

Bottleneck of Inequity? Economic Tradeoffs and Ethical Dilemmas in Industrial Agriculture

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A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.¹ -Aldo Leopold

Industrial agriculture was born out of both the industrial revolution and post World War II technologies in chemical science. Specifically, the combination of mechanization and chemical fertilization paved the way for the historic Green Revolution of large-scale agriculture. Today, corporate industrial agriculture relies heavily on the use of intensive farming and vertical integration based on highly profitable economies of scale. Firms and controlling stakeholders are seeing the economic benefits from what would appear a very efficient

model that provides an abundant amount of food and food bi-product for society-at-large. They are encouraged by economic incentives in era of industry, scientific technology, and government policy that helps move the industrial model forward. Subsidies, biotech engineering, and artificial inputs all lend industrial agriculture a great advantage towards boosting yields, especially in comparison to pre-Industrial Revolution farming. Ultimately, this model ensures that production is high, business is booming, and consumers are benefiting from the low cost of food. From afar, this profiting model appears to benefit the majority of a food secure, globally north, society where supply and demand are in stable proportions to one another. It would seem economic trade-offs are minimal.

However, in industrial agriculture, trade-offs in the form of externalities aren't always recognized. They are the downsides that are not factored into the cost of doing agri-business. From seed to consumer, and grain to grocery, the consequences of industrial agriculture are often considered

¹ Aldo Leopold. A Sand County Almanac: The land Ethic. G. Marino. Ethics: The essential writings. Random House, NY. 2010.
² Sandra S. Batie. "Wicked Problems and Applied Economics."

wicked problems. Sandra Batie describes a wicked problem as untamed social messes that are ill-structured and dynamically complex. Ultimately, they are unsolvable problems imposed upon society, and in the case for industrial agriculture, environmental sustainability as well.²

In this paper, I argue that wicked problems, or externalities, created by industrial agriculture are ethical dilemmas. These dilemmas manifest themselves in the form of social and environmental tradeoffs. Economic viability in industrial agriculture does not account for these ethical issues that, ultimately, serves economic welfare of the stakeholder at the expense of the social and environmental whole. The bottleneck supply chain (fig.1) is the explicit example. It describes tremendous market power yielded by the few, the intermediaries. The actions and decision making of these intermediaries have significant consequences that effect global welfare.

The purpose of this paper is to address the ethical issues not accounted for in economic trade-offs in industrial agriculture. Like a wicked problem, in ethical discussion there is no tangible solution. With ethics, different arguments account for different

² Sandra S. Batie. "Wicked Problems and Applied Economics." *Amer. J. Econ.* 90 (Number 5, 2008) 1176-1191

interests, and in the case here, different stakeholders. From an ethical perspective, could one entity's wicked problem be another's reasonable trade-off? In essence, what ethical dilemmas surface, but are not accounted for into the cost of doing agribusiness? Are the trade-offs imbalanced, and who do they serve the greater good for? Can economic theory encompass ethics to create viable solutions in modern industrial agriculture? How can industrial agriculture incorporate genuine ethical decision making into the foundation of their business model?

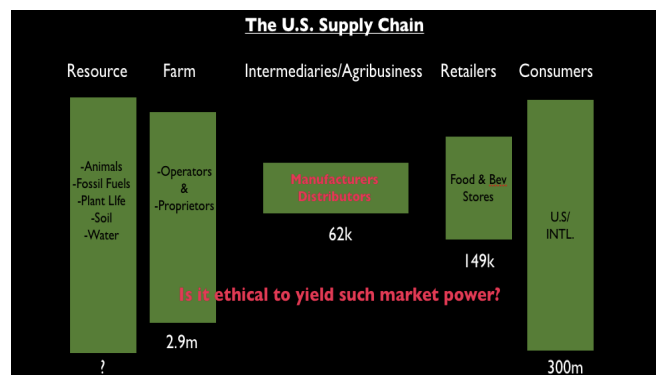


Fig. 1³

The Ethical Dilemma & Wicked Problem

For this paper, I will be using normative ethics as a lens to look at social and environmental externalities created by industrial agriculture. Jennifer Baker writes that ethical theory is the place to develop our

³ Data from: Raj Patel. *Stuffed and Starved*. Portobello Books. UK. 2007

normative yardstick.⁴ Normative ethics inquires how one ought to act. Shelley Kagan claims, “Normative ethics is concerned with stating and defending the most basic moral principle,” of which, utilitarian and deontological theories are a part of.⁵ Utilitarian theory claims that an action is right if it leads to the greatest happiness for the greatest number of people, or the greatest total amount of well being.⁶ Deontological rights based theory is also a part of normative ethics. The “I have a right” stance is Kantian, and claims that actions should consider the factors of one's duties and another's rights. It is a question of what is allowable and what is wrong.⁷ Deontology connects obligation and value.

Ethical dilemmas stem from wicked problems. In industrial agriculture, these problems are the externalities created by stakeholders at the expense of the social good. Be it public health due to a food product recall, or waste runoff due to intensive farming, stakeholder actions bear significant consequences that have not fully been incorporated into the applied economic business models of industrial agriculture. As Batie would argue, they are impossible to

solve, and could only be made better or worse.⁸ They are often ethically charged issues that ultimately require a moral accounting for. Industrial agricultural trade-offs then, that adversely affect the stakeholder along the social and environmental spectrum, also require an ethical accounting for.

As seen in the bottleneck structure (fig 1.), economic incentives are greater for the intermediaries than for other bodies along the network. From a distance, industrial agriculture trade-offs look minimal. More consumers have access to affordable food than ever before, and in accordance with the social capitalistic model, firms are benefiting from the profits.

Stakeholder's Incentives & Wicked Problems

The infrastructure of industrial agriculture reveals various stakeholders along the chain of production. Different stakeholders reap various economic benefits depending upon their investment in the supply chain of production. In essence, in industrial agriculture, any entity that gains to win or loose is a stakeholder-from farmer to intermediary to individual consumer and even the environment.

⁴ Baker, Jennifer A. 'Virtue and Behavior', Review of Social Economy, (2009)67: 1, 3 — 24

⁵ Shelley Kagan. *Normative Ethics*. (Westview; Press, 1998) 3

⁶ Shelley Kagan.. *Normative Ethics*. (Westview; Press, 1998) 62

⁷ Simon Blackburn. *Being good: A short introduction to ethics*. (USA; Oxford University Press, 2002)

⁸ Sandra S. Batie. “Wicked Problems and Applied Economics.” *Amer. J. Econ.* 90 (Number 5, 2008) 1176-1191

Main stakeholders could be seen as the financial investors, or firms. They essentially run the food system. They range from the producer, to supplier (through contract farming), to processor, distributor and even to shareholders as the main profiteering entities. In conventional industrial agriculture today, they have the main controlling interests.

At the receiving end is the individual consumer. They are the demand that initiates the supply. Accordingly, the individual consumer makes personal financial trade-offs based on the cost of and access to food. This creates purchasing power over the firms and they, too, are the stakeholders.

Then there are stakeholders that are underrepresented and often overlooked. They bear the burden of the externalities not accounted for by the more obvious stakeholders. They are society as a whole, the environment and its natural resources, and in factory farming, the laborers and even the animals. Therefore, it can be argued that what is a significant gain and short-term benefit for the main stakeholder can often be a wicked problem or a loss for this often unnoticed stakeholder. Batie explains this issue:

Thus, their wicked nature stems not only from their biophysical complexity but also from multiple stakeholders' perceptions of

them and of potential trade-offs associated with problem solving. Identification of solutions becomes as much a social and political process as it is a scientific endeavor.⁹

Integrating solutions that solve or reduce externalities, however, is rarely factored in. Often, action taken by main stakeholders doesn't consider the potential wrong doing upon the public. Hence, externalities within industrial agriculture create wicked problems that can also be framed as ethical dilemmas imposed upon society.

Literature Review

Much thought, debate, and work has gone into the applying ethics to various combinations of economic theory in an attempt to create economic efficiency that has in it, an imbedded return for well being of society. Environmentalist, philosophers, and economists all take part in the searching to apply ethical accountability in industrial agriculture. Antonio Tencati defines sustainability, as "the capacity to continue operating over a long period of time."¹⁰ Both ethics and economics are concerned with balance and equilibrium to create efficient

⁹ Sandra S. Batie. "Wicked Problems and Applied Economics." *Amer. J. Econ.* 90 (Number 5, 2008) 1176-1191

¹⁰ Antonio Tencati. "Managing Sustainability." Lazlo Zsolnai. *Ethics in the Economy: a handbook of business ethics.* Lang.; Switzerland. 2007

sustainable longevity and returns. Be it for a just society or a profiting company.

To start, economist Amartya Sen debates that place where ethics is concerned with what *one* ought to do. Instead, Sen argues that “behavior is ultimately a social matter as well, and thinking in terms of what ‘we’ should do, or what should be ‘our’ strategy, may reflect a sense of identity of involving recognition of other people’s goals and the mutual interdependence involved.”¹¹ In so much, Sen argues for committed behavior, where “one restrains the pursuit of one’s goals to make room for others to pursue their goals.”¹² Here, it can be argued that the “we” becomes more important than the “I,” and in industrial agriculture, ethically incited dilemmas can go both ways, especially when considering food supply and the entitlements of society.

This interdependence and the consideration of others becomes an even more complex matter when imposed upon. For example, Muel Kaptein and Johan Wempe surmise that “corporate responsibility cannot be traced back to the sum of individual responsibility.”¹³ In

industrial agriculture, the onus is on the firm who entrusts managers, contractors, and labor workers down the line of production. Outside blatant individual violations, it is difficult to pinpoint the transgressions or externalities that many people may have a hand in.¹⁴ Likewise, Tencati argues for innovative new systems that measure corporate outcomes, while controlling social and environmental performance.¹⁵ That is, measuring the output on all agribusiness levels, from product to profit, and holding a mirror of accountability up to the system in order to confront the wicked problems. When it comes to integrating ethics, virtue, and social accountability in business, values-based leadership is considered the model. This entails genuine attention to the measurements Tencati mentions from the ground up.

Michael Toman says that in the sustainability debate, economists should “carefully distinguish between efficient allocations of resources- the standard focus of economic theory- and socially optimal allocations that may reflect other intergenerational (as well as *intragenerational*) equity concerns.”¹⁶

¹¹ Amartya Sen. *On Ethics and Economics*. Blackwell; Oxford. 1994 85

¹² Jennifer Baker. Virtue and behavior. *Review of Social Economy*. 2009. 67 (1): 3-24.

¹³ M. Kaptein and J. Wempe. “Ethical Dilemmas and Corporate Functioning.”” Lazlo Zsolnai. *Ethics in the Economy: a handbook of business ethics*. Lang., Switzerland. 2007. 135

¹⁴ Ibid.

¹⁵ Antonio Tencati. “Managing Sustainability.” Lazlo Zsolnai. *Ethics in the Economy: a handbook of business ethics*. Lang., Switzerland. 2007

¹⁶ Michael A. Toman. Source: Land Economics, Vol. 70, No. 4

Toman ultimately argues that welfare concerns of the current generation does not take sustainability into account on behalf of future generations.¹⁷

Yet, environmental ethicist, Aldo Leopold, was very much concerned with the future of sustainable ecology. Gordon Marino sums up Leopold's argument by explaining that "a green ethic has to be one in which we value the "biotic community" for its own sake rather than a means to something else, such as human happiness."¹⁸ He essentially is arguing that the environment is very much an overlooked stakeholder. Conversely, Toman suggests "ecologists also must recognize the importance of human behaviour, particularly behaviour in response to economic incentives-a factor often given short shrift in ecological impact analyses."¹⁹ Perhaps at this crossroads lives a solution that encompasses the concern for social, environmental, and economic welfare in one.

Finally, Gordon Marino says, "Aristotle reasons that virtue is that which aids proper function. By his reckoning,

excess and deficiency destroy function."²⁰

This Aristotelian point highlights the quandary in industrial agricultural business ethics; a notion that that Lazlo Zsolnai also adds to. He claims, "If we want to improve the ethicality of our economic affairs only as a means to achieving higher efficiency, we ultimately fail."²¹ In light of these two arguments, we must ask ourselves: Due to industrial agricultural externalities that threaten social and environmental health, does it function properly, is it efficient? The economic benefits may, in the short term, reflect an efficient system worthy of yielding great amounts of food to feed the growing population. But, in the long term, as Aristotle points to, virtuous or ethical decision-making is necessary to maintain or sustain true social, environmental and economic function.

Who Benefits? The Case for Industrial Agriculture

Before looking at examples of issues in industrial agriculture that raise ethical questions against the system, the question can be asked: Where *is* industrial agriculture

(Nov., 1994), pp. 399-413P University of Wisconsin Press
Stable URL: <http://www.jstor.org/stable/3146637>

¹⁷ Ibid

¹⁸ Gordon Marino. *Ethics: The essential writings*. Modern Library; NY, NY. 2009.497

¹⁹ Michael A. Toman. Source: *Land Economics*, Vol. 70, No. 4 (Nov., 1994), pp. 399-413P University of Wisconsin Press. Stable URL: <http://www.jstor.org/stable/3146637>

²⁰ Gordon Marino. *Ethics: The essential writings*. Modern Library; NY, NY. 2009.45

²¹ Laszlo Zsolnai. "New Agenda for Business Ethics." Laszlo Zsolnai. *Ethics in the Economy: Handbook of Business Ethics*. Peter Lang AG, European Academic Publishers, Bern, Switzerland. 2002. 1

ethical? That is, where does it comply with the moral and social obligations upheld by society? Agriculture is a modern domesticated business, industrial or agrarian. It takes life from animals, resources from the environments, and harms farm workers on small and large scale. Beyond these generally expected consequences, externalities created due to large-scale farming may be outweighed by the obligations to the stakeholders and to needs of society as a whole. The modern day food system is deeply entrenched in a complex web of interdependence. There are stakeholders, firms, shareholders, farmers, employees, and consumers who are tied into a global free market all along the supply chain. Through the normative ethics lens, much can be argued why industrial agriculture is important to society today.

Industrial agriculture attempts to produce the greatest amount of food for the greatest number of people. Therefore, could these enormous yields be seen as a beneficial utilitarian effort? From a deontological scope, some could insist that, given our modern and technologically advanced society, the consumer has a right to affordable food, the cornerstone benefit espoused by industrial agriculture. It can also be argued that a large, corporate, and vertically

integrated business model is geared toward providing low cost food to the public, and to inhibit this production would leave many without access, and nutritionally insecure. Thus, is this a consumer right? From the perspectives of the stakeholder, it can be argued that the economic trade-offs of industrial agriculture are win-win. A win for the firms, the jobs on a global scale, and for the consumer who reaps the benefits of the economies of scale- a high volume industry that insured them low cost food.

An ethical point of contention in this debate are CAFO's (concentrated animal feed operations). While the externalities are great, from animal to environmental welfare, to ban them would create its own social problems. If mass protein could not be manufactured at the scale it is now, demand would go up, supply would drop, and prices would spike. These actions would restrict access to those who could not afford the higher priced protein. Could the well being of the consumer be harmed? Although a healthy, low, or no-meat diet can be achieved, not all people are equipped with the skills and education to create an animal-free, protein-dense diet to meet nutritional needs in a culture of highly processed food. Is it, therefore, the moral obligation of the government to continue to subsidize the grain

that feeds the confined animals to produce affordable and essential foodstuff for the greater good of the general population?

As for food safety and public health, much can be discussed about transmitted diseases due to mass production and lack of traceability from farm to table- like the recent egg recall of 2010, that sickened a few thousand people consumers nationwide.²² But when taking in account 300 million U.S. consumers, this number could be perceived as factually minimal in comparison to the amount of people who benefit and did not get sick. Yes, some will loose, but this is the ethical trade-off of food security to the many. This is the wicked problem turned economic trade-off in a highly industrialized food system.

Finally, from a global perspective, industrial agriculture has created a complex web of dependency along the supply chain. Consumers in developing countries depend on imports for their sustenance, while the global stakeholder depends on cultivating and exporting goods for industrial firms for their livelihoods. Industrial agriculture creates income for stakeholders and shareholders all along the global supply chain. Disrupting today's conventional model could create overall industry harm,

²² From May 1 to November 30, 2010, a total of 3,578 illnesses were reported. <http://www.cdc.gov/salmonella/enteritidis/>

and dismantling it so could disrupt social welfare worldwide.

Wicked Trade-offs: The Case Against Industrial Agriculture

The question then remains: Is it ethical for an industrial agricultural firm to reap the profits and economic incentives of providing ample amounts of low cost food (mainly to the global North) without factoring in externalities that ultimately exploit the greater good of the worker, consumer, environment, and animal welfare? As asked earlier, could one's economic trade-off be another's wicked problem?

In many ways, the CAFO is one of industrial agriculture's most economically efficient model, producing historically huge volumes of low priced animal protein. But with this structure comes externalities that expose wrongdoings throughout the supply chain that effect farm workers, livestock, public health and the environment. That a firm would allow these transgressions to occur is not only legally, but ethically questionable.

On the CAFO, worker welfare may be seen as an ethically charged dilemma, one that points to occupational diseases and potential injury. While the factory farm

worker is a stakeholder on the supply chain, they often fall victim to the hazardous trade-offs that, on one end, promote a more efficient production, and on the other, puts the the worker in harms way more often than not. The Pew Commissions 2008 report, *Putting meat on the table: industrial farm animal production in America*, reports that *industrial animal farming*, claims “facilities generate toxic dust and gases that may cause temporary or chronic respiratory irritation among workers and operators.” It also goes onto state that studies show that in the Netherlands, pig farmers were 760 times more likely to be infected with MRSA than people in the general population.²³ Hence, is it ethical to expose workers to conditions that put them in harms way?

Another worker (as well as animal welfare and public health) related issue on the **CAFO** concerns the castration of pigs. In 1998, Pfizer pharmaceutical’s animal health division came out with an injectable hormone called “Improvac.” According to Pfizer, they “created a new paradigm in pig production by safely and effectively reducing the presence of the two major sources of boar taint (androstenone and skatole) in the male pig without resorting to

²³ Pew Commission on Industrial Farm Animal Production. 2008. *Putting meat on the table: industrial farm animal production in America*. 29, 33
www.ncifap.org/images/PCIFAPSmry.pdf

physical castration.”²⁴ It’s the first commercial vaccine to prevent boar taint. As a result, the meat is supposed to be tastier and the pigs are also less aggressive in their daily confinement. But warnings of potential health hazards are great when it comes to handling of the drug and administration by the farmer. Handling is prohibited for pregnant women, and an accidental self-injection could have serious consequences, producing a similar effect on people to those seen in pigs, harming reproductive health in both women and men.²⁵ These are but a few health hazards that face industrial farm workers.²⁶ Does the farm worker have a right to a hazard-free working condition? Why would a firm knowingly put their employees at risk? If a system is known to cause potential serious harm, why it is ethically permissible?

Concerning the environment, when looking at trade-offs, wicked problems, or ethical dilemmas, industrial dairy farming becomes a valid example. The Vreba-Hoff dairy farm in Michigan produces 120,000 gallons of manure a day.²⁷ Large lagoons,

²⁴ <http://www.improvac.com/sites/improvac/en-NZ/pages/productoverview.aspx>

²⁵ Jocelyne Porcher. The relationship between workers and animals in the pork industry: A shared suffering. *Journal of Agricultural and Environmental Ethics*: 1-15.

²⁶ Clearly, other questions arise from the use of this drug about the safety of ingesting such meat, its leaching into ground water through urine, and consumer transparency.

²⁷ Michigan State University Libraries, “CAFOS”
<http://blogpublic.lib.msu.edu/index.php/2004/08/06/cafos?blog=5>

adjacent to the farm collect the manure where they are left to sit. Because such manure is toxic with high levels of antibiotics, it does not get reintroduced back into crop farms as fertilizer. According to the Union of Concerned Scientists, CAFOs in the U.S. produce approximately 300 million tons of untreated manure each year. CAFO manure contaminates drinking water, causes mass fish kills, contributes to marine life “dead zones” in lakes and bays, and helps bring on acid rain.²⁸ Additionally, water soil is heavily compromised as a result of raising livestock in large-scale CAFOs, rendering the drinkable water supply of communities that live in proximities of CAFO’s to become compromised more often than not. In 2009, a fourth lawsuit was filed by the Department of Environmental Quality (DEQ) against Vreba-Hoff for the their “continued failure to responsibly manage the waste produced by their CAFOs and protect Michigan's water quality.”²⁹ While these issues seem like legal battles, they are largely ethical issues that, once again, puts industrial farm practices into question when it comes to considering the

²⁸ Union of Concerned Scientists, “The Hidden Cost of CAFOs,” Sept 2008, www.ucsusa.org/assets/documents/food.../cafo_issue-briefing-low-res.pdf

²⁹ Robert McCann, Michigan.gov, “New LawsUIT Filed Against Vreba-Hoff Dairy for Ongoing Permit Violations” http://www.michigan.gov/deq/0,1607,7-135-7251_7253-228003--RSS,00.html

greatest good and rights of the ecological environment and public health in one.

Overall, industrial agriculture becomes questionable when considering the many issues that arise from its current highly mechanized input/output model. On behalf of the consumer, it can be argued they have a right to clean potable water, antibiotic/hormone-free food, label transparency, and humane raised/slaughtered food to name a few. Are firms ethically obligated to protect the well being of their consumer by producing safe and just food? Is the greater good of consumer being threatened and sacrificed by large-scale production?

Other questions from the perspective of the workers and farmers can be raised. Do laborers as stakeholders have a right to safe working environment? Are firms ethically obligated to protect the well being of their farmers, laborers and livestock? As Eleanor O’Higgins makes clear: “It is unlikely that in establishing an economic enterprise, one could justify as a universal principal, ignoring the rights of a population to a safe and clean environment”³⁰ Finally, are all parties along the entire industrial agricultural supply chain responsible for unsustainable

³⁰ Eleanor O’Higgins. “The Stakeholder Corporation.” Lazlo Zsolnai *Ethics in the Economy: a handbook of business ethics*. Lang. Switzerland. 2007

practices that ultimately threaten the ecology that belongs to future generations?

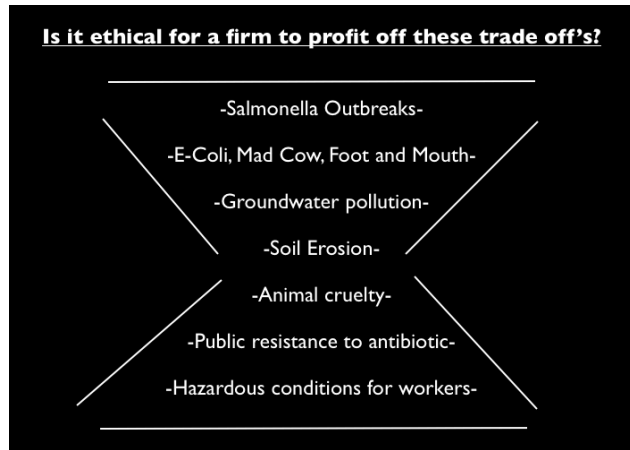


Fig. 2

A Few Ethical Solutions

Today, more than ever, there is a call for industrial agriculture to responsibly uphold a sustainable social, environmental and financial equilibrium. Sustainable business models created outside industrial agricultural are emerging worldwide by the scores as a resistance to the ethicality of the modern day food system. Solutions vary from organic food manufacturers and greener restaurant establishments, to poly-cultural smallholder farms and non- CAFO humanely raised animal farming. This is the short list. That said, it is important to start looking for sustainable and applicable solutions that can be introduced into the industrial economic model as it exists today. The question arises then, is it even possible

to insert ethics here?

One integrated solution that starts at the foundational level is values-based (or values-led) leadership. This is different than a socially responsible business (SRB) or corporate social responsibility (CSR). SRB's and CSR are important. They weigh the social concern and attempt to integrate these issues into their already existing corporate models. However, it can be criticized that a company can create CSR in any part of their operation, while being in direct ethical conflict with other internal corporate strategies. For example, both Unilever and Monsanto, two of industrial agriculture's most influential intermediaries whose ethicality is often questioned, have staked a claim in CSR. Each has developed environmentally and social welfare schemes that are heavily promoted.³¹ It is reasonable to inquire how deep the social responsibility is rooted in each company. Is it possible that CSR's and SRB's that implement such strategy into their businesses do so to appease the climate of the sustainably conscious times? It is fair to argue here that questions arise around marketing, branding and green-washing. In so much, should a CSR or a SRB be socially responsible at its core to represent itself as so. This is where

³¹ <http://www.unilever.com> & <http://www.monsanto.com/Pages/default.aspx>

value-based leadership begins.

In their business ethics discussion on values-based leadership, Mette Morsing and Peter Pruzen said, “We have a chance to improve the general quality of our economic activities only if our motivation is genuinely ethical; that is, only if we want to realize ethical conduct for its own sake.”³² In order for a for profit company to be truly considerate of the social and environmental whole, social responsibility must start at the foundation, beginning with the core stakeholders. It is integral that the welfare ethic and vision comes from the very top and be passed down through management and to all employees. Hence, when driven home to the consumer, it is genuine. To back this up, Leopold insisted that the only foreseeable remedy for such wicked problems is the ethical obligation on behalf of the private owner.³³

One such example is the original strategy integrated in the Ben and Jerry’s Ice cream brand. Founders Ben Cohen and Jerry Greenfield claim,

“By incorporating concern for the community-local national and global...the values-led business recognizes

that by addressing social problems along with financial concerns, a company can earn a respected place in the community, a special place in the customer’s hearts, and healthy profits, too.”³⁴

Together, Cohen and Greenfield crafted a “Social Mission Integration,” where practices, policies, and employees learn to take great responsibility for their actions.³⁵ Models like this can incorporate a business ethic that may help advance the industrial agricultural model. As indicated by Kaptein and Wempe earlier, CSR cannot be traced back to the sum of individual responsibility.³⁶ Therefore, it is necessary to create accountability throughout a business. Ironically, Ben and Jerry’s, a publically traded entity, was bought out by Unilever in a hostile takeover in 2000. Cohen and Greenfield have been very outspoken that this was the beginning of the end of the values-led business they created.³⁷ To this day, Unilever has incorporated the Ben and Jerry’s product as part of their platform to express itself as a Socially Responsible Business.

Other options to be considered for

³² Mette Morsing, Peter Pruzen. Values-Based Leadership. Laszlo Zsolnai. *Ethics in the Economy: Handbook of Business Ethics*. Peter Lang AG, European Academic Publishers, Bern, Switzerland. 2002. 1,259

³³ Aldo Leopold. “A Sand County Almanac; the land ethic.” Gordon Mariano. *Ethics: The essential writings*. Modern Library; NY, NY. 2009. 507

³⁴ Ben Cohen, Jerry Greenfield. 1997. *Ben & Jerry's double-dip: Lead with your values and make money, too*. Simon & Schuster. 30

³⁵ Ibid. 41

³⁶ M. Kaptein and J. Wempe. “Ethical Dilemmas and Corporate Functioning.” Lazlo Zsolnai. *Ethics in the Economy: a handbook of business ethics*. Lang; Switzerland. 2007. 135

³⁷ <http://motherjones.com/politics/2003/01/culture-change>

applying business ethics to industrial agriculture include, socially responsible business investing (SRI), and developing innovative new systems that measure corporate outcomes, while controlling social and environmental performance.³⁸ SRI's incorporate managing financial assets into ethical and environmental criteria.³⁹ This along with proper measurements, like large-scale public and ethical guidelines and policies, could ultimately create accountability that may lead to problem solving away from harmful social and environmental trade-offs.

Amartya Sen claims, economics "can be made more productive by paying greater and more explicit attention to the ethical considerations that shape human behaviour and judgment."⁴⁰ Ultimately, while addressing the financial needs of a for profit business, it is clear that many solutions are welcomed to create a path towards a more ethical industry while diminishing the wicked problem.

Conclusion

Peter Singer suggests, the real ethical

³⁸ Antonio Tencati. "Managing Sustainability." Lazlo Zsolnai. *Ethics in the Economy: a handbook of business ethics*. (Lang, Switzerland. 2007.) 207

³⁹ Ibid. 195

⁴⁰ Amartya Sen. *On Ethics and Economics*. Blackwell; (Oxford. 1994.) X

issue about factory farming is that animal suffering is recognized only when it infringes upon profitability.⁴¹ Could the same be said for all agricultural externalities as they pose themselves as wicked problems?

Philosopher and ethicist, Simon Blackburn quotes Kant who said, "When moral worth is at issue, what counts is not actions, which ones sees, but those inner principles of action that one does not see."⁴² When it comes to industrial agricultural practices, this point made here is particularly precarious. In many ways, industrial agriculture has sustained thus far by taking actions that "one does not see." These actions, like those exemplified above, are often self-regulated by corporate entities and bear great burden to the welfare of the social and environmental whole. The average consumer must go out of their way to learn about the transgressions imposed upon.

Leopold states, "Ethics are possibly a kind of community instinct in the making."⁴³ This instinct very much embodies Blackburn's moral worth. Anthroposophist, Rudolf Steiner has argued that industrial agricultural farmers have shed this very

⁴¹ Jim Mason Peter Singer, , *The Ethics of What we Eat, Why our Food Choices Matter*, (Rodale. 2006)119

⁴² Simon Blackburn. *Being Good: a short introduction to ethics*. (USA, Oxford University Press, 2001)

⁴³ Aldo Leopold. "A Sand County Almanac; the land ethic." Gordon Mariano. *Ethics: The essential writings*. Modern Library; NY, NY. 2009. 499

instinct. In fact, Steiner’s main premise, in developing Biodynamic farming, was centered around a concern with how modern farmers have lost their tacit knowledge developed over thousands of years. The use of chemical inputs and artificial fertilization in industrial agriculture removes the farmer from a historical sustenance-based knowledge base and breaks the pattern of inherited and passed down information.⁴⁴

It can be said that business ethics, too, are passed down- from employer to employee, or firm to farm. But as industrial agriculture continues to neglect business ethics, will it become more removed from the tacit understanding and moral worth of the social and environmental stakeholder? As mentioned in this paper, such trade-offs in conventional farming advance a system deeper into the wicked problem debate, and ultimately removes ethical instincts from the formula at the expense of the society. As complex ethical discussion can be, so are the questions of how to apply them into industrial agriculture. How do we factor in ethics, consequences, and externalities that do not show up in the short term? It seems Sen’s argument for the “we,” as opposed to

the “I,” is an important start to creating an effective business ethic throughout all of agriculture. Perhaps industrial agricultural stakeholders should begin to realize that today’s trade-offs, manifesting as externalities, may not be the answer to a socially, environmentally, and economically sustainable food system tomorrow.

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