess a level of sentience (can experience pleasure/pain) and some of the other capacities mentioned previously.⁹³ Many animals, and certainly all animals in common agriculture, would therefore fall into the moral patient category, as well as certain humans who are deficient for one reason or another (infants, the mentally handicapped, and the enfeebled are some examples). These individuals who are incapable of acting morally themselves are still considered morally relevant because they can be, according to Regan, involved or “on the receiving end of the right or wrong acts of moral agents” unlike insentient objects.⁹⁴

This distinction is important for our discussion because it effectively defines animals as being innocent (incapable of doing wrong or right), so that causing harm to

⁹¹ Regan, T. (2008). The Case for Animal Rights. *Animal Ethics Reader*, 2nd Edition, p. 20.

⁹² Ibid, 19

⁹³ Ibid.

⁹⁴ Ibid.

an animal is equal to harming an infant, mentally handicapped, or otherwise enfeebled person, insofar as they are all instances of moral patients. I admit that this is an extreme conclusion and perhaps even verges on an “appeal to pity” fallacy. What is important, however, is that it provides an interesting argument for defining the moral status of animals. From this perspective, one can conclude that while the moral relationship between a moral agent and a moral patient is not reciprocal as it would be between two moral agents, right or wrong acts themselves still apply to both categories and can be evaluated as such.

I agree with Regan that to some extent these same conclusions hold for causing pain to animals as they do for causing pain to humans. Animal cruelty is an extreme case of this, defined by our causing extreme and unnecessary pain conditions to an animal—exactly what many animal activists accuse animal agriculture of. The reaction to instances of animal cruelty and wanton abuse is predictably one of disgust and abhorrence—hence the activists groups’ utilization of such images so frequently. As further evidence, the Diagnostic and Statistical Manual of Mental Disorders (DSM) characterizes animal abuse and cruelty as an indicator of Antisocial Personality Disorder, known colloquially as psychopathy⁹⁵. This basic revulsion can be understood as a symptom of our commonly held value system that says cruelty in any form is, simply, bad. Not only that, but the notion that suffering is *the* evil—if forced to pick just one—to be avoided or alleviated, is common in some of the important, classic ethical traditions.

⁹⁵ Pulled directly from the DSM IV: “Antisocial Personality Disorder, Diagnostic Features: “The essential feature of Antisocial Personality Disorder is a pervasive pattern of disregard for, and violation of, the rights of others...early-sign behaviors in youths include: aggression and abuse to people and animals, destruction of property, deceitfulness or theft, or serious violation of rules.”

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Ed., p. 646.

For animal agriculture to prove that their practices do not fall into this category, the industry must show that it does not commit the acts prohibited by Colorado State law, or that there is sufficient and overriding reasons to warrant such treatment. Based on the conclusions of the previous chapter of this project, these conditions cannot be conscientiously met. To be sure, the purpose of this section is not to accuse agriculture of being purposefully cruel or abusive to animals. My earlier discussion on what constitutes a “good dairyman” and the prevalence of such farmers should be referenced for my personal sentiments on the matter. In fact, I would argue that many of the current practices under attack have their origins in more benign motivations designed to benefit the agriculture community. Rather, to prove a point necessary for my argument that animal welfare must occupy a greater place in agriculture, I want to elaborate on the reasons behind why the value judgment, “causing unnecessary suffering [to an animal] is inherently bad,” is generally acceptable.

It would be worthwhile to elaborate on the apparent connection between wrongness and causing animal pain, focusing primarily on the pain or suffering of the animal as *matter*ing to it, and any ensuing obligations the moral agent has in her treatment of agricultural animals⁹⁶. One tool available to philosophers in determining the source of value judgments is to turn the impersonal or universal judgment under scrutiny into a personal one and then slowly build back up to a universal claim based on the answers found. In our case, pulling loosely from Bernard Rollin’s examples on the subject, I can ask why I do not want to be the victim of cruel actions or generally to suffer

⁹⁶ There exists copious literature on the subject in terms of different relationships humans have with animals; for example, wildlife, zoo animals, companion pets, and animals used in research. I am purposely avoiding any further mention of these. Besides the fact that the scope of the present project is only concerned with animal agriculture, including these other variations would unnecessarily complicate the more basic concerns at hand and introduce distinctions that are not relevant to the argument I wish to put forward. These other topics can be examined further in Armstrong, S. & Botzler, R. (2008). *The Animal Ethics Reader*. Routledge Publishers, NY.

at all⁹⁷. My answer is that I value my wellbeing, and therefore the pain I experience *matters to me*. Note that this is a negative kind of “mattering,” where the removal of a certain experience is desired. I respond, almost instinctually, to painful circumstances by trying to avoid or escape that which is causing me pain. The more painful the experience, the more excited this reaction becomes, even to the point of hysteria. Why else would this response be so emphatic except that the elimination of suffering is important to me? No further reason is needed to explain why I want to eliminate my suffering and why I might claim that the person causing such pain is morally reprehensible for doing so.

Likewise, when observing another person treated cruelly, I am able to empathize⁹⁸ with her in her avoidance behavior because I can understand what it would mean to suffer in that sense and would behave similarly myself. By comparing my own experiences with her avoidance behavior and reaction to suffering (including any confirmations she may give me directly), I can perceive that her pain *matters* significantly and is considered negative to her. Moving further up the impersonal chain, if I were confronted with a situation where I could treat another person cruelly, I may hesitate to do so because of the same conclusions I came to in empathizing with the suffering person—I acknowledge that the person has the capacity to suffer and that this matters negatively to that person. Following the logic of my own experience, I would have to hold myself culpable for causing this person pain if I chose to do so. It is easy to see how this principle can become more standardized into the original claim, “causing

⁹⁷ Q.v., *Animal Rights and Human Morality* (2006), “Reasonable Partiality and Animal Ethics” (2005), and *Farm Animal Welfare* (1995).

⁹⁸ Empathy is a rich philosophical term and the use of it here would benefit from a technical definition. The word originates from the Greek *empathia*, literally *co-pathos* or co-emotion—meaning a shared emotion. I find, however, that the German version of *Einfühlen*, literally “a touch/feeling” or to be touched presumably by witnessing another’s mind, more closely captures how we understand the experience. It is really more of an intuition of a feeling we *perceive* in the other person that we can barely touch, but that is often true. This capacity is remarkable and not limited to humans; anyone with a companion animal can tell you their pet knows when they are sad by the change in the pet’s behavior. This anecdote lends further strength to the idea that we can empathize with an animal’s pain.

unnecessary suffering is bad.” Calling a cruel action “wrong” or “bad” is simply shorthand for the fact that pain and suffering matters negatively to the people who experience it.

If our empathy arises from our ability to correctly (or nearly so) interpret the behaviors of others based on our own self-knowledge, then it seems a similar proof could follow in the case of the suffering of animals, even though they are not moral agents in the Regan sense. When we observe a cow bellow, flinch, and buck when jabbed in the rear by an electrical cattle prod (a common practice in the industry to herd cattle along a chute), we can confidently say that the experience negatively matters for the cow. If this is true, then along with our ability to recognize the pain of the animal, we should be able to empathize with it, and therefore reasonably “understand,” even if only by our own anthropocentric terms, the experience of the animal. Those avoidance behaviors are probably not dissimilar from our own were we to find ourselves in the same situation. We can conclude, therefore, that pain *matters* to the animal in much the same way that pain matters to humans, and thus carries the same moral value and obligations. It is not a great leap to determine from this that the same reasons that explain the wrongness of causing extreme and unnecessary pain in a human apply to animals—perhaps even doubly so as they are moral patients and not moral agents, and thus dependent upon humans in a significant way.

With these tools at our disposal, we can now examine a selection of common ethical theories that address our problem. Given the amount of evidence provided earlier on the diminished welfare of dairy cattle resulting from industrial practices, it must be concluded that the industry is perpetuating some cruel-like conditions for the animals. Although not a universally cruel system, the presence of any amount of excessive and unnecessary pain is morally wrong and indefensible. A brief look at Utilitarian theories,

Rights approaches, and Virtue ethics on this topic will help to address our proposition. While each position has its own shortcomings, and thus not to be taken as infallible, they all show an important perspective on the need for greater animal welfare conditions in agriculture and reinforce the need for the industry to take it seriously.

2.1A Utilitarian, Interest Responses:

The Utilitarian arguments which contend that the agriculture industry needs to account for animal welfare are perhaps the most prevalent in academic circles and popular culture at this time. This is due in overwhelming part to the work of Peter Singer and the acceptance of his ethical theories into the dogma of the largest animal activist groups such as People for the Ethical Treatment of Animals (PETA) and the Humane Society of the United States (HSUS). As such, it is his arguments on animal welfare in agriculture that I will use as a paradigm example for the Utilitarian approach.

Singer's most famous approach towards animal ethics relies heavily on his conception of the "principle of equality" which he defines simply as "the nature of the principal of equal consideration of interests."⁹⁹ The argument goes, pulling from the now cliché Bentham quote,¹⁰⁰ that moral concern for the interests of a living thing should not be limited by any other characteristic (including species, intelligence or rational capacities) than its ability to suffer. Singer explains that "The capacity for suffering and enjoying things is a prerequisite for having interests at all," and that if a creature can suffer then "there can be no moral justification for refusing to take that suffering into

⁹⁹ Singer, P. (2008). Practical Ethics. *Animal Ethics Reader*, 2nd Edition, p. 36.

¹⁰⁰ "The question is not, Can [animals] *reason*? nor Can they *talk*? but, *Can they suffer*?" Bentham, J. (1789). *The Principles of Morals and Legislation*. Oxford Press. London

consideration."¹⁰¹ His argument confronts the notion that non-human animals cannot be objects of moral concern because they are of a different species. Singer points out that the main reason for having this “speciesism” is because there is supposedly a natural characteristic which all humans share equally and which separates us morally from other creatures. However, as he shows, there is so much diversity in cognitive ability, rationality, dignity, and other supposed reasons for considering humans as special objects of moral concern that it would exclude many humans from this category. Those among us with mental handicaps, who are infants, or otherwise enfeebled, are perhaps far more cognitively weak than many of the higher mammals that are generally excluded from moral standing, and therefore lack these “special features” attributed universally to humans. Singer correctly exposes the logical mistake this entails when those higher animals are excluded and enfeebled humans included. Making such special conditions for moral standing are, for Singer, as arbitrary as racial profiling or religious discrimination. Not only does Singer hold that all beings who suffer require our moral consideration under his principle, but that giving greater weight to the interests of one set of beings (however defined) over another that suffer equally violates our moral obligations. Suffering is suffering, and “pains of the same intensity and duration are equally bad, whether felt by humans or animals.”¹⁰² This means, effectively, that the human tendency to value its own kind’s suffering over that of other animals, if the level of suffering is determined to be equal, is morally indefensible.

Generally, Singer’s utilitarianism is based upon the singular value that suffering is morally bad and the right thing to do is always to prevent or relieve it whenever it is encountered. The obverse naturally follows, where happiness is the moral good to be maximized whenever possible. Exception is given only to situations where the degree of

¹⁰¹ Singer, P. (2008). Practical Ethics. *Animal Ethics Reader*, 2nd Edition, p. 37.

¹⁰² Ibid. 38.

suffering differs between two individuals, and in such cases more consideration is required to be given to the individual or group experiencing with greater suffering. It is an agent-neutral, maximizing utilitarianism which borders on perfectionism—allowing for few exceptions to that general rule.

Even from this brief description of Singer’s philosophical approach, one can anticipate his view on animal agriculture. His concern for food animals is that their suffering, caused by life in factory or modern operations, far outweighs the benefits experienced by the humans who consume them or their products. Animal food products are technically unnecessary for the continued healthy existence of most people, making them luxury goods desired only for the taste. In order to remain consistent with his principle of equality, Singer must denounce any case where the major interests of one group (the extreme and unnecessary suffering of animals) are sacrificed for the minor interests of another (the pleasure humans derive from taste).¹⁰³ Singer consistently compares the confinement of agricultural animals in feed lots to the human slave trade as being roughly equal in terms of the suffering produced; taken to its extreme, his principle advocates for animal liberation when the suffering of the animal in captivity is greater than it would be if it wasn’t in captivity.

To his credit, he is quick to point out that acceptable farming practices such as small-scale operations or pain-free slaughterhouses that allow for new animals to live because of the space created by the death, are theoretically acceptable but practically impossible.¹⁰⁴ However, if we revisit the conditions required of a good ethical theory from page two of this essay: that it must necessarily be pragmatic, situated in the present time and culture, and able to lend itself to real-world application, we find that Singer’s

¹⁰³ Ibid. 39.

¹⁰⁴ Ibid. 40.

approach is lacking. Despite this crippling weakness, one of the main strengths that I perceive in his argument is that he makes a compelling case for why it is morally indefensible to discount the suffering or wellbeing of an animal, except in special cases where greater suffering is thereby avoided. Finding a rational argument against this view becomes quite difficult if it is to be agreed that suffering is fundamentally bad. Additionally, the fact that humans do not require animal products for a healthy existence strikes a blow at the animal agriculture industry because it calls into question the reasons behind the industry's push to expand without limit as it has the past 100 years. If it is only an economic reason nested in American tradition, and not the promotion of a "healthy product" or to "feed the world" as the industry claims, then the comparison to human slavery grows slightly stronger. It also questions the position that human benefits outweigh animal suffering.

If animal agriculture hopes to adequately defend itself from Singer's critiques, it must find a way to address the problems of animal suffering which permeate the industry to an extent that satisfies some of these concerns.

2.1B Arguments for Animal Rights vs. Animal Welfare:

We have already discussed the position of Tom Regan on the moral position of animals; his related views on the rights of animals further extend his influence on academia and philosophical positions on the ethical use of animals. His overall conclusion on the matter is that all moral agents and moral patients have "certain basic moral rights, including in particular the fundamental right to be treated with the respect

that, as possessors of inherent value, they are due as a matter of strict justice.”¹⁰⁵ He argues that because animals count as moral patients, meaning they possess specific advanced cognitive abilities, they are also what he calls a “subject-of-a-life.” This is defined as beings whose lives are “better or worse for them, logically independently of the utility they have for others and logically independently of their being the object of the interests of others.”¹⁰⁶ This is quite similar to the Kantian principle of being an “end in itself” or being “inherently valuable.” In fact, Regan holds that being a subject-of-a-life is the same as being considered inherently valuable. He also makes the claim that it is this inherent value which explains why we have direct duties to respect people and create “rights” or laws to ensure we continue to “treat those individuals who have inherent value in ways that respect their inherent value.”¹⁰⁷ Because Regan believes that being a subject-of-a-life and thus having inherent value is a *categorical variable* (or universally applicable with no degree of application: either one *is* inherently valuable, or one *isn't*), we are bound by justice to treat everything that has inherent value with the same consideration and respect. Therefore the most basic rights we extend to humans, i.e. the right not to be harmed, to live a life in line with our own flourishing, etc., must also be extended to animals. In Regan’s own words, “It is not an act of kindness to treat animals respectfully. It is an act of justice.”¹⁰⁸

Regan’s position on animal agriculture, based on this argument, comes to the same basic conclusion as Peter Singer’s insofar as he argues for animal liberation. However, Regan extends this conclusion further and advocates for the total dissolution of animal agriculture because it violates the animal’s basic rights. We enter into a

¹⁰⁵ Regan, T. (2008). The Case for Animal Rights. *Animal Ethics Reader*, 2nd Edition, p. 25.

¹⁰⁶ Ibid. 22.

¹⁰⁷ Ibid. 23.

¹⁰⁸ Ibid.

contractual-like relationship with animals in agriculture; however the terms of this contract are rather severe: Produce as much as you (the animal) can, or I will kill you. This “contract,” according to Regan, is unconscionable and does not even count as a true contract as the animal has no say in its participation.

For the same reasons that Singer’s arguments are practically weak, Regan’s position fails to meet our successful ethical system requirements. Additionally, it is unclear if animals actually possess the requisite cognitive abilities to be a true subject-of-a-life as defined by Regan. He includes abilities like having a sense of the future, and how well or ill their decisions affect such a future as requirements for being a subject-of-a-life. Can a cow really anticipate the long-term benefits of, say, a surgery to untangle her long intestine, or is it simply consumed in a confused and primal fear? Can a cow significantly anticipate the future at all? If not, then perhaps the rights associated with a given species may be a matter of degree, even if their inherent value is not. Furthermore, the animal agriculture industry will continue to exist as long as people demand animal products—and this is not going to change any time soon. This does not condone their actions in any sense; however, it does require that any ethical theory which settles for nothing less than total abolition will suffer from being impractical.

In response, the collective industry reaction to such militant calls for abolition of animal agriculture has been one of strong defensiveness and has actually harmed any attempt to create better welfare conditions for animals by confounding open dialogue on the issues. As was the case with every other major civil rights movement, change happens slowly over time and always by working *to improve* the organization or institution’s current practices, not by abolishing the organization itself. When slavery was abolished, agriculture and domestic work wasn’t eliminated, the structure is what changed. When women’s suffrage passed in the US, the American government wasn’t

eliminated, the structure was merely amended. Similarly, if the goal is to *improve* the welfare of animals, abolition of the entire animal agriculture system is perhaps not the answer. Structural change is what is necessary.

Bernard Rollin's influential work on animal rights is an expression of just this. His use of "rights" is merely a legal and rhetorical tool, based on our current culture's moral language; to ensure basic welfare conditions of animals that are otherwise unable to do so themselves, rather than the categorical and absolute kind of rights for which Regan argues. He admits of only one absolute "right," but it is not of the same type as normally construed, e.g. normative duties for preventing harm. The right he is concerned with is a level higher than this: what he terms a "meta-right." As he puts it,

"Thus, to put our conclusion in the language of "rights," we have established that animals have a very basic right, a right that is on a higher level than any particular right, namely, the right to be dealt with or considered as moral objects by any person who has moral principles, regardless of what those moral principles may be."¹⁰⁹

This effectively establishes animals as moral objects but does not promote any normative or specific action towards them, only that they be considered as morally relevant. From here he builds a network of related "rights," but in essence they are all further elaborations of what it means for an animal to be "dealt with as a moral object."

Philosophically, his work is as equally concerned with the suffering of animals as Regan's; however, the conditions under which this is addressed are altogether different. It would also be a mistake to call Rollin's position a rights approach, even though he relies heavily on this kind of language in his legal and philosophical *oeuvre*. In truth, his approach is closer to that of Singer's, but from an Aristotelian Teleology perspective rather than a Utilitarian calculus. One could call it a "*welfarist-teleology*,"

¹⁰⁹ Rollin, B. (2006). *Animal Rights and Human Morality*, Third Ed. p. 110.

consequentialist ethical theory. Understanding Rollin's definition of teleology is integral in understanding his argument, and will be discussed in depth.

Rollin capitalizes on Aristotle's definition of *telos* (literally "end" or "goal") to undergird his argument that animals count as objects of moral concern (much of the argument we have already covered). In using a spider as an arbitrary example, Rollin defines *telos* as "a nature, a function, a set of activities intrinsic to it, evolutionarily determined and genetically imprinted that constitute its "living spiderness."¹¹⁰ He continues that the life of something with a *telos* consists in a "struggle to perform these functions, to actualize this nature, to fulfill these ends, to maintain this life...or a drive to preserve its integrity and unity."¹¹¹ This is essentially a more robust definition of what was earlier discussed about a life mattering to a living being. Rollin is careful to point out that these actions or struggles are not necessarily consciously performed, and in fact the most basic and important of these self-preservation actions are usually instinctual, even for humans. An example of this is our need for oxygen; we may not always be consciously aware of this need, but it still very much matters to us if our means of getting it is thwarted. Having a *telos* means by definition that one has interests, and that any actions that attempt to actualize this proves that the being cares about what happens to it. Because we have based our conception of morality and what it means to be an object of moral concern on the capacity to have such interests, it follows for Rollin that animals are obvious examples of this.

In the ensuing sections of his book *Animal Rights and Human Morality* (2006), Rollin outlines how the various practices of scientific research, wildlife management, and agricultural use of animals either do not or need to better account for the various *teloi* of

¹¹⁰ Ibid. 100.

¹¹¹ Ibid.

the animals in question. For the purposes of agriculture, Rollin is explicit in stating, much as we have in the first chapter, that industrial protocols have usurped traditional husbandry values and reduced welfare measurements to productivity levels. Accordingly, this has meant that the *telos* of the animal is not respected and often dismissed in favor of economic goals. If one considers the overall argument for animal morality as was just conceived, this is a direct affront on the most basic “meta-right” of the animals. Because of the widespread welfare problems associated with this, Rollin criticizes the industry for its moral irresponsibility.

This position is perhaps the most promising philosophical argument for both accepting animals as objects of moral concern and developing practical solutions to welfare problems, although it still suffers from some weaknesses. The strength of this view comes in the ability for scientific research to account for the many of the characteristics associated with a given animals *telos*. Scientists can demonstrate the specific behaviors, social needs, and environmental conditions that promote the inherent nature of an animal, and then apply such findings to legal and industrial measures to ensure steps are taken to account for them. This makes Rollin’s argument succeed where the previously discussed arguments have not—in that it lends itself well to practical application and avoids many of the extreme conclusions that make the other views unpalatable. Rollin does not endorse the elimination of animal agriculture or animal liberation as do Singer and Regan, but rather hopes to find a compromise that allows agriculture to keep up production and still maintain an acceptable level of animal welfare. Paradoxically, it is just this malleability of Rollin’s argument that might be its weakness. It is unclear whether or not the measures Rollin deems necessary can adequately ensure *enough* of an animal’s wellbeing in the face of industry pressures.

Still, this argument is able to overcome this weakness. In terms of industry response, it is unclear how defenders of current agricultural practices can overcome the criticisms in Rollin's argument. There will have to be a major *Gestalt* shift that takes the animals under the industry's care as morally relevant beings that require a level of respect for the animals' wellbeing, rather than as merely production machines whose needs are subservient to the whims of man.

2.1C Character Ethics Response

The last ethical stance I will evaluate on the topic of ensuring animal welfare in agriculture requires only a brief discussion. There exist some important philosophical theories that hold the main reason to act morally is the subsequent benefit for oneself. According to this view, a morally good life is the highest excellence man can achieve. These are variously called Virtue theories or Character Ethics and emphasize the alignment of mental states, habit formations, and beliefs with "virtues" that partake of what is considered the ultimate good of mankind, and thereby make the person himself good. The technical details of this view are irrelevant to our discussion; I introduce this branch of ethical theory only to use one of its main principles: that our actions constitute and reflect our character, that this character can be deficient or exemplary, and that an exemplary character constitutes a truly happy or successful life. I would like to apply this principle to animal welfare and the role of agriculture in ensuring it; specifically, I argue that according to this view, the agriculture industry suffers from a deficient character in its current practices.

Although not considered a virtue ethicist, Immanuel Kant does frequently cite the importance of a good character in connection with moral actions. His moral theory relies heavily on the assertion that in order for someone to act morally, she must possess a “good will” or inner state that is concerned with promoting justice and other morally good values. His position on the cognitive abilities and the moral standing of animals is rather contrary to current positions on the matter;¹¹² however, he did maintain in several of his works that cruelty towards animals is to be avoided because it reflects poorly on a person’s character and is evidence of a weak moral will. As an example, in the much read 1785 work *Groundwork for the Metaphysics of Morals*, he comments:

“Cruelty to animals is contrary to man's duty to himself, because it deadens in him the feeling of sympathy for their sufferings, and thus a natural tendency that is very useful to morality in relation to other humans is weakened.”¹¹³

Elsewhere, Kant contends that one can judge the heart of a man by his treatment of animals, and that cruel treatment of animals often leads to cruel treatment of other people.

Another telling example of character flaws associated with animal cruelty has already been mentioned. The American Psychiatric Association’s *DSM-IV* entry on Antisocial Personality Disorder directly cites animal abuse as an early sign of a psychopathic neurosis. While cruelty is significantly different than abuse, with cruelty sometimes being an unconscious result of someone’s actions—as in the case with agriculture, the consequences for the victim tend to be the same. Additionally, it is very difficult to tell the difference between cruelty and abuse and in much of the activist literature condemning the industry, these are often conflated with each other.

¹¹² He was among the group that excluded animals from moral consideration because they lack many of the requisite cognitive abilities that warrant consideration. His final conclusion was that, “Animals... are there merely as a means to an end. That end is man.” Q.v., Kant, I. (1963). *Lecture on Ethics*. L. Infield (trans.). HarperTorchBooks, p. 239.

¹¹³ Kant, I. (1998). *Groundwork on the Metaphysics of Morals*. Mary Gregor (trans), part II, paras 16 and 17.

Obviously, the animal agriculture industry should want to avoid being labeled as clinically psychopathic. Much of the dialogue between the animal agriculture representatives and industry critics has been on the character of the industry, often drowning out any other discussion. There is some relevance in this often overly emotional and rhetorical debate: If the industry continues to act in ways that, for example, weaken the dairy cow's resilience in the face of environmental and physical strain, then it shows a wanton attitude towards the life of the creature in favor of economic gain. This reflects a corrupt character. In light of my other arguments, it would seem that the industry would be well served by increasing its efforts to ensure better welfare of its animals.

2.2 Social Responses to Industry Failures

The preceding discussion hopefully gave enough of a philosophical background on the necessity of including animals into general moral consideration, and specifically into industry initiatives in agriculture. In this second section, I will now argue that a failure to do this will result in the eventual social regulation of agriculture in a way that will hinder the successful continuation of the industry. I argue this based on a sociological interpretation of the role of morality in societies and in the very nature of agriculture. Ethical imperatives that are laid down by a society are, in part, expressions of its need for self-preservation; in fact it could be described as one of the primary ways that a society organizes and protects itself from potentially hazardous influences. This is certainly not a foreign concept for social scientists. As moral-economist and sociologist Andrew Sayer, Lancaster University, describes morality, "The moral concerns lay norms (informal and formal), conventions, values, dispositions and commitments regarding

what is just and what constitutes good behavior in relation to others, and implies certain broader conceptions of the good or well-being.”¹¹⁴ Especially in terms of economic language, morality has often been construed by social scientists as a kind of “normative contract” based on trust between parties that serves to bind a society in a unified social logic. Breaching such contracts threatens the very foundation of how a society interacts with itself.¹¹⁵ Our US Constitution and Bill of Rights have this as their most distinct goal, and are quite explicit in this regard. Furthermore, the legal debates that have surrounded most, if not all, of our country’s most famous ethical transitions, e.g. the abolition of slavery, women’s suffrage, gay rights, abortion issues, even such failed movements as prohibition in the 1920’s, have all centered around addressing breaches in this contract. Failure to account for these ethical problems is seen as a very real threat to the well-being of a country. This applies equally to the internal organization of an industry, and certainly has led to many federal regulations of industries that have undermined the nation’s social order.

This, however, does not mean that industries and other groups in a social organization are keen in their support of socially defined ethical imperatives. The current position in much of the animal agriculture industry is intransigent and loud in its rejection of any regulation attempts, denying the veracity of many of the criticisms against their standard practices which supposedly necessitate such regulations. This is most certainly a product of an economic-based fear rather than an informed position, and shows the total inability of the defenders of current practices to mount proper ethical arguments. This is, of course, not universally true of every member in agriculture

¹¹⁴ Sayer, A. (2005). Perspectives on Moral Economy. Unpublished manuscript prepared for conference on Moral Economy at Lancaster University, UK, in August 2005.

¹¹⁵ This is described in detail in K. Browne & B.L. Milgram, eds. (2009), *Economics and Morality: Anthropological Approaches*, E.P. Thompson (1991). *Customs in Common*, and Mauss, M. (1990 [1925]). *The Gift*. (q.v.)

and there are examples that attest to progressive and intelligent discussions between critics and farm organizations. However, the overwhelming attitude of the industry has been stubbornly reactionary. In the section following this I will examine the ideological reasons behind this, but for now it is necessary to provide evidence for my claims.

The global trend in political involvement in agriculture is one of increasing regulation. For animal agriculture, this has been largely expressed in terms of ensuring food safety, better waste management, and stronger animal welfare standards. This is due in great part to a growing social climate concerned with the living conditions of food animals, with organizations like PETA and HSUS at the helm. These activist organizations are gaining an increasingly strong political lobbyist presence, made even stronger by the increasing number of publicly available media outlets aimed at “outing” the ethical shortfalls of the industry. Authors Michael Pollan, Anne Lappé, Bill McKibben, and Barbara Kingsolver consistently publish books defaming the industry, while impossible-to-watch-movies like *Food Inc.* fill the common social imagination with the abject horrors of animal suffering in intensive factory-farms. The political influence of these movements may not be as extensive as their pro-agriculture correlates, but they have still been powerful enough to secure the success of federal and state mandates such as regulations against tail docking, sow stall and battery cage elimination, and other welfare measures. The creation of the Pew Commission on Industrial Farm Animal Production (PCIFAP) and successful publication of their 2008 report: “Putting Meat on the Table: Industrial Farm Animal Production in America” is another, perhaps the most holistic and informed organization, to engage in ethical considerations of animal agriculture. Their work was developed by some of the leading experts in both industry and academia, and has spurred a stronger discourse on these issues and continues to influence both legal reforms and industry decisions.

As further proof of the growing social movement, nations in Europe and the southern Pacific have already adopted stringent agriculture regulations on the proper handling and care of agriculture animals.¹¹⁶ While slower to engage these issues, the US has been adopting similar regulations following the EU's trajectory. In fact, in 2004 alone, over 2,000 state laws were proposed relating to animal welfare and cruelty prohibitions.¹¹⁷ While it is true that few of these proposed laws actually passed, the sheer volume of legal pressure these propositions represent is evidence of the social pressures behind them. The rising tide of social interest in improving animal welfare conditions on farms, paired with a historical precedent for social movements initiating political and legal reforms (discussed in depth later) should provide enough reason to assume that legal measures will continue to pass through the legislative branch and significantly impact American farming practices. This is effectively an ultimatum for the industry: change on your own, or be forced to do so.

As was suggested earlier in this chapter, agriculture is, by virtue of its relationship to society and what it produces, a very different kind of organization than other industries. A manufacturer that produces something as banal as widgets, or even an industry as complicated as the automobile industry does not, inherently, produce or interact with society in a very deep moral sense. If the auto-industry disappeared tomorrow, life would be more inconvenient perhaps, but we would still manage to carry on as a society well enough. If agriculture were to vanish overnight, the result would be disastrous. We rely implicitly on agriculture as an industry to feed us, to provide a *necessary* social good, without which our society as such would cease to function. Not only does the industry provide such a good, but as has already been established, relies

¹¹⁶ Q.v., European Commission (EU Legislative Branch) website on animal welfare laws: (<http://ec.europa.eu/food/animal/welfare/>)

¹¹⁷ Rollin (2006). *Science and Ethics*, p. 103

implicitly on objects of moral concern to produce such goods. Dairy cattle are objects of moral concern and therefore should be recipients of the respect this entails.

These characteristics give the dairy industry membership into a very small group of social services that defy and overwhelm economic concerns. Examples include our healthcare system and medicine, education, and government. While it is true that economic factors and values certainly play a large role in this kind of organization, it would be an obvious mistake to say that all of the values, moral responsibilities, and social expectations of these groups can be contained neatly in economic terms. Common intuition seems to suggest that the accumulation of wealth is of secondary or instrumental concern to maintaining one's health, wellbeing, and personal fulfillment—not to mention the responsibility to care for objects of moral concern. We therefore expend a great deal of public energy and intellectual rigor in how a society should construct and uphold this kind of organization. Part of this translates to how society should regulate its actions because these decisions have direct and significant impact for all of the parties involved. Agriculture is certainly such an organization, however it is not operating as such nor is it being regulated in the manner it should be as defined by other organizations that fulfill similar, necessary social goods. This is a problem.

Despite this, it would be a fair assessment to call the general response by industry leaders and their subservient organizations to the current and pending regulations obstinate and uncompromising. In reviewing these responses, it seems as if any attempt to reform or regulate the way farm animals are used has been seen as a personal affront and threat to be countered. A news release by the American Farm Bureau Federation on the then new European Union laws for farm animal welfare adopts this tone:

“American producers already face a slew of expensive government rules, but when it comes to animal welfare they are largely bound by state anti-cruelty laws and their own ethical standards. The last thing U.S. producers need is to have

their competitiveness trimmed further by the introduction of European-style animal welfare rules.”¹¹⁸

2.2A Scientific Research Regulation as Analogy

This is not a unique response to new social movements. A similar state of affairs accompanied the desegregation of schools, anti-discrimination laws, and other civil rights reforms with many affected business and organizations condemning the reforms as apocalyptic for their valued way of life. This also happened in animal research, and an analogy to our topic should be made with the debate that has gripped the scientific community since the 1960’s. In his *Science and Ethics* (2006), Bernard Rollin provides a clear account of this battle. The scientific community, until recently, was largely opposed to having their research subject to ethical regulations which they saw largely as matters of emotion and not the “objective reason” that should guide science. The practices in question were on the methods of invasive research, animal handling standards, and the lack of pain-controls in animal-based research. Researchers questioned the necessity of ensuring a certain standard of life, including controlling pain in creatures that very well may not feel pain at all, while critics argued the opposite. The debate between activists and researchers was heated and allowed for no middle ground, with activists accusing researchers of Nazi-like behavior and the other side calling activists “anti-science crazies hell-bent on disrupting Western Civilization.”¹¹⁹ It became increasingly clear, however, that the scientific community could level no legitimate ethical defense for its method of research. Studies demonstrating the ability of animals to feel pain, among other

¹¹⁸ Thornton, M. (1996, January 8). U.S. Must Avoid European Animal Welfare Rules. *Newsroom*. American Farm Bureau Federation. Retrieved from <http://www.fb.org>

¹¹⁹ Rollin, B. (2006). *Science and Ethics*, p111.

arguments (e.g. the anxiety caused by uncontrolled, extreme pain from invasive research can confound any results), culminated in a large-scale reform of research protocols, such as the expansion of Institutional Review Board (IRB) mandates in the National Institute of Health reviews for research.

This fear of regulation was as strong as it was because it was predicted to “greatly disrupt research” and block finding important results, as legislation is often not intelligent enough to allow the necessary freedom for scientists to do their work. According to Rollin, this was born from a blinding ideology within the research community that said science is ultimately value-free and imposing values would corrupt research. Following in the views of logical positivism, many working scientists held that proper science should only allow for empirically verifiable statements¹²⁰. Viewing “value” in general and ethical propositions specifically as wholly unverifiable and a product of subjective creations, the ideology contends that such elements need to be removed from consideration in research. Even on a very elementary level, this is not true. The frame of reference by which we approach the world greatly shapes what we perceive and what is taken as relevant. For example, when I reach for the coffee cup in front of me, I see only the cup and a little around it, ignoring what is to my far left and not seeing at all the bridge of my nose or my retina, although both are directly in my field of vision. This most certainly holds in science. As a very elementary example, when a chemist and a biologist are studying water the chemist will be primarily concerned with the elements composing it while the biologist will be concerned with its potential to support life. This shows that on a fundamental level scientists focus only on what is valuable for their research question and tend to ignore the rest. What we value is therefore central to our perception and even how the purely “objective” scientist conducts her research.

¹²⁰ Ibid. p17.

If we extend this discussion to include moral values, we will see that the same conditions apply. Research is never done in a vacuum—there is always a goal directing what is being studied. As a prime example, the development of the hydrogen bomb carried with it obvious ethical consequences and the very decision to begin research on it carried a host of value judgments. After the atom-bomb was dropped on Japan, the scientists who had done the main research and construction of the weapon were often asked if they had any regrets. The response of Sir Rudolf Ernst Peierls, a primary member of the Manhattan Project, is especially telling of the extent of this ideology. In his 1985 autobiographic article “Reflections of a British Participant,” he very frankly claimed that during his time working on the bomb, he did not question the implications of using the bomb because he trusted the “good will” of the agency leaders ordering the project whose job it was to make those ethical decisions. In other words, it wasn’t his job to consider the morality of the work; he was a scientist, not a politician. In Peierls’ own words, “In retrospect I have to admit that these views were a little naïve.”¹²¹ It was a moral decision for the scientists to continue working on the bomb knowing the kind of destruction it was capable of, and it was a moral decision for the government to initiate the project in the first place. The result of this research was an explosion of regulations on research, third-party review boards, and other reformations to protect society from immoral research. This example shows that ethical values have a very important place in science and research.¹²²

¹²¹ "I have been asked many times why I continued working for the project when the bomb was no longer needed as a deterrent, and whether I felt happy about developing a weapon that was going to be used to cause unprecedented destruction and suffering. . . . The leaders, I felt, were also intelligent men of good will and would try to make wise and humane decisions. In retrospect I have to admit that these views were a little naïve." (Peierls, R. (1985). Reflections of a British Participant. *Bulletin of the Atomic Scientists*, 41(7), p. 27.)

¹²² It could be argued, based on the nature of research like this, that scientific research as an industry provides an equally important and necessary social good, with as significant of impact to social health, as agriculture, healthcare, and government as discussed earlier. This fact is interesting, but not relevant to our discussion.

My point in explaining the blindness inherent in the scientific ideology is to draw the analogy that agriculture suffers a similar blindness from its own ideology. The result of the scientific community ignoring social pressures to ethically regulate its work, and denying its duty to accommodate these at all, was massive government involvement that forced regulation. A similar fate is already well underway for agriculture.

2.2B The Inevitability of Regulation

Agriculture as an industry is subject to the same consequences that the scientific community experienced because of its unwillingness to account for the social ethics behind its work. As Rollin explains, “The array of social ethical revolutions...has forever changed the way governments and public institutions comport themselves. This is equally true for private enterprise: to be successful, businesses must be seen as operating solidly in harmony with changing and emerging social ethics.”¹²³ Consumer demands have led to regulations in every sector of trade from minority representation in businesses and schools, warning signs on cigarette cartons, and the more recent trend of Corporate Social Responsibility reports that show off a company’s commitment to sustainable business practices. This should apply even more to an industry supplying as necessary a social good as agriculture does. Rollin continues, “Not only is success tied to accord with social ethics but, even more fundamentally, freedom and autonomy are as well.”¹²⁴ Every industry is given a certain level of freedom by society to pursue its goals, based primarily on the fact that the general public does not have the proper education to

¹²³ Rollin, B. (2009). Animal Rights as a Mainstream Phenomenon. Proceedings from The Range Beef Cow Symposium XXI. Casper, WY.

¹²⁴ Ibid.

understand the intricacies of a profession (hence the name “professional”), yet still desire the products of their labors. This amounts to a trust that the company will act in a morally acceptable way in return for the autonomy necessary to innovate and succeed. If that trust is violated, it is the responsibility of society’s collective voice (i.e. government) to protect itself. Simply put, “society basically says to professions it does not understand well enough to regulate: You regulate yourselves the way we would regulate you if we understood what you do, which we don’t. But we will know if you don’t self-regulate properly and then we will regulate you, despite our lack of understanding.”¹²⁵ Failure to account for social concerns results inevitably in increased federal regulation, a subsequent loss of autonomy, and greater public distrust.

There is, in fact, good reason to draw the analogy between the responses of the scientific community against regulating animal experimentation and the animal agriculture community against regulating industry practices on animal welfare. Official statements of the American Farm Bureau Federation (AFBF), U.S. Farmers and Ranchers Alliance (USFRA), and the American Agriculture Alliance (AAA)¹²⁶ universally condemn current and potential government regulations that seek to reform animal handling and breeding practices. Three examples of these organizations’ most recent activities will serve to prove just this.

The AFBF has been very clear on its position on federal regulation as Bob Stallman, president of AFBF since 2000, expressed in a recently released statement on new government regulatory reforms,

“Today, farmers, ranchers, and countless other business owners face a long list of federal requirements that are eroding their bottom line; they come in the form of

¹²⁵ Ibid.

¹²⁶ These three organizations represent the largest, and most funded, non-governmental groups that lobby or work with the US government on the behalf of the agriculture industries.

regulations, “guidance”, and any number of other agency pronouncements. All too often, these agency actions are far from transparent and lack full consideration of economic impact – let alone any effort to minimize that impact.”¹²⁷

Suffice to say, there is very little support for any external regulation.

The USFRA is equally condemnatory of regulations, but shifts the blame to ignorant and “susceptible” consumers who are too easily swayed by inflammatory activist agendas and then vote for regulations based on misinformation. Joe Cornely, a director at the Ohio Farm Bureau under USFRA, stated that more realistic expectations among consumers are needed, “So often people advocate for a utopian world and it's not doable. Feeding the world requires us to kick up some dirt and create a few odors. That is just a reality of producing food and fiber that may not fit in with the utopian vision. The vast majority of people are reasonable people; they just need to know that you can't have the perfect world.”¹²⁸ Such statements bespeak a distrust in both the general public and a disdain for regulations, not to mention an embarrassing admission of the industry's moral grey area.

Finally, the Animal Agriculture Alliance, a non-profit organization composed of the largest corporate and private “institutes” representing a majority of the industry, is perhaps the most vehement in its condemnation of both activist work and federal regulation. Their 2010 Stakeholder's Summit was titled, “Truth, Lies, and Videotape: Is Activism Jeopardizing Our Food Supply?” and consisted of several workshops and presentations providing a “united response to detractors bent on eliminating the

¹²⁷ Stallman, B. (2011, January 19). Regarding President Obama's Executive Order on Regulatory Reform. *Newsroom*. American Farm Bureau Federation. Retrieved from <http://www.fb.org>

¹²⁸ Crumb, M.J. (2011, January 31). Farmers Create New alliance to Fight Bad Publicity. *Bloomberg Businessweek*. Retrieved from <http://www.businessweek.com>

industry.”¹²⁹ David Martosko, one of the presenters, spoke on the human cost of the animal rights movement, "Animal activists are in the business of creating conflict. It's critical to fight back. Ask yourself: do you believe in farming, or do you not? Are you willing to defend it, or not?"¹³⁰ Following this, former Department of Homeland Security Undersecretary Asa Hutchinson delivered a keynote address on the growing threat of activist terrorism and the need for greater security measures to protect industry. Additionally, other publications from AAA denounce any federal regulations or measures that have come from activist pressures as they, “represent a slippery slope that farmers and ranchers must be wary of. Animal rights organizations such as HSUS will only be satisfied when animal agriculture is *entirely* eliminated [sic].”¹³¹

This kind of stance towards critics of the industry, which each of these organizations hold, serves only to further alienate the public from true discourse. One recommendation that all of these three organizations gave to their members was to increase industry public relations efforts to cast a more positive light on agriculture and animal conditions and to be more transparent in their practices. This is incompatible with their assault on activism. The activist organizations are, after all, composed of the same public sector the agriculture industry hopes to influence. If the industry refuses to work *with* every element that influences the federal decisions that affect them, then regulations will only have a more detrimental effect by forcing change on an industry unwilling to work with the organizations proposing the eventual regulations.

The worries outlined by Stallman and the AFBF, while consistent with this previous critique, do contain an element of truth. While the regulations AFBF contends

¹²⁹ Animal Agriculture Alliance. (2010). Truth, Lies, and Videotape: Is Activism Jeopardizing Our Food Supply? Proceedings from The 2010 Stakeholders Summit. Arlington, VA.

¹³⁰ Ibid.

¹³¹ Animal Agriculture Alliance. (2010). Agriculture Must Collaborate to Educate Voters. *Newsroom*. Retrieved from <http://www.animalagalliance.org>

with may ensure greater welfare standards for animals, their application, time frame, and potentially insensitivity to the farmer's economic needs do pose a problem for the industry. The failures of the US automobile industry over the past decade provide a clear example of how federal regulations can affect economic success. It was arguably due in part to increased emission standards and its related cost, among other global trade variables and poor corporate planning, which led to the auto industry's recent collapse. Early adopters of emission regulations were able to weather the latest economic downturn while late adopters and notoriously eco-unfriendly companies had to be bailed out of bankruptcy. Federal banks effectively took the reins of these companies, leading to a substantial loss in autonomy. A similar process is already underway in agriculture and will continue if the industry doesn't take the initiative to change its practices first and in a way that takes the unique needs of agriculture into consideration. As one spokesperson for the AFBF characterized it, "New attempts at passing restrictive animal welfare legislation in the United States are as sure as the cows coming home."¹³²

Those automobile companies have largely bounced back from their recent struggle, however the "rules of the game" under which they previously operated have since changed. If the animal agriculture industry hopes to survive this inevitable transition with less pain and long term consequence, they must be willing to change the old rules themselves to reflect a more ethical *modus operandi*.

¹³² Thornton, M. (1996, January 8). U.S. Must Avoid European Animal Welfare Rules. *Newsroom*. American Farm Bureau Federation. Retrieved from <http://www.fb.org>

2.3 An Economic Decision Calculus Cannot Account for Ethical Responsibilities

After considering all of the previous discussions, one could rightly ask how the animal agriculture industry could have devolved into its current state. Examining the underlying ideology that permeates the industry may provide some insight into this. In the analogy drawn between the scientific community and the agriculture industry, I concluded that, contrary to the scientific ideology, science is not value-neutral. Moral considerations play a fundamental part in every research protocol, and must be accounted for because of its role in society and to avoid increased regulation and a subsequent loss of autonomy and greater public distrust. I had also mentioned that the agriculture industry also suffers from a blinding ideology that rejects important moral considerations and precludes the ability for defenders of current practices to mount proper ethical arguments. This ideology has its roots in current economic theory and consists of the belief that the “bottom line” (i.e. overall profit margin) of any industry is the singular absolute value. Other concerns, including moral obligations, are violable and should only be considered insofar as they do not threaten the bottom line. As such, they are effectively translated or *reduced* to monetary terms; and here again our axial question has resurfaced. This is the keystone of an economic decision calculus and a hallmark of the economic ideology. Everything must be considered in the only language a business can comprehend: money. Stallman’s previously quoted statement on the harm of government regulations is the perfect example of this ideology at play in agriculture. In considering this ideology, some questions immediately arise, namely “Can you fully account for the welfare of a sentient being in terms of capital?” and “Can economic calculations adequately inform our obligations to objects of moral concern?” I would answer, no.

The fact that the farming industry has either ignored the underlying reasons for the systemic failures documented in this essay, or simply been unable to see them as morally significant, is a product of this ideology. If it were not the case, there would be far more compliance and support of increased welfare standards based on the traditional husbandry values that still permeate the industry. Something has usurped these traditional moral obligations, and in so doing has also given the profession a revealing name change. “Farming” in the US has ceased to become the correct adjective to describe the profession; it is now officially the “animal agriculture industry.”

Farming has always been a form of livelihood, a social system that worked under an almost sacred contract: The farmer will feed the rest of society in exchange for enough money or goods to allow the farmer to live comfortably and continue to produce food. This social structure has shifted since the industrial revolution and ensuing urban migration. As was outlined in the introduction, food became an investment commodity once farm decisions were controlled by middle-men and vertically integrated distributors. As with any investment commodity, the promise of greater wealth spurs competition and growth, leading to new and innovative production methods to ensure continued economic success. Farming was not immune to this transition and is now a business, a corporate network, an *industry* that survives only by competing in a global market. Accordingly, the M.O. of the industry is not to “feed the world” as it so righteously proclaims¹³³, but to maintain a viable business among its increasing competition. Feeding the world is conditional on any surplus capital the industry is willing to invest: a form of charity. By holding to this economic ideology, one is forced to conclude that it simply costs too much to incorporate ethical standards that don’t have an immediate monetary pay-off. The industry cannot afford to make these changes

¹³³ Q.v. “USDA Welcome video,” on the department’s official website: www.usda.gov

without a substantial hit to its bottom line, and balks at any attempt to force its hand in doing so. I believe this explains much of the intransigent attitude described in the previous section.

For me to show that the economic ideology in agriculture is unable to account for such moral concerns as animal welfare, I will first need to elaborate on the features of the decision calculus that defines the ideology. A decision calculus is a codified method of determining the best possible action based on reasonable predictions of the related consequences. In the economic ideology, the calculus used is called “cost benefit analysis” (CBA). A robust definition of the general model is given by O’Neil, Holland and Light (2008):

"Individuals have preferences whose satisfaction increases their welfare. The strength of preferences for marginal changes to their current range of goods can be measured by individuals' willingness to pay for their satisfaction... the total benefits of the project can be identified by summing the different amounts that affected individuals are willing to pay for the marginal changes the project brings, the costs by summing the different amounts affected individuals are willing to pay for changes not to proceed. A project is worthwhile if benefits are greater than costs. Given a choice of projects, we should choose the project that produces the greatest sum of benefits over costs."¹³⁴

For the economic version of the model that concerns our project, the general CBA is translated to define the given cost or benefit variables for each decision in terms of capital or perceived monetary loss and profit for those players involved in the transaction. Based on what has already been presented in this essay, it is clear that historically the agriculture industry has used such a capital-based CBA in deciding many of its most influential decisions, including its research goals, how it defines its “best practices” for handling and breeding animals, and how it engages the public sector. The potential benefits of using bST, for example, were analyzed in the research literature

¹³⁴ O’Neill, J., Holland, A., Light, A. (2008). *Environmental Values*. Routledge. New York, NY, p 28.

against possible economic costs to the farmer and, less so, to the physical costs to the cattle insofar as it would affect production. When studies like the ones compiled by Bauman (1992), previously cited, heralded the growth hormone as providing “unprecedented gains”¹³⁵, the conclusion was decidedly that bST must be used to ensure competitive market performance in the growing global trade. Even when evidence emerged as to the health risks associated with its use, industry leaders continued to promote the use of bST because of the overwhelming economic benefits, blaming any animal welfare problems on “poor management” or as marginal issues needing little consideration.¹³⁶

None of the literature defending current practices takes seriously the accusations that these practices significantly detract from the quality of life of the animal, nor do they adequately address other morally relevant, non-economic costs or benefits, whether for the animals or humans involved. I believe this is because a capital-based CBA cannot adequately translate the important aspects of moral issues into monetary terms, only the economic costs of implementation, and therefore cannot understand the obligation to conform to the acceptable ethical standards. There are other relevant “costs” and “benefits” besides economic ones that are generally accepted in our social ethic. Physical and emotional pain and their obverse of pleasure and joy, feelings of injustice or disgust, or the satisfaction felt when you relieve someone else’s suffering are some examples of costs and benefits that cannot necessarily be discerned in a capital-based CBA. We can call the collection of variables like these, in addition to the economic variables, the *real* costs and benefits that need to be accounted for in a morally acceptable decision calculus.

¹³⁵ Bauman, D.E. (1992). Bovine Somatotropin: Review of an Emerging Animal Technology. *Journal of Dairy Science*, 75 (1), p. 3445.

¹³⁶ Ibid. 3432.

Additionally, it is unclear that a capital-based CBA can justly distribute the real (or even economic) costs among the affected parties in its calculus because it is incapable of determining any cost to individuals other than the ones who stand to be affected by monetary gains and losses. It certainly cannot account for any cost to an animal because the concept of money is totally alien to it. If, for the sake of argument, it were a human that produced the milk in the dairy industry, what amount would a person be willing to pay to accept the level of genetic, bodily, and psychological stress inflicted on modern dairy cattle? Alternatively, what amount of capital gain would be acceptable to warrant treating a human in this manner? Obviously, all of the real costs and benefits would not be accounted for if we decide to put a price to it. To articulate this differently, we can consider these real costs and benefits as a kind of social good that cannot be exchanged for money. It is a kind of loyalty or relationship we have towards other moral objects to respect these goods. As O'Neill, Holland, and Light contend, "One cannot buy [social goods]. To believe one could, would be to misunderstand those very relationships. To accept a price is an act of betrayal."¹³⁷

Like the scientific ideology, the economic version is blind to moral values, despite the fact that these values play a significant role in influencing what is taken as relevant and important. Although money may be the primary value in this ideology, there are significant underlying values that exist just below the surface. As in science, the aims of the various animal agriculture practices were to accommodate as many of the interests of the relevant parties as possible. To continue with the bST example, it was originally created by Monsanto to provide farmers with an affordable and readily available supplement to increase milk production. If the only interested parties were Monsanto and a farmer with declining profit margins, there would seem to be little if any further

¹³⁷ O'Neill, J., Holland, A., Light, A. (2008). *Environmental Values*. Routledge. New York, NY, p 78.

issue in this case: the benefit of increasing milk production far outweighs the potential extra monetary cost of buying the new technology. In essence, that is what Monsanto concluded.

This, however, was not the case. There were interested parties that only revealed themselves *a posteriori*, or after the new technology was implemented. The dairy industry's research failed to predict all of the parties that would be affected by bST. If we add in for example the relative uncertainty of introducing large amounts of growth hormone in an eco-system, the interests of poorer farmers who couldn't afford the new technology, the global market effect of a sharp increase in milk production and its effect on poorer nations that couldn't subsidize their exports, plus (let us not forget) the morally significant interests of the cows themselves; the complexity grows. Just with these four new variables, we get an entire host of new interests and new standards for what the real costs and benefits are.

In addition, not only is the market unable to account for moral values in its decision calculus, but even the mechanisms by which it is able to change its practices is stunted. It can be argued that individual players in an industry that operate under this ideology suffer from a version of the "collective action problem." As it operates now, the changes necessary to ensure greater welfare for dairy cattle would translate as an increase in production cost—without any economic gain. Any producer, distributor or farmer who takes initiative to make moral changes on a grand scale will automatically be out-competed by their conventional peers. Separating oneself from the crowd in this sense is to commit economic suicide, much as a rogue prey-animal will be quickly picked off by a predator. Through rational examination, and my own experience working on farms, even if a farmer or industry player *wants* to change her practices to align with higher moral standards, she cannot justify it economically and still be in business.

At present, the only way to promote the moral values that a society demands is to measure consumer preference and try to match their practices with what the consumer wants to purchase. Again, however, the economic paradigm that permeates the industry simply cannot perceive what is beyond this including the fact that behind these consumer preferences are actual sentient beings that are affected by the whims of the consumer and her preferences. The paradigm can therefore not *directly* reflect the values of society, only indirectly measure them through consumer preferences.

Ethically sound practices that confront conventional ones are believed to be inherently more costly by the industry because purely economic values (e.g. efficiency) are not given the greatest priority and therefore cause a business working under such a model to operate in the red.¹³⁸ Additionally, the value-added elements of better moral standards or long-term viability through more resilient milk-makers are benefits that may not be actualized in a meaningful way soon enough to inspire internally-motivated changes. As was briefly discussed in the introduction, however, there is not always a negative correlation between morally strong practices and efficient business. In the case of limitless milk production increases and breeding practices that only favor production, it was demonstrated that this is decidedly not the case. A middle ground must be found somewhere on the “efficiency vs value” curve that balances both variables without detriment to either side of the curve. Therefore, it seems that the only way to make sweeping changes in an industry is to apply external forces to effectively “change the rules of the game,” as occurred in the scientific research community or the automobile industry. If the agriculture industry is forced to operate more ethically across all levels,

¹³⁸ It is arguable that conventional practices, such as have already been discussed in the first chapter, do not lead to business operating “in the black” either. The cost of ignoring ethical commitments, which was also covered earlier, are mostly externalized in the form of animal suffering, lower health standards for consumers, and long-term economic costs for the industry itself. Forcing the industry to internalize these costs will obviously be a blow to the bottom line, so revered by executives. However, I am tempted to play my very small violin at such concerns, and may just be a fact about animal agriculture that has heretofore been ignored.

then competition will not be a factor and other means of externalizing costs will be adopted, though not at the expense of the cattle or public health.

To conclude this section, I would argue that the value complexity inherent in intensive animal agriculture practices creates a framing problem that is almost impossible for the traditional cost-benefit analysis calculator to handle. By framing, I mean the necessary background events or variables that fix our reference point for what is relevant and what is not. If we cannot capture all of the interests that are at stake in our societal moral ethic with a capital-based CBA, it would follow that some parties will be taken advantage of or would fail to realize the greater goal the new research has in mind. This is obviously a problem if it causes unacceptable suffering for any of the affected groups, as we have shown some of the practices in modern dairy have. As such, we are obligated to abandon or revise our decision calculus. Our most basic social ethical intuitions include far more than profit margins in determining what is valuable. By continuing to ignore these other socially defined obligations, the dairy industry fails in its responsibility to regulate itself in the eyes of society.

Argument Conclusion:

As a review, I have built on the previous chapter's conclusion that current dairy industry practices have eroded the physical resilience of the cow, and altogether represents a failure of the industry to account for the long-term health of dairying in general. From this, I have also shown that ensuring high standards of animal welfare is more than merely an economically sound investment; it is a moral obligation and social requirement. By virtue of its very nature as a business and provider of a social good, the dairy industry, and agriculture in general, *must* be held morally accountable in its

practices and regulated accordingly. As a consequence, if the industry continues in its present trajectory, government regulations will inevitably follow as long as social pressures remain heavily on the side of animal welfare. These regulations will most likely limit the industry in terms of autonomy and freedom to make its own decisions, especially if the industry continues to aggressively oppose attempts to reconcile social moral values with its own interests. This is a seriously self-defeating attitude that must be addressed. Finally, because the dairy industry is governed significantly by a capital-based cost-benefit-analysis decision calculus, it is unable to meet these conditions, and will therefore be subject to these regulations.

In the interest of being as explicit and complete in my argument as possible, I would like to synthesize the preceding three sections into a formal argument:

- (1) If animal welfare is a morally relevant attribute of animal agriculture, and
- (2) If failing to account for this will lead to significant difficulties due to increased federal regulation and waning social trust, and
- (3) If the current decision-making apparatus of agriculture precludes an ability to address these moral problems,

Conclusion: Then, such an industry *must* be subject to greater ethical standards than those other counterparts. This is because the dairy industry is subject to premises (1)-(3), and is therefore more similar to social-wellbeing operations such as healthcare or education, rather than such purely mechanistic industries as automotive or widgets. That it would behoove dairy, and all agriculture for that matter, to be early adopters of such standards is of secondary concern to the fact that a *laissez-faire* attitude towards agriculture that allows for a rejection of moral values is unacceptable.

CHAPTER 3: Solutions and Future Work

The failure of mere economic goals to direct agriculture in an ethically acceptable way, and thus to successfully guide its decisions, has been a subject of interest for some time. Leo Tolstoy, in his seminal work *Anna Karenina* (1877) goes into great detail, perhaps to excess, expounding upon just this. Although we should not take Tolstoy to be an authority on the matter, the musings of his main character, Levin, are worth noting and are surprisingly prophetic:

“He maintained that Russia's [agricultural] poverty came not only from an incorrect distribution of landed property and false orientation, but had recently been contributed to by an alien civilization abnormally grafted on to Russia, particularly by the means of communication and the railways, entailing a centralization in cities, the development of luxury and, as a result of that, to the detriment of agriculture, the development of factory industry, of credit and its companion—the stock exchange. It seemed to him that when the wealth of a state develops normally, all these phenomena occur only after considerable labor has already been invested in agriculture...

Considering our incorrect use of the land, the railways, brought about not by economic but by political necessity, were premature and, instead of contributing to agriculture, which was what they were expected to do, had outstripped agriculture and halted it, causing the development of industry and credit, and that therefore, just as the one-sided and premature development of one organ in an animal would hinder its general development, so credit, the means of communication, the increase of factory industry... only harmed the general development of wealth by setting aside the main, immediate question of the organization of agriculture.”¹³⁹

It seems quite fitting that Tolstoy chose to use the metaphor of unbalanced organ growth to describe the effects new and alien variables have caused in agriculture, especially for

¹³⁹ Tolstoy, L. (2004). *Anna Karenina*. (R. Pevear & L. Volokhonsky, Trans.), p.484.

our discussion of dairy. While the remainder of Tolstoy's social commentary on the excesses of European social mores does not pertain to our topic, his view of agriculture is amusingly on point. This passage is an especially strong articulation of the point I have been making—and, allowing for a few liberties in translating it to fit our specific issues, serves as a nice literary summary of how economic means cannot fully account for the values and needs of agriculture, and the resulting significant consequences.

As we have seen from the previous discussions, moral concerns, including those for the welfare of the food-animal, comprise a significant responsibility for dairy—and the greater food-animal industry. In fact, I am convinced that ignoring moral responsibilities will inevitably lead to complete failure for any industry, especially those that are trusted to provide the kind of necessary social goods that agriculture does. The negative ethical concerns that carry the most weight tend to be those that arise from short-sighted or corrupt practices, and the offensive nature of these practices is often related to their inability to conform to the needs of the society that admonishes them. For the dairy industry, not only do the relevant concerns directly affect the long-term economic viability of the industry, but there is a very real moral obligation to account for the wellbeing of the animals for their own sake. To ignore these concerns, or to operate under a system that cannot address them because of overdeveloped economic interests, will inevitably retard the development of the industry as a whole. As such, these concerns must be addressed, and done so in a way that balances the needs of the farming community with the moral obligation they have towards their animals.

The goal of this project is not merely to break down the dairy industry and leave its scattered remains for the birds, but to direct future work in developing an ethical means of addressing the problems inherent in the industry at present. It is a project that will hopefully make visible the larger philosophical problem from which the industry suffers: economic priorities taking precedence over moral values. The objective of this

concluding chapter is my attempt at providing some semblance of the scaffolding necessary to move beyond this ideology. With this in mind, I will be reviewing some of the current legislation and work already done in this field, as well as discussing other potential solutions, provide critiques of them, and in the end suggest a kind of amalgamation of the best aspects of each to inspire future work on the subject. We must attempt to take a sober look at the ethical problems within the dairy industry and recognize the competing needs for all of the parties involved without verging on emotional squabbles of the sort which can permeate the discussion. This includes weighing in on the economic needs of the industry, social concerns, and other politically sensitive factors.

The sections of this chapter are organized by solution type and include current measures already in place, proposed legal mandates or regulations, and cultural paradigm shifts. A final discussion will follow.

3.1 Current Measures for Ensuring Greater Ethical Standards in Dairy

There are already many laws, voluntary checklists, best-practice recommendations and third-party certification standards that are in place to ensure greater ethical standards in the dairy industry. These programs have certainly improved matters and have garnered some much needed social support for a floundering industry, especially with the promise of stronger laws being passed. However many shortcomings still exist, mostly due to their lack of scope or the motivations behind their creation. A brief review of these is necessary before any critiques can be given.

On a federal level, there is only one law which regulates the treatment of dairy animals. It is known as the “Twenty-eight Hour Law” and requires that when transporting an animal, one “may not confine animals in a vehicle or vessel for more than 28 consecutive hours without unloading the animals for feeding, water, and rest.”¹⁴⁰ The Animal Welfare Act, the other widely-cited anti-cruelty law that regulates the treatment of animals, only regulates a select few animals. Officially, it only “authorizes the Secretary of Agriculture to regulate transport, sale, and handling of dogs, cats, nonhuman primates, guinea pigs, hamsters, and rabbits intended to be used in research or “for other purposes.” It requires licensing and inspection of dog and cat dealers and humane handling at auction sales.”¹⁴¹ A 1970 amendment to the act extended the law to include “all warm-blooded animals determined by the Secretary of Agriculture as being used or intended for use in experimentation or exhibition except horses not used in research and farm animals used in food and fiber research.”¹⁴² Of the seven acts passed since the original Animal Welfare Act which amend or modify its purview, there is no mention of farm animals. Why farm animals are not included is never explained by the act’s literature, although at the time when the act was approved and the first amendments made, these animal welfare issues were not of major concern and much of the practices critiqued in this work and others had not yet surfaced. Federal laws, while they do *suggest* a successful framework for greater ethical legislation, do not provide any kind of precedence for more ethical treatment of farm animals or a stronger moral constitution for the industry itself.

The framework provided by the Animal Welfare Act, were it to include farm animals, would significantly impact the current industry and require that all current

¹⁴⁰Twenty-Eight Hour Law. Pub. L. 103-272, § 1(e), 108 Stat. 1356. (1994).

¹⁴¹ Animal Welfare Act. Pub. L. 89-544. H. R. 13881. (1966).

¹⁴² Animal Welfare Act Amendments of 1970. Pub. L. 91-579, § 3 (g). H. R. 19846. (1970).

practices, and future practices, be submitted to federal review to determine their impact on the welfare of the animals. The structure of the act requires a rigorous upkeep of records and detailed treatment of the animals in use that may lead to better ethical practices in the long-run.¹⁴³ In 2004, the European Union passed a version of the Animal Welfare Act, although it is far more stringent in its purview in that it also includes farm animals. Presently, the European Union Policy on Animal Welfare (EUPAW) is under third-party evaluation to assess where the policy can be expanded or amended, with hopes to improve “harmonization” between government enforcement, industry economic health, citizen cooperation, and greater animal welfare.¹⁴⁴ A similar set of standards and cooperative investment by all of the stakeholders would certainly benefit America in the same way that it has for the EU.

Local and state laws represent the other form of government regulation in the United States. There are stronger and more comprehensive laws on this level, but that is not really saying much, due to the dearth of federal legislation. In any case, state laws are only slightly more comprehensive in what is covered as unacceptable treatment of farm animals, although only fourteen US states have enacted any laws related to farm animal welfare.¹⁴⁵ Of these, none of the laws include dairy cattle per-se under their auspices and have mostly to do with regulating the confinement of veal calves, pregnant sows, and egg-laying hens. Of the fourteen state laws, only seven of them have actually mandated regulations on ethical handling or housing standards, while four other states merely created some kind of “Animal Welfare Review Board” but did not pass any laws.

¹⁴³ For a more detailed look at the level of oversight required in the act, q.v. Animal Welfare Act, §16-17. (1966).

¹⁴⁴ European Commission. (2010). Evaluation of the EU Policy on Animal Welfare & Possible Options for the Future. GHK Consulting (Lead Partner). London, UK.

¹⁴⁵ For the complete list, q.v. Rumley, E.R . (2010). States' Farm Animal Welfare Statutes. National AgLaw Center Research Publication. Retrieved from: <http://www.nationalaglawcenter.org/assets/farmanimal/index.html>

California has passed the most legislation regarding farm animal welfare including creating humane standards for housing veal-calves, egg laying hens, and pregnant sows, as well as outlawing *foie gras* production and tail-docking in cattle and ensuring “downed animal protection” which outlines the treatment of lame farm animals. Most of these statutes are covered in their infamous Proposition 2 law, passed in 2008.¹⁴⁶ The final three states, seemingly acting on a very different opinion of the need for ethical agriculture standards, passed laws restricting the enactment of any animal welfare laws. Georgia was the most explicit about how it would limit the passage of any regulations, mandating that,

“No county, municipality, consolidated government, or other political subdivision of this state shall adopt or enforce any ordinance, rule, regulation, or resolution regulating crop management or animal husbandry practices involved in the production of agricultural or farm products on any private property.”¹⁴⁷

As per my discussion in the previous chapter on the necessity for federal legislation in leveling the playing field and eliminating the “collective action” dilemma in the industry, it would seem an effective piece of an overall solution to increase the federal and/or state activity on animal welfare laws for farm animals. Laying this framework for acceptable treatment of farm animals would provide a starting point for ensuring that moral values play a greater role in determining how the dairy industry operates. As it stands now, however, the laws are not strong enough nor are they extensive enough to account for the specific needs of the dairy industry.¹⁴⁸ Because of

¹⁴⁶ Proposition 2: Standards for Confining Farm Animals. CA (2008).

¹⁴⁷ Prohibition on Regulation of Farm Production by Local Governments. Ga. Code Ann. § 2-1-6 (a).

¹⁴⁸ Although the scope of this paper cannot include a discussion of all of the factors influencing political and economic policy in agriculture, it cannot be ignored that there are elements in agriculture that are steeped in political turmoil and deeply involve the dairy industry. Corn is a paradigm case of this. Corn prices, controlled in a significant way by federal subsidies, also directly affect feed costs as corn is a staple in dairy feed. Therefore, much of animal agriculture is

this, the economic leash that has until now dissuaded and limited farmers and industry from adopting stronger ethical policies is still as strong as ever. An intelligent and thorough analysis of the ways industry concerns, social interest, and animal care can be balanced is necessary before any new laws can be created.

3.2 Proposed Legal Mandates for Ensuring Greater Ethical Standards in Dairy

Every year, and with every change in government administration, more bills are proposed concerning ethical agriculture regulation. Organizations like the Pew Commission on Industrial Farm Animal Production (PCIFAP), animal activist propositions, and industry lobbyists are constantly working to promote their own views. While few of these proposed laws have any chance of passing, they each represent a viewpoint and concern that should be considered in developing a more holistic legal response to the moral issues at hand. The Pew Commission represents one such attempt, and should be considered more seriously.

The Pew Commission report has already been briefly mentioned, and I need not go into too much detail on the specifics of the report; however, the recommendations of the commission may provide some kind of template for future work on incorporating moral considerations into agriculture. The report focuses primarily on four areas of moral concern: public health, the environment, animal welfare, and rural communities. For the purposes of this project, I will only use their work on animal welfare and rural

controlled, or at least directed, by American Corn production. These kinds of interactions only serve to complicate the interactions between politics, industry, and society.

communities.¹⁴⁹ The suggestions the PCIFAP offer in these areas are to: (1) Phase out and then Ban the nontherapeutic use of antimicrobials (including antibiotics and antimicrobials designed as growth promoters); (2) Phase out intensive confinement (including veal/sow/hen crates, as well as providing adequate natural movement for dairy cattle which may include reintroducing pasture feeding); (3) Increase competition in the Livestock Market to hopefully improve the economic situation in animal agriculture and help to buffer any costs improved welfare standards may bring; and finally, (4) Improve research in animal agriculture to increase transparency in what is being researched by the industry and to include research into other-than-economic improvements in animal husbandry.¹⁵⁰

These suggestions have been received with mixed support. A contra-report by the Animal Agriculture Alliance (AAA), an industry backed organization, called many of the findings of the Pew Commission into question, claiming that the commission did not take an objective enough stance in its scientific research and ignored the AAA's own research which found different results. They further claimed that PCIFAP "favors opinions over science" and supports activists groups that want to "eliminate factory farming" altogether.¹⁵¹ Whether or not these claims are accurate, and it is my opinion that their own biases and interests have detracted from their credibility, more rigorous work and peer-review research is needed before the Pew suggestions can be conscientiously put to work. However, regardless of the comments of nay-sayers like AAA, the work of the Pew Commission is an important step forward in creating a comprehensive solution to the ethical problems in the dairy industry.

¹⁴⁹ For the full report, q.v. Pew Commission on Industrial Farm Animal Production. (2008). *Putting Meat on The Table: Industrial Farm Animal Production in America*.

¹⁵⁰ PCIFAP Report, Executive Summary (2008). pg 21-23.

¹⁵¹ Lobo, P. (2008). *Pew Commission Findings Questioned*. *Animal Agriculture Alliance* publication.

Another promising solution has come from David Favre, Professor of Law at Michigan State University and fellow lawyer Jaime Olin. They have drafted a template for future comprehensive animal welfare laws based primarily on EU legislation and the US Animal Welfare Act. Their “Model National Animal Welfare Legislation” was designed to “represent general animal welfare legislation that can be easily adopted by developing countries,” and also sets out “specific criminal actions, and a process for future regulatory acts by national and local governments.”¹⁵² The model law outlines three commitments: “(1) Animals, having both intrinsic and extrinsic value to human societies, deserve special protection of their individual interests under the law. This statute acknowledges the obligations that humans have toward animals. (2) All branches of the government shall endeavor to implement the spirit of this law in assuring the best possible life for animals within our community. (3) This law acknowledges the rights of humans to keep and use animals, but only where the interests of the animals are recognized and protected.”¹⁵³

The ensuing statutes elaborate on these goals and define strict regulations for the treatment of farm animals. Some of the more philosophical regulations include respecting each individual animal and altering methods of husbandry, transport, and slaughter as new, more humane methods are developed. Additionally, the model law requires that animals are kept in enclosures where the animal has “ample room to rise to its full height, turn around, lie down, and will not incur any danger from the enclosure itself”, a greater “acknowledgment of the social behaviors of the species when determining the number of animals to keep per enclosure,” and these findings be used to ensure the appropriate amount of space, fresh air, social interactions, access to exercise,

¹⁵²Favre, D. & Olin, J. (2004). Model National Animal Welfare Legislation. Michigan State University College of Law. Retrieved from:
<http://www.animallaw.info/statutes/stmodelanimalact.htm>

¹⁵³ Ibid.

and appropriate social grouping practices is given.¹⁵⁴ Interestingly, the model law would also regulate against giving animals growth hormones, a stricture that will undoubtedly be contested but which follows from the discussion presented in my project. Work such as Favre's and Olin's would certainly encourage more dialogue on the ethical implications of animal agriculture and spur greater federal and state action to settle and disputes.

Activist organizations like HSUS and PETA have also offered their own suggestions on new regulations, and some (especially in California) have been successfully passed. The recent Proposition 2 law in California, previously discussed, was heavily funded by HSUS and supported by PETA representatives. Typically construed as radical groups and demonized by industry organizations like AAA as unabashedly as the activists groups demonize the industry, these organizations and their legislative victories have become stumbling blocks in open dialogue between the two groups. Industry groups have increased their smear-campaigns to match their peers at HSUS and PETA in attempts to gain greater support from voters. Regardless of the ability of these new laws to ensure higher ethical standards in agriculture, the ensuing partisanship and aggressive opposition they garner may have a negative long-term effect and create political instability as administrations shift over the years. It is a legitimate worry that any groundbreaking laws passed that are opposed by large industry groups may be susceptible to being overturned with changes in federal or state administration. This vulnerability will exist as long as a greater cultural paradigm shift does not accompany these new laws. Therefore, it would follow that more cooperative endeavors like those of the Pew Commission are needed to protect any new legislations from this kind of uncertainty.

¹⁵⁴ Ibid.

As a final note in this section, there has been a growing trend within the dairy industry for farmers to develop or apply voluntary ethical standards and certifications to their operations. The National Dairy Farm Association’s “Caring for Dairy Animals Technical Reference Guide and On-The-Dairy Self-Evaluation Guide,” the National Dairy Animal Wellbeing Initiative “Principles and Guidelines for Ethical Care of Dairy Cattle,” and the Federation of Animal Science Societies’ “Guide for the Care and Use of Agricultural Animals in Teaching and Research” checklists are three examples of industry-initiated moves to account for moral responsibilities in the dairy industry. These guidelines are generally concerned with how to best manage a farmer’s dairy herd in order to account for minimal welfare standards while still maintaining a profitable bottom line. Examples of “good practices” from these guidelines include, turning out animals daily for exercise (weather permitting), giving animals room to stand and lie down, room to stretch, eat, drink, and eliminate comfortably; ensuring that the animals receive adequate nutrition and water to achieve a proper body condition score and be fed in a way that promotes health and reduces the risk of disease; and finally to support the use of science-based practices that promote animal-wellbeing in laboratory animals in research settings.¹⁵⁵

These kinds of solutions are important to consider because they address what I have been arguing from the beginning—that a new ethical code for agriculture must balance the needs of the industry with a concern for the wellbeing of the animals. These

¹⁵⁵ I’ve used the following checklists for examples of “best practices” that take animal welfare into account:

National Milk Producers Federation. (2010). The Animal Care Management Checklist. Retrieved from: www.nationaldairyfarm.com;

The National Dairy Animal Well-Being Initiative Coalition. (2008). Principles & Guidelines for Dairy Animal Well-Being. Retrieved from: <http://www.dairywellbeing.org>; and

Federation of Animal Science Societies. (2010). Guide for the Care and Use of Agricultural Animals in Teaching and Research. 3rd ed. Retrieved from: <http://www.fass.org/page.asp?pageID=216>.

checklists are attempting to do this and are generally successful in maintaining economic viability in the process. There may be legitimate concern with these voluntary standards, however, as enforcing them could be difficult. It is also questionable how adequate they can be in ensuring high enough ethical standards. Most of these certification programs are developed internally to the industry, and seem to operate primarily from the same economic paradigm that was critiqued in the previous chapter. This presents a worry that the industry will still be unable to perceive all of the moral values that should be accounted for in a properly ethical operation.

3.3 Cultural Paradigm Shift as a Solution

Finally, I want to examine a more philosophical discussion on the cultural paradigm that currently predominates in US society. The greatest impetus behind the new infatuation with animal welfare and ethical agriculture within pop-culture comes directly from a changing cultural paradigm. With each new generation, moral values seem to grow and encompass more areas. One hundred years ago, there were only a select few moral problems on the social radar, while now there seems to be a moral undertone to almost every major activity in private, public, and industrial sectors of society. Many philosophers and social scientists have argued that, despite a growing concern for animal welfare and more ethical agriculture, the underlying social attitude toward agriculture has remained unchanged and thus limits any real change to how the agriculture industry operates. Popular understanding of where our food comes from and how it is produced is still quite limited despite the unprecedented growth and research success the industry has had. Lack of concern and the growing popularity of

convenience, affordability, and immediate gratification seem to predominate the general attitude of Americans toward their food. The growth of supermarket chains like Wal-Mart, Costco, and others whose food prices seem to always be dropping speak directly to this. In general, it is arguable that convenient, cheap food is preferable to ethically produced, but expensive alternatives. At present, “moral” food is considered a luxury compared to the conventional alternatives.

Many philosophers and social scientists have been arguing recently for a more fundamental change in society and industry values than legal regulations can affect. Our cultural reliance and modern perspective on agriculture and the animals within it is undergoing a significant shift—and not always in an ethically progressive manner. Examining the current social paradigm, some important intellectuals are proposing a radical *Gestalt* shift in the way we approach both our food system and the animals that provide us with food. The “New Social Ethic” described by Bernard Rollin is a model case of this kind of intellectual work.

Rollin was able to pin-point early on the origin of the rise in public concern for the welfare of animals and moral standards in animal agriculture. He claims that its source was a growing awareness that animals were sentient creatures and their unnecessary suffering an atrocity. Anti-cruelty sentiment for animals has been pervasive in our society for generations and was the primary means of assessing the moral acceptability of animal use. Our earlier discussion, linking animal cruelty to psychotic personalities, and society’s condemnation of such behavior, demonstrates this. A growing pool of data shows, however, that the suffering of animals in agriculture is not due to cruelty at all—it is a symptom of the lack of values and growing industrialization within the agriculture industry. Accordingly, a “new social ethic” is needed, and is slowly developing, to accommodate this new moral shortfall in agriculture that does not take

intentional cruelty as its primary measure of acceptability. This new social ethic also reflects a growing respect for the symbiotic relationship humans have with their domestic animals, and encompasses an awareness of our special moral obligation to ensure a higher standard of living for agriculture animals. This new ethic basically recognizes the once invisible suffering of animals and our responsibility to address it. However, this is not a perfect ethic, and as Rollin explains,

“It is certainly the case that the new ethic has moved beyond the self-interest basis inherent even in husbandry, by self-consciously demanding the mitigating of animal suffering in the pursuit of benefits for humans. But, while we try to minimize the suffering of animals we use for our benefit, we have little doubt about the appropriateness of killing them for food, using them clinically in research, or in general unhesitatingly manipulating their lives for our benefit, even if it is plain they would rather not be so used.”¹⁵⁶

Rollin believes that society is on its way to accepting animals as intrinsically valuable, but is still fully entrenched in the old cultural paradigm that says animals are essentially tools for human use. To elaborate, Rollin continues to explain that,

“Society does not abolish animal research or food animal production; it restricts these practices to minimize suffering. But it does not question their acceptability. The *raison d'être* for these animals is still serving humans - witness the locutions "food animal", "lab animal". Such animals, like slaves, remain property, albeit, again like slaves, property protected against some abuses by law...”¹⁵⁷

The comparison to slavery is poignant and expressive of the general way in which we perceive our moral responsibility to animals: We may not want them to suffer unnecessarily, but they are still, at base, a means to our ends.

A stronger, new-“new social ethic” will have to engage this old paradigm and assess its acceptability in guiding our consumer, political, and industrial choices. It is

¹⁵⁶ Rollin, B. (2003). Reasonable Partiality and Animal Ethics, pg 116.

¹⁵⁷ Ibid.

perhaps time to reconsider the slave-type attitude we have toward animals, and adopt a more symbiotic relationship with them. Rollin believes we as a society have made this leap in terms of our companion animals—obvious not only in our language (considering them members of our family) but also in how we protect them legally. In considering the reasons for excluding food-animals from the same care afforded to pets, it is difficult to find any legitimate reason for this, other than the special relationship usually associated with companion animals and their owners. The level of sentience and capacity to suffer or to express their own *telos*, admits of very little difference to their house-bound relations. The human relationship with food-animals may be different and less emotional, but this relationship is still significant. Our use of their bodies for sustenance seems to be a relationship that would demand some level of respect. I would argue that because of this, our relationship to food animals requires more extensive ethical responsibilities than to our pets, despite our relational and emotional distance from them. The fact that we *need* these animals in an important way to feed ourselves as opposed to the emotional comfort we get from companion animals should be considered as we examine our current social paradigm.

While this perspective and these goals may not be as pragmatic as the suggestions of the Pew Commission or the others previously discussed, they do provide an interesting measuring-stick for determining how successful new legislation and practices are at ensuring greater ethical standards in an industry. For a new ethic to be truly successful, it must closely match with the general moral beliefs of a society. Otherwise, such laws and regulations become more of a detriment to social welfare rather than a confirmation that such laws are governing effectively. As was discussed in the previous chapter, a society's moral codes can be seen as a reflection of its attempts to regulate and protect itself from chaotic influences. "Good laws" are supposed to be ones that contribute to this goal and encourage a stronger and healthier society. Animal welfare laws that ensure

higher moral standards and protect the farms and industries that provide citizens with a necessary social good should be reflective of the same standards. Additionally, if the current trend of recognizing morally unacceptable actions and practices toward dairy cattle continues and does not fit squarely with our current social paradigm on our moral relationship with animals, it may be time to reevaluate how we perceive and understand present relationships and responsibilities to food animals.

3.4 Amalgamation of the Best Practices

There are positive aspects to each method which may absolve the industry of its moral inconsistencies, and should be considered. The practicality of legal solutions, the industry voice and more progressive thinking present in voluntary, industry-developed guidelines, the strength and moral high-ground of activist approaches, and finally the comprehensive nature of a cultural *Gestalt* shift are elements that should be preserved in any solution proffered to the ethical dilemmas outlined in this thesis.

The legal approach may lack some long-term rigidity as changes in administration always increase a controversial law's vulnerability; however, the practical implications cannot be ignored. Laws have a definite time frame for when and how they are enacted and enforced, and require a level of review that should be able to accommodate the worries of both industry and society. Arguments over how extensive laws should be and who will have to pay the costs associated with compliance can eventually be settled, although this may be the biggest hurdle for legal solutions to overcome due to the strength of the lobbyists on both sides.

Industry developed voluntary checklists and guidelines for ensuring animal wellbeing are not typically far removed enough from the economic paradigm to be sufficiently comprehensive and account for all of the moral responsibilities inherent in dairy. Despite this, the increasing popularity of such checklists demonstrates a much-needed growth of industry initiative in addressing important moral problems. This attitude should be encouraged because it may serve to better empower a defensive industry to make real, lasting changes in the way it practice its business.

On the other side of the fence, activist groups and their legal agenda may indeed be able to account for the moral responsibilities we have toward animals in agriculture; however, the aggressive tactics and smear-campaigns, just as in any political debate, only serve to drive a wedge between concerned social groups and industry leaders. In addition, animal activist groups often do not have the sensitivity to acknowledge the importance of balancing industry needs within their overall moral scope. As has been argued throughout this paper, economic goals are not *necessarily* wrong or opposed to other moral values. It is only when those other values are reduced to economic ones or ignored altogether when a problem arises. If the goal is to *reform* the industry and not eliminate it, then accounting for the needs of a business is crucial.

Finally, a full-fledged cultural paradigm shift poses an interesting puzzle for philosophers. On the one hand, this solution is completely holistic and represents one that would require by definition, that all of the moral concerns addressed in this paper be accounted for. If our society is able to see animals as among the kinds of living things that deserve greater moral consideration, and develop a symbiotic relationship instead of the more parasitic one enjoyed now, it would mean that many of the current dairy practices, research protocols and industry goals would be seen as unacceptable and be phased out on their own. Unfortunately, this is a rather rosy dream that lacks immediate,

practical strength. It is unrealistic to believe that a new paradigm can be enforced or simply materialize because a philosopher proposes it. *Gestalt* shifts occur over a period of time and often after much back-and-forth between competing parties, perhaps never fully reaching the ideals originally proposed.¹⁵⁸ Instead of arguing that a *Gestalt* shift is the best solution, it may be more appropriate to use this philosophical benchmark as a measure of success for other solutions. If a new law, certification standard, or commission is developed to address agriculture's ethical responsibilities, the effect should be one that moves society and industry towards a more progressive cultural paradigm and away from the status quo that has perpetuated the moral shortfalls seen today.

From this discussion, three basic values or needs have surfaced as the most important to account for in developing an appropriate and strong ethical solution to agriculture: ethical strength, economic viability, and verifiability. Charlie Arnot, CEO of the Center for Food Integrity and President of CMA, has suggested a similar standard for measuring how effective an ethical solution will be in agriculture. Arnot has developed a "triangle template" to represent the need for stakeholders in the three values mentioned to engage in a kind of "checks and balances" conversation to ensure that all of the values are adequately being represented. As he explains,

"If food system practices are not ethically grounded, they will not achieve broad-based societal acceptance and support. If they are not scientifically verified, there is no way to evaluate and validate the claims of sustainability, and if they are not economically viable, they cannot be commercially sustained."¹⁵⁹

¹⁵⁸ For example, the *Gestalt* which says "slavery is wrong and people with black skin are not inferior to those with white skin" has almost fully replaced the previous paradigm that said black people are only partially human. However, there is plenty of evidence to suggest that racism and classism (and its connection to race) is still prevalent in some areas of society. A fully equal society is yet to be realized.

¹⁵⁹ Arnot, C. (2008). Sustainability Takes Balance. *Feedstuffs*, 80 (17), p 1.

Scientific verification is one way, but need not be the only method, to ensure that any new, ethical practice will work and accommodate all of requirements found to be ethically necessary. Regardless, equal participation is required for all three of these stakeholders for a solution to really work. I believe that this rather simple standard may be an optimal starting point in developing new and better ways of holding agriculture more accountable for its practices.

3.5 Discussion

A perfect amalgamation of the best aspects of each of these potential solutions that we have just covered may be impossible; however, including elements of them in future work on this subject will need to be seriously considered, or reasons given for their exclusion. Any strong ethical system that hopes to tackle the moral shortfalls of the dairy industry—and animal agriculture in general—will need to consider several factors, including our responsibility to balance industry’s economic needs, the social ethic of the public, and the welfare of the animals. A new ethic will also need to be pragmatic and provide reasonably feasible directives—any ethic that does not lend itself in this way should be abandoned or reconsidered. Impractical “solutions” are completely useless as there is no way to put them into practice. Therefore, examining legal options, farmer-initiated standards, and social attitudes may provide a stronger starting point to changing our morally-deficient social paradigm.

I have argued throughout this work that promoting stronger ethical standards in agriculture is an economic necessity and a moral responsibility. More work is needed to

determine what and how extensive these responsibilities are, but minimal standards are needed now that can account for the *telos* of an animal and avoid as much unnecessary suffering as possible. Reexamining agricultural research protocols, new technology use, and handling practices is necessary and previously-ignored ethical standards must be adhered to. Balancing the needs of the three main stakeholders—morally concerned parties, industry, and society—is needed to ensure this and to avoid the pitfalls of an economic ideology that has crippled the ethical sensitivity of the agricultural industry until now.

CONCLUSION

The reduction of moral values and non-economic social concerns to merely economic goals has come to dominate and inform the dairy industry's self-governance in the United States. This is not a new trend, nor did it arise quickly; rather this paradigm developed over generations and because of a plethora of social, political, and economic transitions beginning at the turn of the previous century. The once symbiotic relationship between farmer, cow, and the surrounding population now resembles a mostly economic relationship between farmer-distributor and distributor-consumer. Because of this, the health and wellbeing of the cow ceased to be the farmer's highest priority. The industrial revolution, fueled by the great farm to city migration in the late 1800's and early 1900's, saw agriculture increasingly controlled by inter-state and even international markets rather than direct farm-to-consumer exchanges. Improvements in production and transportation technology, breeding science techniques, and ruminant nutrition, paired with a growing demand for dairy products, encouraged the dairy industry to seek higher profit margins to maintain an increasingly expensive agriculture practice and meet the growing federal pressure to develop stronger national and international markets.

The effect of this accumulation of mostly economically driven external variables on the dairy industry was to initiate a paradigm shift in traditional husbandry practices to a largely industry-model of organization and production. Fewer cows producing more

milk faster and with less monetary cost to the farmer became the MO of industry. This resulted in a transformation the cow into a veritable udder on legs, rather than a sentient being whose milk helped to support a community. From the 1930's to present, selectively breeding cattle primarily for their ability to produce milk, in addition to new growth hormone technologies, housing systems, and milking practices have changed the cow's genotype and phenotype to give it the ability to produce an average of 12,000lbs more milk *per anum* than its 1920's counterpart. The economic effect of this was to propel US Dairy into becoming a leader in international dairy sales; however the non-economic effects of this change have been less positive. The cow's physical resilience has plummeted and the long-term viability of the industry has followed this trajectory.

This historical account of the dairy industry and discussion of its current state of disrepute has provided a paradigm example of what is facing all of animal agriculture—indeed all of agriculture. This discussion has unearthed a very deep-rooted ethical dilemma in modern agriculture practice and the way in which our society has chosen to organize itself. Broadly construed, this can be described as a growing pattern to reduce all moral values and ethical obligations to economic variables and to account for them only in those terms. The result of this fallacy of reduction, however, is for the industry to operate under a social paradigm that can no longer account for some of the most important social values that a community depends upon to effectively organize and protect itself from chaotic influences. Moral obligations to respect “objects of moral concern” and to ensure their continued flourishing, developing a virtuous character, and honoring the kind of deep social trust that accompanies industries providing necessary social goods (of which agriculture is a part), are examples of values that cannot be neatly translated into economic terms. To do so, to reiterate O'Neil, Holland, and Light, “would

be to misunderstand those very relationships. To accept a price [for our moral obligations] is an act of betrayal.”¹⁶⁰

In addition to these more general shortcomings of a modern style of agriculture, there is a specific moral duty to respect the *telos* of the animals we use for food—simply because of the nature of such creatures. It follows logically from our social ethic for inter-human relationships that similar restrictions on immoral acts should apply to animals. Out of respect for the *telos* of these animals, and because of the special role of agriculture in society, I argue that the dairy industry *must* follow stricter moral standards, and that a continued failure of industry to properly account for these moral obligations will result in potentially crippling federal regulation. Furthermore, if the economic paradigm that controls the decisions of agriculture really does preclude its ability to account for important moral values, then not only must the dairy industry change its practices to meet higher social standards, but they must also be willing to fundamentally change the very *Gestalt* which undergirds the industry. Such a change will take remarkable skill to do successfully, but it follows from my argument that this must be done in order for animal agriculture to become morally acceptable.

The final piece of this work detailed some potential solutions that could accomplish this, but as was shown from my discussion, none of the current mechanisms for change have been successful. There have been a select few promising attempts, and by using the best aspects of each a new, stronger, and pragmatic solution could be developed. It remains to be seen, however, whether or not the competing parties in this discussion can move beyond the hurdles that presently face conversations to improve the ethical standing of agriculture. Animal activist groups and industry leaders will need to

¹⁶⁰ O’Neill, J., Holland, A., Light, A. (2008). *Environmental Values*. Routledge. New York, NY, p 78.

find a common ground in order for any potential legal mandate or commission suggested practice to have lasting and successful effects.

It is my opinion that agriculture, and dairy in particular, can continue to play an important role in society and even increase our ability to create a better world. While this may be a topic for future work, and certainly moves beyond the largely applied field that this philosophy thesis has engaged, it may be time for our Western culture to remember the once proud social status we afforded to those who provided our food and the deep, nearly spiritual relationship to the practice this entailed. We may have to search deep into our history, even to pre-Roman times, to rediscover a time when we adequately respected those who fed us and the importance agriculture played in society, but that attitude once represented a major pillar in the collective psyche. It is perhaps a dark and cynical remark to say that humans are the only creatures on earth who generally cannot feed themselves, but with less than one percent of the American population working in agriculture, it is an uneasy truth. Although generally considered a mark of a successful society that more specialized industries and nonessential work can occupy the population, we should perhaps temper our pride and narcissism with some measure of humility. Dependency and vulnerability characterize our current relationship to our food, making this project and other ethical accounts of agriculture increasingly important in our modern age. It is my hope to continue to pursue these critical ethical dilemmas and address these social patterns more deeply in future works.

Appendix 1

Colorado Criminal Code. Article 9. Offenses Against Public Peace, Order, and Decency.
Part 2. Cruelty to Animals. § 18-9-202:

1. (1)(a) A person commits cruelty to animals if he or she knowingly, recklessly, or with criminal negligence overdrives, overloads, overworks, torments, deprives of necessary sustenance, unnecessarily or cruelly beats, allows to be housed in a manner that results in chronic or repeated serious physical harm, carries or confines in or upon any vehicles in a cruel or reckless manner, engages in a sexual act with an animal, or otherwise mistreats or neglects any animal, or causes or procures it to be done, or, having the charge or custody of any animal, fails to provide it with proper food, drink, or protection from the weather consistent with the species, breed, and type of animal involved, or abandons an animal.
 - (b) Any person who intentionally abandons a dog or cat commits the offense of cruelty to animals.
2. (1.5)(a) A person commits cruelty to animals if he or she recklessly or with criminal negligence tortures, needlessly mutilates, or needlessly kills an animal.
 - (b) A person commits aggravated cruelty to animals if he or she knowingly tortures, needlessly mutilates, or needlessly kills an animal.
3. (1.6) As used in this section, unless the context otherwise requires:
 - "Serious physical harm" means any of the following:
 - (a) Any physical harm that carries a substantial risk of death;
 - (b) Any physical harm that causes permanent maiming or that involves some temporary, substantial maiming; or
 - (c) Any physical harm that causes acute pain of a duration that results in substantial suffering.

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