# Inhuman Nature:

# Seeking Alternatives to Neoliberalized Nature in Food Systems and Society

by

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**Capstone Research Synthesis**

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## Abstract

This Capstone Research Synthesis addresses the social and ecological harms of industrial agriculture caused by the neoliberalization of nature. This inquiry is motivated by the damages caused by humans through the contemporary agricultural system and seeks alternative ways of constituting nature-society relations that do not cause or contribute to social injustices. The Overall Research Question this Capstone asks is how can conceptual frameworks that challenge neoliberal orientations to nature-society relationships be applied to better understand and create more eco-socially just food systems and societies? To address this question, this research examines how alternative frameworks of eco-anarchism, eco-Marxism, and eco-feminism approach the market, the state, property and civil society. It then presents illustrative examples of agricultural projects applying alternative principles and approaches derived from this analysis; examples include Autonomous Administration of North and East Syria also known as Rojava, the Movimento dos Trabalhadores Rurais Sem Terra, and the Zapatistas. This Capstone research demonstrates that our dominant model of agriculture, which produces social and ecological injustices, can be challenged; and that alternative conceptualizations of market, state, property, and civil society relations can be applied to organize more eco-socially just agriculture.



Keywords: neoliberalism, eco-anarchism, eco-Marxism, eco-feminism, property, market, state, civil society

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# One—Introduction

In modern times humans have become a wolf not only to humans, but to all nature.

Abdullah Öcalan

We live in capitalism. Its power seems inescapable. So did the divine right of kings. Any human power can be resisted and changed by human beings.

Ursula K. Le Guin

The contemporary food system is an industrial system that reflects the priorities, desires, cultural norms, and laws of society. Our society is a neoliberal and capitalist one, where profit motive, competition, and individualism are prized features. As such, the food system is structured to turn a fundamental, biological need – the provision of food – into a money-making endeavor. Food is not considered a right, but a means to an end, that end being the accumulation of wealth.

The industrial food system is a system that endeavors to control environments and people, destroys traditional food ways and biodiversity, and extracts value from the mass production of monocrops and exploitation of farmworkers. Those who run the agribusinesses producing pesticides, fertilizers, genetically modified seeds and plants, influence government policy and gain increasing power through their excessive financial influence. The industrial food system is rightfully lauded as an incredible human feat, changing the history of the world as we know it and producing food on a massive global scale. It has, however, failed to equitably distribute nutritious food worldwide, with millions of people going hungry, and it creates enormous ecological and climate damage. Inequitable distribution of food and environmental harms adversely affect the majority of the world's population. Environmental destruction has an insidious way of multiplying social damages and social harms in turn reproduce environmental devastation.

The focus of this Capstone Research is on addressing the harms derived from industrial agriculture. There are many examples in which humans' relationship to nature is one of callous exploitation and ignorance, often caused by neoliberal capitalist ideology and the industrial food system that results from it. My research considers whether we must persist in this system, subsumed in the logic of capitalism and at the exploitative whims of neoliberalism; and whether there are other ways to relate to nature and organize the food system that do not result in social and environmental harms. The research problem of this Capstone is to seek out alternative approaches to nature-society relations and thus develop alternative ways of organizing agriculture.

The importance of addressing this research problem is to demonstrate that even though neoliberal, capitalist structures may seem massive and immutable, there are different ways of building and developing society, relating to nature, and building agricultural systems. This research addresses this problem by asking about frameworks that challenge neoliberalism and demonstrate that neoliberal capitalism is not the only way of organizing society or conceiving of our relationship to nature. Nature can be a respected player in the project of life and does not need to be exploited and destroyed for the benefit of humans. By developing improved relations with nature, and reducing environmental destruction, we can in turn develop socially-just social relations as well.

This research addresses the negative social and ecological consequences of industrial agriculture by asking about conceptual frameworks that challenge neoliberal orientations to nature-society relationships so that we can better understand and create more socially-just food systems and societies. Through this research I have discovered that the three selected frameworks, eco-anarchism, eco-Marxism and eco-feminism, have deep histories challenging

capitalism, harmful hierarchies, and advocating for improved relations between society and nature. This research does not pretend to review and explain all that these frameworks have to offer. Indeed, it is a modest presentation of only some aspects of each of these frameworks, intended to illustrate the existence of alternatives so that what may seem as inevitable can be seen as possible to change. These frameworks represent powerful challenges to neoliberal approaches to the market, state, property, and civil society, offering principles and practices to guide more equitable relations. I have further discovered that these principles are enacted in varying ways in the three existing examples of alternative agricultural projects reviewed. These are located in the Autonomous Administration of North and East Syria (AANES) also known as Rojava in Syria; the Movimento dos Trabalhadores Rurais sem Terra (MST) in Brazil; and the Zapatistas in Mexico. Some may argue that these examples are not evidence of possibility due to the extreme contexts from which they derive (e.g., civil war and declared revolution). Regardless of foundational circumstances, however, the organization and philosophical underpinnings of the examples demonstrate the real possibilities of alternative modes of organizing the food system and society that is more compatible with social justice. Despite the circumstances in which these movements were birthed, they offer exciting potential, and could be sources of inspirational guidance to achieve social justice, especially in the face of dire circumstances.

The Capstone Research Synthesis begins with the Background and Significance of the research. Chapter Two includes an introduction to the research domain of food systems and society, and definitions and explanations of social problems, social justice, and eco-social justice. Following these, I elaborate the social problem of industrial agriculture, to which the Capstone Research Problem responds, investigating alternative frameworks and their applications to agriculture. The chapter concludes with a research statement and an Overall Research Question

(ORQ), before turning to Chapter Three - Methodology and Methods. This chapter defines research paradigms, explains the two Constitutive Research Questions (CRQ) that will be used to answer the ORQ, and elaborates the research design used to answers each CRQ. Chapter Four - Results, Application and Contribution, presents the results of this research, explaining the significance of the results and how they contribute to our broader understanding and scholarship on nature-society relations and the impacts different frameworks have on that relationship as it relates to organizing the food system. The Capstone Research Synthesis then concludes with a summative fifth chapter.

## Two—Background and Significance

This chapter provides the necessary background information for this Capstone Research, providing context for and emphasizing the significance of the research. In it I define the domains of food system, society, and ecosystem as essential grounding for this work. Following that I define social justice, explicate eco-social justice, present, and define the concept of a social problem, and explain the social problem of interest, the ecological degradation and social harms derived from modern industrial agriculture and exacerbated by the neoliberalization of nature and society. From there, I identify my Capstone Research Problem, which focuses on investigating alternatives to neoliberal nature-society relations, concluding with the Overall Research Question that guides this Capstone.

### Domain of Food Systems and Society

This chapter begins with defining and clarifying the research domain of this Capstone, the food system. Specifically, I briefly explain what it does, who is involved, how it works, and the social structures at play. The food system is a complex system that is comprised of a variety of elements and activities (Neff and Lawrence 2014, 2), resources, inputs, outputs, and overlapping subsystems. The social elements in the food system include actors like farmers, farmworkers, corporations, grocery stores, and transporters. It also includes biological actors like nutrients, microorganisms, water, soil, and animals. The most powerful actors in the food system are transnational corporations that control and are involved with much of the inputs, processing, trade, and other activities (Clapp 2015, 306). Around 25% of all food crosses an international border before consumption (Greenpeace 2022, 4) due to the global scale of the food system and the size and number of corporations involved. Transnational corporations comprise most of the United States food system which has enormous global influence, selling $1.8 trillion in goods

and services and producing 9 billion animals annually (Neff and Lawrence 2014, 9). The social and biological activities involved in the food system include the production, growth, harvesting, distribution, and consumption of food (Neff and Lawrence 2014, 2). Also included are social and contextual factors, like the economy, education, policy, society and social justice, and food cultures that influence governmental and societal obligations of food provision and distribution, subsidy choices, and policy decisions (Neff and Lawrence 2014, 2). As a social system, it has relations, patterns, laws, and cultural norms that are embedded and constructed within and reflects the context of broader society.

Society is a non-static system that is comprised of the interactions, social relations, rules, laws, cultural norms, and built environment in which humans inhabit. It forms "the fabric of most people's daily livings, just as the earth provides the economic-biological context for life itself" (Dean 2005, 326). Society is both a physical, spatial, and literal thing, but it is also a conceptual idea. The concept of society is constructed through our ideas of a common way of life, supported through social structures (Dean 2005, 329). Societal structures of importance to this Capstone research, which I categorize as domains of society and social relations, are the state, property, markets, and civil society. Briefly, the state encompasses the government and bureaucratic structures that develop and enforce societal laws. Property is a means of organizing society through designations of ownership. For example, whether property is private versus public and where property is located and how it is obtained reveal and shape society, societal norms, and social relations. The market refers to activities and relationships related to the coordination of financial dealings, production, consumption, and trade. Markets determine the flow of money and goods in a society, often organized for the greatest efficiency to the detriment of social and human values (Clarke 2005b, 207). Finally, civil society refers to all aspects of

social relations and institutions that do not situate in the previous three. Nongovernmental organizations (NGOs), charities, religion, professional associations, unions (Jezard 2018) as well as science and research, are examples of civil society. Civil society can support or challenge the functioning of the other domains, and therefore influences society more broadly.

These social structures  that comprise society – the state, markets, property, and civil society – are not independent of human beings; they are created by and affect humans. The structures of society, rules, laws, and cultural norms, constrain human actions and exert power over our lives. The human beings that comprise society "make, interpret, and enforce the rules" (Musolf 2017, 3-5). Cultural norms and standards organize humans and our interactions in ways that are coherent to the existing system. Society and its domains are organized through ideology, which is a set of beliefs, ideas, concepts, and actions that inform and structure reality, and confirms itself through reinforcement by the actors within. Ideology is the apparatuses and practices and things that people "do" (Crossley 2005, 151), and what people "do" makes society.

Overall, society is structured and limited by hegemonic ideologies. Hegemonic ideologies are those that are the sufficiently powerful and prevalent to become naturalized and considered common sense (Allen 2006, 117). Ideology, the beliefs, customs, ideas, and actions that structure society, influences how the domains of society and social relations (the state, property, markets, civil society) are constructed and enacted. Ideology influences the actions and beliefs of individuals, creating boundaries between what is and is not acceptable.

Socially created boundaries, domains, and structures are, however, not so impenetrable that they cannot be altered. Society can be unmade or changed through the agency of individuals. Agency is the ability of an individual to act, purposefully and intentionally (Musolf 2017, 4). Agency allows for individuals to make decisions within and beyond the constraints of society.

Through those decisions and their agency, individuals can challenge the structures of society and their corresponding, often hegemonic ideologies. This is how societies change over time, through the actions of the people within them. For example, people have identified numerous alternatives to the hegemonic ideology and practice of capitalism, including socialism, communism, and anarchism. Capitalism seems to be a perpetual and immutable force, but as Ursula K. Le Guin so artfully put it, it is not: "[Capitalism's] power seems inescapable. So did the divine right of kings. Any human power can be resisted and changed by human beings." This perspective indicates that society is a recursive system, making its inhabitants through previously determined structures. Its inhabitants, in turn, remake society by reinforcing or challenging these structures. The food system, as part of society, reflects ideologies in and the nature of the domains of society. Likewise, food systems are embedded in ecosystems, which extend beyond ideology, but as we will see, are still affected by it.

The food system, as a partly biological system, is embedded within ecosystems much as it is within the broader social system. Ecosystems are composed of organic and inorganic factors, the interactions, and relations between the physical and biological components, within the environment in which these factors interact (Willis 1997, 81-268; Molles 2016, 393). The ecosystem can be considered a community of organisms and non-living elements, within an open system that circulates the energy and matter that sustain it (Willis 1997, 270; Bookchin 2005, 90). Ecosystems can exist at any scale and may overlap, from bacterial-level interactions within the human digestive tract, to different canopy layers of trees, to lakes, to continent-wide rainforests or the oceans. The sun is the driving force of energy in this system, warming the biome, creating energy in plants that produce sugars and fix carbon, produce fruits and seeds that are consumed by herbivores or decompose into nutrients; some animals are consumed by other

creatures, which in turn further affect the bacteria, nutrients, fungi, and abiotic materials within the ecology of an environment (Molles 2016, 393). The ecosystem is "a circular, interlacing nexus" of relationships between plants, animals, microorganisms, and abiotic materials (Bookchin 2005, 91). There is a complex interdependence, not limited to predator-prey relationships; there are also passive and active mutually beneficial relationships that are "a major factor in fostering ecological stability and organic evolution" (Bookchin 2005, 91). These complex ecological relationships that exist in the sphere of nature impact societal functioning, and in turn, are affected by society.

There are many ways in which nature and society interact and intersect. To illustrate, the city of Chicago was developed along the river due to ease of transportation and access to natural resources, but the land around the river was highly saturated and had poor drainage (Cronon 1991, 24, 56-58). This caused flooding and the accumulation of mud so extreme that beginning in 1849, the city required buildings, some several thousand tons, to be manually lifted by several hundred men and jacks, to build new foundations that would eventually raise the entire city up by dozens of feet (Cronon 1991, 58). The local ecology and market forces, combined, influenced the initial location of the city. The built environment initially changed the landscape. The environment in turn forced a dramatic restructuring of the city. Social organizing and ideological beliefs intersected with the at times immutable, and other times mutable, broader ecosystem. Social structures, physical and conceptual, are constantly being made and unmade by the individuals that comprise the system, motivated through ideology, with environmental consequences that, in turn, affect society.

Ideology, in addition to conditioning society and its domains as described above, also influences the ways in which we understand and relate to nature. Of course, ecosystems and

nature itself do not form hegemonic ideologies the same way humans do; that is a unique trait of *Homo sapiens*. However, our understandings of nature and our relationships to it, are influenced by dominant ideologies. Capitalism is an ideology that significantly affects both the way we interact and understand nature and societal domains, as indicated above.

Capitalism is an economic system in which property is privately owned, prices are privately set, and labor is purchased for wages (Jahan and Mahmud 2015, 2). The essential feature of capitalism is the profit motive, the goal for capitalists being to make profit for owners and investor-shareholders (Jahan and Mahmud 2015, 2; Clarke 2005a, 22-23). Despite the constant interaction between nature and society, under capitalism, nature is severed from humans for the purpose of designating it as an exploitable resource for profit accumulation. While the example of Chicago demonstrates the impact nature has on society, nature was still ideologically positioned as something to be overcome and dominated, as people engaged in an awesome act of defiance and conquering of nature. Nature and society are inextricably linked (Cronon 1991, xiv) but there is an ideological separation of humans and nature under capitalism, that is visible in the food system, where it produces negative outcomes called social problems, that effect the realization of social justice.

**Social Problems and Social Justice in Food Systems and Society**

The food system is embedded in society and ecosystems and therefore reflects the social justices and injustices present in these systems. These injustices are visible in food systems and society as social problems. In this section, I define social justice and then explain what social problems are and how they reflect social injustices. Finally, I identify the social problem this Capstone research focuses on, the negative ecological and social effects of industrial agriculture.

*Social Justice*

Social justice is the presence of freedom and an absence of hierarchical structures that result in oppression. Freedom is a power, an active capacity, an inherent natural state of all living beings (Parekh 2005, 132-133). It is "the absence of restraints or restrictions" and any restrictions that exist on freedom must be justified (Parekh 2005, 132-133). Restrictions and protections of freedom are enforced through informal social constructs, like cultural norms, or formally engendered structures like the law. We can summarize this duality as the "freedom to" and the "freedom from." I, as a woman may have the freedom *to* travel on foot, alone, at night, but societal structures of misogyny and patriarchy make it dangerous for me to do so; I am not truly free for I do not have the freedom *from* predation. This restriction is not a formal one, but a cultural, ideological one. A poor, sick person has the freedom *to* get healthcare as they are not legally restricted; but financial restrictions mean they are not free *from* the restrictive harms of poverty. Poverty and its associated restrictions are not a formal structure, but a social and cultural one based on capitalist ideology and its implications. For the definition of social justice used here, freedom is simultaneously the absence of restraint and the protection from unrestrained freedom; the power to act without applying or experiencing harm.

An often overlooked, but hegemonic social construction that results in restraints on freedom and causes injustice, is the ideology and practice of hierarchy. Hierarchy is generally understood as a system that is stratified into levels that have asymmetric relations (Wu 2013, 286). This asymmetry is the imbalance of power between someone (or something) having a great deal of power and authority, and someone (or something) that has little power and authority and is subject to the more powerful. Hierarchy is a harmful structure and is relevant to any conception of power dynamics and domination, within culture, tradition, and the very

psychology of individuals (Bookchin 2005, 68-69). Hierarchy inherently requires inferiors and superiors, wherein the suffering of the inferiors is justified by the benefits and gains the superiors acquire from said suffering (Bookchin 2005, 72). Hierarchy delineates the power structures and dynamics within society, interpersonal relationships, and within individuals themselves, appearing in varying capacities.

Hierarchy can constitute oppression, which can be based on economic or social and cultural relations. Oppression is defined by Iris Young in *The Five Faces of Oppression* (1990) as being composed of marginalization, exploitation, powerlessness, cultural imperialism, and violence. Marginalization is the process by which people are deemed unusable by the broader system, resulting in material deprivations (Young 1990, 63); this is caused by social and class-based hierarchies, which determine which groups are useful to the capitalist system, and which are not, thereby weakening their standing as compared to the dominant group(s). Exploitation is the state in which individuals experience deprivation and vulnerability leaving them susceptible to the loss of power; one group appropriates and profits from the labor of another group (Young 1990, 61); those lower in hierarchical structures are the groups most likely to be exploited, often through market and state forces. Powerlessness is the lack of decision-making ability; certain classes and groups have greater status in society than others. Those who are powerless have little to no autonomy, authority, or experience of respect (Young 1990, 65-66). Hierarchical structures are inherently about power and control; those at the top have power through autonomy, automatic respect, and authority based on their work or societal status. Those who are subordinate in the hierarchical ranking lack these and are powerless. Cultural imperialism is when the dominant society alienates other groups, rendering them invisible or stereotyped (Young 1990, 66). Cultural imperialism is only possible if there is an ideology of hierarchy

among cultures, where one is positioned as superior to another and manifests in the expropriation of property, goods, materials, and people. The last face of oppression is violence, oft occurring, organized or random, with the result of creating an environment of fear that is exacerbated if the social context in which the violence occurs, justifies, or makes it acceptable (Young 1990, 68). Violence is utilized in the maintenance of structures of domination, such as through the state which holds a monopoly of violence. Ultimately, the oppressed are subjected to the socially constructed and institutionalized disadvantages and unattainable power (Musolf 2017, 2). Those that do not suffer from oppression and have socially constructed power and institutionalized advantages are the privileged.

The privileged are often not fully cognizant of their position within society. Privilege yields superiority delusions, which codify systems of oppression and domination (Musolf 2017, 8). The oppressed are keenly aware of their subjugation, but a "socially privileged life" often comes with an ignorance of how an individual's actions and social practices maintain the social constructions of power and oppression, which result in the legitimization of domination and the stereotyping of the oppressed (Musolf 2017, 1-3). It is in this way that hierarchy is internalized within an individual and is externalized and reinforced in society more broadly. Where the oppressed are marginalized, the privileged are valued; where the oppressed are exploited, the privileged reap the benefits of the exploitation; where the oppressed are powerless, the privileged are the hoarders of power; where the oppressed are alienated and stereotyped, the privileged control the narratives; and where the oppressed suffer violence, the privileged know peace. The binary of oppression and privilege is the definition and demonstration of hierarchy.

All of these ideological structures are made and unmade by individuals residing within the system. Societal structures organize "social positions hierarchically in all institutions so that

power emanates from those who control the means of administration and violence to make and enforce policy" (Musolf 2017, 3). Meaning, the privileged have greater agency within society, and therefore have an interest in maintaining dominant social relations. The oppressed on the other hand, have a greater interest in changing the social systems, for they lack agency and experience oppression due to their societal, hierarchical positioning. This system of domination and oppression cannot, by its very nature, provide the circumstances needed for a just society. The ability for any person or group to dominate over another (whether that is men over women, white people over Black people, the wealthy over the poor, or humans over nature) results in an absolute absence of true freedom that is the purpose of social justice. It results in harmful and dangerous oppressions where people lack power and decreased agency, are subjected to violence, exploitation, marginalization through stereotyping and alienation. This culminates in restrictions, hierarchy, and oppression – social injustice.

To summarize, social justice is the presence of freedom and an absence of hierarchical structures that result in oppression. It is the active uplifting of oppressed voices, the removal of hierarchical structures, and the accepting and incorporating of marginalized people's truths into the construction of society. All peoples deserve to contribute to the construction of society and building a just ideology. As ideology affects more than just social relations, this master narrative and conceptions of justice must be expanded even further to include the environment.

As ecosystems and society are intertwined, harm to one can cause harm to the other. Both reflect the socially constructed injustices of hierarchy and oppression, and I consider this intersection, eco-social justice. Eco-social justice is the presence of freedom and the absence of oppression and hierarchy, by human against human, and humans against non-humans and nature. It is the emancipation of all humans and nonhumans from structures of power and exploitation,

and the presence of freedom, without human exceptionalism or superiority delusions. Absence of eco-social justice reflects hierarchical constructions of oppression and privilege that appear with the absence of social justice.

Violations of social justice and ecological justice are often connected and reinforcing. These violations frequently stem from hierarchical capitalist ideologies that position nature as a source of exploitable resources (Attfield and Reed 2021, 111). Resource exploitation often coincides with violations of human rights and the association of marginalized groups with nature and its exploitability. The capitalist association of some peoples (women, indigenous groups, the colonized) with nature results in these groups being oppressed (Patel and Moore 2017, 24) or worse. To illustrate, we can look at the activism and death of the Nigerian environmental activist, Ken Saro-Wiwa (Al Jazeera 2009). The Dutch Royal Shell Company for decades had been drilling for oil in Nigeria, particularly in Saro-Wiwa's indigenous tribal lands of Ogoniland. The oil drilling violated the cultural rights of the people living there, exploiting, and destroying natural resources and devastating Ogoniland. Saro-Wiwa engaged in an activist and protest campaign against Shell, advocating for human rights and environmental protections. In 1995 the Nigerian government arrested and executed Saro-Wiwa and four others. In 2008 Shell Company settled a lawsuit, that was accusing them of engaging in human rights abuses and furnishing the Nigerian government with financial funding and weapons used to crush activism and dissent opposing Shell's actions in the country. The environmental degradation of Ogoniland went hand in hand with violations of human rights, ultimately resulting in the state sanctioned murder of one of the most prominent activists. Exploitation of the environment benefited Shell Company and the Nigerian government but harmed the indigenous Ogoni, destroyed the environment, and murdered Saro-Wiwa.

Stories like this are prevalent. Berta Cáceres in Honduras was murdered in 2016 for her activism fighting for the rights of the indigenous Lenca people against the construction of the Agua Zarca Dam. The construction of the dam was going to displace the Lenca peoples, cutting off water, food, and medicine, and cause great environmental destruction. Construction of the dam was seen as an attack against the Lenca, their autonomy and free will, as well as an attack on the spiritually important Gualcarque River (Goldman Prize 2015). Seven men from one of the companies behind the dam project, Desarrollos Energéticos SA (DESA), were found guilty of Cáceres' murder in 2018. These two stories illustrate the connection between environmental violations and attacks on human rights, demonstrating that land and environmental exploitation benefit the few already privileged and further erode and destroy human rights of those already oppressed. Oppressed peoples and nature are linked together via the negative damages that result from the actions derived from the capitalist system. Yet this commonality is often overlooked and ignored, and human society is severed from nature for important reasons.

The separation of humans from nature, historically and contemporarily, is for the purpose of the capitalist class, the privileged, to create and obtain increased profits. This occurs though the hierarchical oppression of nature and groups of people associated with nature (Patel and Moore 2017, 24). The cleavage between nature and society reinforces the concept of hierarchy; the application of the concept of hierarchy on the environment denies nature its own integrity and creates the belief that hierarchy is a natural construction, creating the psychological construction of hierarchy as normalized (Bookchin 2005, 92). The further separated humans are from the nonhuman, ideologically and physically, the more concretely the psychological construction of hierarchy elevating humans above the nonhuman, the easier it becomes to exploit the environment as it is ideologically understood to be meaningless and amoral (Challenger

2021, 5, 23) and serves purely as a well of resources for the benefit of humans. If the environment is nothing more than an inert source of resources, then violations of it (like oil drilling, natural gas fracking, industrial agriculture that result in harms like species extinctions, biodiversity loss, pollution of water and air, or climate change) are considered entirely normal and acceptable, as they are simply externalities resulting from actions that benefit humans. These externalities are not factored into the overall calculus, for nature is explicitly separated from the human (Patel and Moore 2017, 21) and therefore is *rightfully* exploited. Exploitation and extraction for the benefit of others is hierarchical oppression, whether it is of nature or humans.

Violations against nature and people reflect the ideological binary of oppression and privilege. Those of privilege believe they have the right, based on their hierarchical standing of wealth and power, to take and use whatever natural resources they desire, at the expense of the health, wellness, safety, and rights of the environment and other people. Eco-social justice is the presence of freedom, and absence of such oppression and domination, and hierarchy, and all the above examples demonstrate a lack of eco-social justice. Oppression and privilege, domination and hierarchy are socially constructed. The way society structures itself, privileging some individuals over others, and humans over the nonhuman, is not immutable. If the lack of eco-social justice is the result of socially constructed oppressions, then eco-social justice can be brought about through socially based solutions that address social and ecological problems in society.

*Social Problems*

Social problems reflect the social injustices produced by society. A social problem is when one or more individuals or social entities experience harm that is caused by one or more social conditions that can be remedied with a social cure (Alessio 2011, 8). Simply, social

problems have social causes, social consequences, and social cures. The cause is usually some socially based violation of social justice. The consequences, then, are the manifestation of oppression and domination for some and benefits for others; a hierarchy which affords benefits and privileges to the oppressors at the expense of the oppressed. The cure is to address the social causes in a way that establishes social justice. Complexity arises in defining social problems when we find that some consequences are themselves causes, creating a cascading effect of harm that can be difficult to delineate and address. Solving cascading social problems requires rooting out the ultimate cause, using a clear definition of social justice to diagnose problems and identify cures. In this Capstone research, my focus is on eco-social problems and eco-social justice as guiding frameworks for identifying the root causes of and solutions for problems reflected in both society and ecosystems.

An eco-social problem is when one or more social *and* ecological entities experience harm that is caused by one or more social conditions that can be remedied with a social cure. Note I do not indicate that there are ecological causes or ecological cures, as the ecosystem itself does not have the ability to violate standards of eco-social justice. While the environment has its own functions and processes, it does not have ideology, nor intentional direction and decision making. Therefore, while I argue it has a certain amount of agency, and certainly rights, it does not have capabilities to *understand* violations of eco-social justice; it simply experiences and reflects injustice. For eco-social problems, the harms that the environment can potentially cause humans are ultimately derived from social activities. For example, in *Late Victorian Holocausts*, Mike Davis (2001) discusses the El Niño event of 1743-1744 and its effects in China and Europe. In China, drought caused by an absence of monsoons devastated the winter wheat crops, followed by high winds and sunstroke that killed farmers and damaged crops (Davis 2001, 280-

281). However, no mass starvation happened, due to the cultural tradition of storing grains for distribution to the populace in harsh times (Davis 2001, 281). Contemporaneously, millions of European peasants died from starvation following devastatingly cold winters and drought-filled summers because European society did not guarantee subsistence as a right (Davis 2001, 281). So, the climate (an expression of "the environment") negatively affected humans to a great degree, affecting agriculture and food production. However, the real damages and the ability to avoid environmentally-induced catastrophe come from *social* structures. In China, pain and suffering were mitigated due to society's belief in subsistence as a human right. In Europe, society simply allowed the peasantry to die. Therefore, eco-social problems do not have ecological causes or ecological cures; it is ecological events' intersection with new and preexisting social injustices that cause eco-social problems.

Ultimately eco-social problems arise from an absence of eco-social justice. They have social causes, with ecological and social consequences, and social cures. Evidence of eco-social problems is society is abundant. The cure, as noted, is to explore the social causes of these problems and associated injustices. The next section explains the eco-social problem that is the focus of this Capstone research, the ecological degradation and connected social harms that results from industrial agriculture, and its causes in neoliberal ideology.

*Capstone Social Problem*

This Capstone research addresses the eco-social problem of industrial agriculture and the social and environmental harms caused by it. As explained, eco-social problems have social causes, ecological and social consequences, and social cures; they arise from the absence of eco-social justice, which is the presence of freedom and the absence of oppression, domination, and hierarchy. When eco-social justice is present, both humans and nonhumans experience freedom

from restrictions and harms, and oppressive hierarchies. The next sections explain the eco-social problem of industrial agriculture, its history and its effects, followed by its causes in neoliberal, capitalist ideologies in each of the domains of society and social relations noted above – markets, the state, civil society, and property.

## Industrial Agriculture

Here I provide a review of the historical development of industrial agriculture, and its social and environmental consequences, which will be followed by the explanation of how these consequences are exacerbated by neoliberal nature-society relations. Industrial agriculture is a transnational system that has had enormous negative economic, social, and ecological consequences. It can be described as "a set of technologies and practices that aim to maximize agricultural productivity and profitability and minimize the challenges that nature or the environment poses, typically by substituting industrial processes for biological processes and human labor" (Gillon 2019, 205). Maximizing productivity and profitability is part and parcel of capitalism, and industrial agriculture encounters the social rights and biological components of food production as a barrier to profit (Gillon 2019, 217). As agriculture is partly biological, rooted in nature and natural cycles, it relies on the environment and ecological systems for pollination, photosynthesis, evolution and resources like water, soil, and nutrients (Gillon 2019, 205). Its basis in nature makes capital accumulation difficult, with unpredictable elements like sunshine, weather, pests, and reproductive cycles (Gillon 2019, 205) interfering with the consistency needed by capital accumulation. Industrial agriculture engages in methods to overcome this barrier as prescribed by the logic of capitalism, requiring control and exploitation.

The development of neoliberal capitalist ideology, its application to agriculture, and its effects on the framing of social relations today have long historical legacies of exploitation and

oppression world-wide. Industrial agriculture has its roots in colonialism, where colonized countries produced agricultural products for the colonizing empires (Gonzalez 2004, 423). This period is described as the first food regime (Friedmann 2008, 2), which expanded territory and the reach of capitalism through the already occurring violent appropriation and exportation of cheap agriculture products from colonized territories. Agriculture products were imported from the peripheral colonies and the exploited indigenous populations to the ruling center (Gonzalez 2004, 423). Colonists viewed the naturalism of indigenous peoples, particularly in North America as sinful and demonic, coupled with the idea that nature was "a ferocious beast that had to be tamed and punished to function as a machine, put at our service forever and ever" (Galeano 2009, 4). The quest for profit and wealth devastated the traditional food system of indigenous peoples and the ecosystem, resulting in the death of millions (Davis 2001, 280-281). Natural agrarian cycles were destroyed, and so was the power of the indigenous peoples, resulting in the struggle to provide sustenance due to the aggressive extraction processes of the colonists (Davis 2001, 290; Goodman and Redclift 1991, 96). The enslaved and colonized peoples were simultaneously separated from nature and natural cycles and their culture, while forced to labor in agriculture for the exportation of goods to the colonial powers. Agricultural practices remaining in colonizer countries increasingly drained the soil of its fertility, a biological constraint on domestic agricultural production that resulted in the importation to the colonizer countries of Peruvian bird and bat guano in the late 1800s (Foster 2000, 156). At this time, Karl Marx observed what he called the metabolic rift, which is the disruption of the metabolic cycle that resulted from the displacement of peasant workers, from the commons centuries prior.

The environmental and social impact of the enclosure movement, which helped constitute capitalism and, eventually, industrial agriculture, cannot be understated. The process of

enclosing the commons in England was engaged by wealthy landowners in the sixteenth century who expropriated public agricultural lands and began charging rent to the peasantry who previously accessed the land freely (Wood 2000, 28-29). Peasants were increasingly exploited for their labor, or forced from the agrarian life, migrating to urban areas like London in search of jobs, doubling the urban population of London between 1500 and 1700 (Wood 2000, 37-38). The pattern of propertyless and exploited peasantry laboring as direct producers for the benefit of the wealthy would be reproduced in the colonies (Wood 2000, 25-30). This enclosure of the commons, expropriation of agricultural lands, and the destruction of the customary rights used by the peasantry to protect the land (Wood 2000, 32) interrupted the biological patterns of waste products that compost into new soil nutrients. In turn, due to the intensified production required to pay increasing land rent to landlords, expedited the extraction of the nutrients (Wood 2000, 28-29). The nutrient depletion of the soil due to overwork and over-extraction, and lack of regeneration of nutrients from composting waste products, resulted in decreased agricultural output. When the potency of the imported guano as organic fertilizer was not enough to recuperate the soil, synthetically created chemical fertilizers were applied, temporarily improving yield, before once again exacerbating the already depleted soil, cyclically requiring yet more synthetic fertilizer. Coinciding with the intensification of already-existing agricultural lands, expansion of agricultural territory through the destruction of forest resulted in a reduced number of insect-eating birds, which in turn resulted in an increase in pesticide usage (Foster 2000, 239-240). The consequence of this intensification and extensification was further depletion of nutrients, soil degradation, topsoil loss, decrease of outputs, and increased input from capital in the form of greater production of, and intensified application of chemical fertilizers and pesticides. This pattern continues to today, along with other exploitative processes.

The exploitation of people and land in the colonial period continued through the decolonization period, yet similar patterns of colonial exploitation remained. Decolonization led to strong state protections of national food production, and agriculture become increasingly industrialized (Friedmann and McMichael 1989, 95-103). This is where we can see financial liberalization, a trait of neoliberalism, coming to the fore. As time went on and developing and post-colonial countries extracted themselves from the boot of colonialism, they needed economic assistance. Through the International Monetary Fund and the World Bank, liberalization policies were formulated that protect the agricultural systems of developed countries but force open post-colonial countries' agricultural and financial systems for exploitation (Gonzalez 2004, 421). Exploited countries continued the process of colonialism through increasing the production of monocrops to finance food imports to support their populace (Gonzalez 2004, 422). This destroyed and limited the agrobiodiversity of the colonized countries, limited the ability of farmers to engage in subsistence farming, resulted in damages to ecosystem health, and increased food insecurity (Gonzalez 2004). This instability led to agrarian reform movements and calls for socialist policies in formerly colonized countries.

Urban areas with large population centers suffering from food insecurity were seen as a threat to industrialized, capitalist countries. During the post-WWII period, fears of the spread of Communism motivated the United States and other Western capitalist countries to engage in food aid efforts, exporting cheap wheat to formerly colonized countries to placate urban unrest (Patel and Moore 2017, 149) and gain political and economic advantage (Friedmann and McMichael 1989, 104; Friedmann 2008, 2). The export of cheap food resulted in the "pattern of rural underdevelopment and dependence on food imports" (Friedmann 2008, 4) in Third World countries while simultaneously quieting potentially Communistic urban unrest with cheap food

(Patel and Moore 2017, 151). Yet, even as food prices dropped due to this influx of cheap food imports, farmers and indigenous peoples in these countries found they could not compete, and were forced from their lands, fell into poverty, and began to suffer from malnutrition and food insecurity while simultaneously relying on international markets and imports for food (Gonzalez 2004, 422; Friedmann 2008, 4). Farmers are some of the most malnourished peoples due to this rural disenfranchisement, as poverty is the primary cause of food insecurity, not lack of food production (Gonzales 2004, 422).

The production and export of food from the industrialized countries became a financial and political venture. In the United States and elsewhere, industrial meat production and the development of non-perishable foods meant increasing separation of agricultural processes, wherein mass-produced monocrops and the expansion of concentrated livestock production resulted in further ecological and social destruction (Friedmann and McMichael 1989, 104-108). This post-WWII period also found economists beginning to promote the ideology that would be come to be known as neoliberalism, focusing on individual freedoms, private property rights, entrepreneurship, and unregulated markets and trade (Harvey 2005, 2; Lawrence and Smith 2020, 412). This is supported through what is called the neoliberal state, the governmental structures, systems, and ideology that reflect and support these business interests and freedoms and remove any form of control or impediment to markets and profit making, prioritizing these interests over others (Harvey 2005, 2-3). Economic liberalization via the neoliberal state forced open developing countries' markets to corporations while simultaneously protecting the industrial nations' markets through food aid and the project known as the Green Revolution.

The Green Revolution, a misnomer, ultimately served to expand and enhance the system supporting corporate profits and protecting nationalistic goals. The Green Revolution, a term

coined in 1968 (Patel and Moore 2017, 149), had the outward goal of reducing hunger and poverty through humanitarian efforts from the Global North to the Global South (Harwood 2018, 9). Assistance from developed countries to developing countries came in the form of higher-yielding seeds, fertilizers, pesticides, mechanization, and irrigation methods (Harwood 2018, 10). On its face, it would seem the Green Revolution was a success, with grain output doubling between 1950 and 1980, and food prices decreasing by 3% each year between 1952 and 1972 (Harwood 2018, 21; Patel and Moore 2017, 151). However, the effect on food security was much less positive, with rates of hunger increasing 11% over the course of the Green Revolution (Patel and Moore 2017, 151). The damage from cheap food prices and resulting poverty did not benefit the populations the project was stated to help. The rural populations suffered greater food insecurity, but the ultimate political aim of quieting calls for agrarian reforms and leftist unrest in urban areas was a success (Patel and Moore 2017, 152). The transnational corporations also benefited greatly. In 1980 a World Bank Executive stated that for every $1 loaned by the World Bank in relation to the Green Revolution, $7 were returned to corporations in the industrialized countries (Harwood 2018, 22). The impact of patented transnational seeds resulted in a decrease in the variety of crops with a smaller genetic base (Gonzalez 2004, 423) leaving crops more susceptible to adapting diseases and pests (Gonzalez 2004, 446). This so-called Revolution forced farmers to increasingly rely on transnational corporations for pesticides, fertilizers, and seeds, draining money from local populations toward industrial nations and their corporation, a pattern that continues to this day. In 2004 five agrochemical companies controlled 65% of the global pesticide market, merging with other companies producing fertilizers and seeds (Gonzalez 2004, 425) resulting in massive control over the global agriculture market. In 2021 the top four agrochemical companies, Syngenta, Bayer CropScience, BASF, and Corteva accounted for 58%

of the $67.8 billion of global pesticide sales (Statista 2023). A 2022 report from Greenpeace reveals four corporations, Archer-Daniels Midland, Bunge, Cargill, and Dreyfus (also collectively known as ABCD) control 70-90% of all worldwide grain trade (Greenpeace 2022, 14). This massive economic power results in political power to impact policy decisions of governments (Gonzalez 2004, 425), persisting the impacts of corporations on the agriculture system, society, and the ecosystem more broadly. The biological restraints of agriculture are forcibly overcome by corporations as a necessity to achieve capitalist accumulation (Goodman and Redclift 1991, 91).

The huge financial gains for agrochemical corporations that is derived from the industrialization and financialization of agriculture is reinforced through neoliberal ideologies and capitalism overriding the social rights of people and nature. The impact of neoliberalism on nature, social relations, and the intersection of the two reveals that it is beyond an economic system, but a philosophy that impacts all aspects of life. The neoliberalization of nature and society relations extends early foundational colonial and capitalist relations in the food system and is foundational to modern-day industrial agriculture and its negative consequences. This is explored in the next section.

## Neoliberal Nature-Society Relations in the Food System

Neoliberalism is a philosophy based on the financialization of society and social relations, reinforcing hierarchical structures therein. It principally claims human freedoms can best be achieved through the liberation of individual entrepreneurialism, with emphasis on private property ownership, and unregulated financial markets and trade (Harvey 2005, 2). Recall that eco-social justice is the presence of freedom and an absence of hierarchical structures that result in oppression of human by human and of the non-human by human. Neoliberalism, in

prioritizing the interests and freedoms of corporate finance, individualism and profit over other members and aspects of society and the environment, intrinsically rejects eco-social justice. The development and reinforcement of hierarchy and oppression through neoliberalism for the purposes of financial accumulation and power creates eco-social problems.

Nature under neoliberalism is forced into capitalist production through industrial forces and the inherent value of both nature and humans is denied for the explicit purpose of exploitation and extraction. The severance between humanity and nature is extreme, forcing humans to be considered un-natural (Galeano 2009; Nash 2001, 27), a separate entity from nature, despite being biological beings ourselves. Neoliberalism locates nature within the capitalist system as an element separate from humans, without its own integrity, a tool to be manipulated and extracted from, which in turn reflects the hierarchical oppression of humans (Bookchin 2005). The natural world, and our relationship with it, is oversimplified, commodified, oppressive, and hierarchical. Capitalism creates, and benefits from, the idea that humans are separate from the web of life (Patel and Moore 2017, 24). This neoliberal ideology bifurcates nature and society (McAfee 2003, 216) and has affected the way we exist and understand the world (Harvey 2005, 3). Rather than bringing humans and nature closer together, industrial agriculture reflects neoliberal ideology, the consequences of which are damage to ecosystems and societal harms through oppression.

The eco-social injustices that exist due to the neoliberal ideologies' presence in agricultural systems are demonstrated within each of the four domains of society and social relations previously delineated: markets, the state, property, and civil society. These domains reflect the oppression and hierarchy resulting from neoliberal ideologies of nature-society relations as they appear in industrial agriculture.

***Markets***

In terms of markets, neoliberalism relies on marketization and market proxies for the commodification associated with neoliberalism. Market proxies are public goods and services that are typically run by the state but are now run as though they were a business venture. Protections or regulations to address any socially or environmentally damaging effects of business are relegated to market-based solutions, rather than government-based restrictions (McCarthy and Prudham 2004, 276-279). This aligns with marketization, the application of prices and commodification on previously non-commodified entities (Castree 2008a, 142). The market under neoliberalism supersedes state functions.

The neoliberal market also manifests through the financialization of the food system. Clapp and Isakson (2018, 438) write about the financialization of the food system and the three ways it occurs. The first is through the opening of new areas of capital accumulation. This is the process by which food and agriculture are abstracted fully into financial values (Clapp and Isakson 2018, 439), meaning all cultural and biological contexts of food and agriculture are removed and replaced by financial metrics. The second way the food system is financialized is through the prioritization of paying shareholders over all other values, including food security (Clapp and Isakson 2018, 438). This occurs due to an increase in the number of financial players like investors and speculators in agricultural markets. Increased speculation results in food price increases and pricing instability of food worldwide (Clapp and Isakson 2018, 440; Ghosh 2010, 72). As food prices increase, the financial value of farmland increases, which is a combination of the physical space as well as its productive capacity; this can result in multiple mortgages on multiple landholdings being bundled with shares of this bundling sold to shareholders (Clapp and Isakson 2018, 441). Orienting food as simply a commodity to be extracted and exchanged,

without consideration for its actual production as derived from natural and social processes is the financialization of life. The financialization of life is "the process wherein the ordinary practices of social reproduction are increasingly governed by financial motives, logics and products" (Clapp and Isakson 2018, 446). Social relations and natural relations are mediated through financial terms and through production and consumption of fetishized commodities.

Commodity fetishism is a specific alienation derived from capitalism. Commodity fetishism is when the method of producing the commodity is obscured through financial framings (Gunderson 2014, 109). The social and ecological relations that actually produce a product are obscured and the commodity itself gains a life of its own through financialization (Gunderson 2014, 109-110), mediating social relations through market exchange. In neoliberal markets, food is less of a biological need, a human right or cultural phenomenon, than a means of financial exchange used to provide profit to shareholders of large agribusinesses.

***State***

Market structures are reinforced by the state through deregulation and reregulation, which are two sides of the same coin. Deregulation is the removal of state-based social and environmental restrictions and protections that may hinder market function; reregulation is the installation of state regulations that support privatization and marketization (Castree 2008a, 142). Neoliberal governance removes state and government supports for farmers and agricultural education and moves to privatize this support through bank loans and trade liberalization (Clapp and Isakson 2018, 446-447). The state deregulates to free corporations and financial markets from restraints like environmental protections and taxes; and reregulates to prevent challenges that would interfere with corporate profiteering.

The environment is subsumed to the logic of the neoliberal state. Through neoliberal ideology, the environment is best protected not through state protections, but through capital-accumulating activities (Castree 2008a, 146-147). Conversely, those same market-based incentives motivate the deregulation of certain protected environments. Meaning, environments that are not already being exploited are opened to forces encouraging capital accumulation (Castree 2008a, 147), and environments that are already opened, experience increased exploitation. Industrial agriculture demonstrates how neoliberal ideology can influence and constitute market and state relations and result in eco-social injustices present.

Eco-social injustices that derive from the failure of the state to protect people and the environment can be seen in the production and use of chemical fertilizers and pesticides. Chemical fertilizers and pesticides that the industrial agriculture system relies on, result in contaminated water and soil, poisons humans, and harms vital insects like honeybees (Clapp 2015). Fertilizers and pesticides are utilized in agriculture to increase yields of food product, and in turn profit accumulation. Fertilizers that enter the water system cause rapid algae growth, which then blocks sunlight to underwater plants and absorbs all oxygen, resulting in dead zones (EPA 2022). Chemical fertilizers like neonicotinoids, are linked to colony collapse in honeybees (Stokstad 2021) which has resulted in a devastating decrease in their populations, which ultimately affect food production for both humans and nonhumans alike.,

Pesticides, like fertilizers, produce eco-social harms. The production and use of pesticides has resulted in toxic spills and leaks into sewer and water systems and are most often located in low-income and communities of color (Donley 2022, 3-5). People who identify as non-Hispanic, Black or Mexican American are disproportionately affected by exposure to pesticides and subsequently experience higher rates of childhood and breast cancers, and neurodevelopmental

problems (Donley 2022; Lerner 2021). Between 1992 and 2017, 450 million pounds of the pesticide chlorpyrifos was sprayed on crops (Lerner 2021). Industry-based studies found this chemical to be harmful, but through data manipulation and corporate influence on the EPA, it was labeled safe (Lerner 2021). Under the Trump administration, EPA Administrator Scott Pruitt made drastic changes to the functioning of the EPA through back-room deals with corporations and industry lobbyists (Dennis and Eilperin 2017). Under his leadership Pruitt reversed chlorpyrifos bans, though in 2020 after California and Hawaii initiated their own chlorpyrifos bans, the largest manufacturer, Corteva Agriscience declared they would no longer produce or sell the chemical (Baker 2020). In India, pesticide usage rose 17% from 1955 to 2005 due to the Green Revolution, but the locations with the highest usage are now found to have massive cancer clusters (Patel and Moore 2017, 152). The production and use of pesticides comes at a cost, devastating damage to public health, and to natural systems like waterways and insect populations and more. The capitalist drive for profit, unregulated markets, and the inherently oppressive nature of the system means that the negative externalities of poisoning pollinators and ecosystems or particular groups of people do not need to be considered, as any regulations regarding the toxic chemicals get in the way of capital accumulation. The oppressive structure of neoliberalism results in environmental and social harms, through the market and state de- and re-regulation and reflects the hierarchal underpinnings of neoliberal capitalism and industrial agriculture, where industry, corporations, and profit accumulation take precedence over all others.

***Property***

The concept of property is critical to neoliberal governance, which seeks to privatize public goods, such that all aspects of life are positioned to be a profit-making endeavor.

Privatization is the process by which previously non-private property becomes solely owned by an individual or private corporation (Castree 2008a, 142). This results in companies controlling essential parts of society for the sake of profit. The concept of property and the privatizing of communal spaces manifested early in the development of capitalism and are components of neoliberalism today. Even prior to the advent of neoliberalism, the ideas that would be its basis were already in effect with classical liberalism, the theory that established free-market and laissez-faire approaches to the economy. The free market was substantiated through higher private controls over land through the enclosure of the commons, bringing once communally owned pasture and agricultural lands into private ownership (McCarthy and Prudham 2004, 277; Wood 2000). Keeping land in communal control meant it was not "free" to engage in the free market. Land not only had to be freed through private ownership, but it was to be "improved" to gain value. Unworked land was valueless, and it was only through the application of human labor that it gained value via commodification (McCarthy and Prudham 2004, 277; Wood 2000). This further reflected the moral economy based on land owning and state protections promoting unlimited land accumulation and property ownership by individuals (McCarthy and Prudham 2004).

This pattern of expropriating land from peasantry continues today. For example, the World Bank created "free export zones" that transnational corporations use to their advantage to produce commodities with cheap labor pulled from the excised peasantry (Federici 2004, 72). The poor are exploited and oppressed based on their hierarchical standings in the neoliberal system. To receive loans, former colonies are required by the World Bank to privatize communal lands (Federici 2004, 123), and these loans create debt cycles that result in further privatization and exploitation. The result of this privatization is monopolistic control over land use,

monocultural agricultural production, and natural resource extraction. In the 2020 executive summary from the Land Coalition, they found that only one percent of farms owned 70% of all farmland globally (Land Coalition 2020, 10). Monopolistic control over farmland by transnational corporations consolidates control of agriculture into the hands of the few for the purpose of profit, while degrading the environment, abusing workers, and reducing the number of small farms and decreasing local control over food (Farm Action 2020). Land accumulation by agri-business corporations and financial institutions are driven by growing demand for food production, biofuels, increased desertification (the result of heavily exploited lands via unsustainable farming methods), and speculations on increasing land value (Lawrence and Smith 2020, 417). Land grabs by financial entities enforce depeasantization of land and results in the replacement of agrobiodiversity by monocrops (Lawrence and Smith 2020, 418). The private control over land is understood within the neoliberal framework as a net positive, creating value for the owner at the expense of others, reinforcing hierarchical structures that result in oppression.

The relevance of property in industrial agriculture and neoliberal ideology is not limited to land. Industrial animal production views animals as property and their byproducts like eggs and milk are resources forcibly extracted for human benefit. Animal products are the result of forced fertility, as Gabriel Rosenberg and Jan Dutkiewicz (2020) write: “Artificial insemination… allows factory farms to sync the estrous cycles of entire barns of animals, which, in turn, maximizes the efficiency of impregnation, gestation, and birthing. In other words, artificial insemination allows farms to guarantee that animals breed on the market’s clock rather than their own biological one.” Animals become not biological entities with agency that experience the world, but little machines churning out food products and new little machines.

This food industry practice is a violent extraction of resources in violation of a living being's bodily autonomy, because we deem them an "other." Animal rendering facilities, or slaughterhouses, have been found to cause the "Sinclair effect" – working at an exceedingly violent workplace exacerbates violence elsewhere, with arrest rates for violent crimes, rapes, and sexual offenses higher for communities hosting slaughterhouses than those without (Fitzgerald, Kalof and Dietz 2009). Violence against animals is intertwined with violence against humans; the oppression of animals is intertwined with the oppression of humans (Fitzgerald, Kalof and Dietz 2009, 159), reflecting industrial agriculture's inherent oppressive structure via neoliberal property ownership.

Privatization extends to the genetic level, with patented genetically modified seeds owned by transnational corporations. Rather than using traditional methods of saving, breeding, and sharing seeds, farmers are required to purchase new seeds every season (Gonzalez 2004, 452). Any farmer that saves or shares patented seeds, even inadvertently through natural reproductive methods like wind, can face harsh legal consequences due to the stringent patent protections enforced by the United States, Canada, and the European Union (Gonzalez 2004, 462). Ownership of genetic material, to the exclusion of farmers or ignorance of potential environmental damages, is a right derived from property ownership. What is owned is controlled to the exclusion of all else. Natural systems, biological processes, cultural practices, and foodways are all appear as subordinate to the neoliberal conception of property.

***Civil Society***

A key role of civil society under neoliberalism is to serve as a flanking mechanism by filling in gaps left by state deregulation. Flanking mechanisms provide social support that was once the purview of the state and include reliance on charities, NGOs, public, and community

organizations to provide services (Castree 2008a, 142). Charities, for example, often feed and clothe people who are in poverty, because the state fails to enforce regulations on minimum wage, healthcare or appropriately apply taxation. Science and research are often performed at the behest of corporations, creating new knowledge that is then patented, and used to support the neoliberal system. The normalization of these flanking mechanisms in civil society reinforces the ideology of neoliberalism, absolving the state of any responsibility to address visible eco-social problems.

In terms of industrial agriculture on a global scale, public and non-profit organizations like the World Trade Organization, the International Monetary fund, the World Food Program, USAID, USDA and the Bill and Melinda Gates Foundation support the political-economic partnerships between corporations and governments (Holt-Giménez 2017, 54). For example, the nonprofit Bill and Melinda Gates Foundation (BMGF) has a great deal of influence on agriculture in Africa through its organization Alliance for a Green Revolution in Africa (AGRA) (GRAIN 2014, 1). AGRA provides grants and funding to agribusinesses and impacts agricultural policy in Africa regarding GMO seeds and land use (GRAIN 2014, 5). A second BMGF foundation, the African Agricultural Technology Foundation (AATF) works to develop GMO seeds and plant varieties while also lobbying for changes in policy regarding the use of GMOs in agriculture (GRAIN 2014, 5). A 2016 report by the group Global Justice Now found that over 80% of seed varietals in Africa were from small-scale farms saving and exchanging seeds, but the BMGF organization, AGRA, supports the commercial seed industry, risking the agrobiodiversity of African farms (Curtis 2016, 28). The commercial seed industry requires certifications to protect intellectual property rights, risking criminalization of non-certified seeds (Curtis 2016, 28), and the risk of gene flow between GMO plants and non-GMO plants risks

harming biodiversity and the formation of "superweeds" that are resistant to herbicides (Gonzalez 2004, 453). BMGF also funds the project Water Efficient Maize for Africa (WEMA), partnering with Monsanto (now Bayer), who has donated the use of a drought-resistant maize, for the stated reason of responding to climate change and alleviating hunger, but more likely for the purpose of circumventing the normal commercial approval process (Curtis 2016, 31) and paving the way for African farmer dependence on commercial GMO crops. The position of the nongovernmental organization in this circumstance serves to support the overall market processes of neoliberalism. The patented seeds, as explicated earlier in this chapter, coincide with the use of fertilizers and pesticides that ultimately poison surrounding waterways and environments, farmworkers and neighbors living in production zones. The domain of civil society under neoliberalism flanks and protects the machinations of the ideology, finding new avenues of accumulation, and enforcing the neoliberal dualism of nature and society through such support.

These examples demonstrate how industrial agriculture, as the intersection of society and nature, under the neoliberal paradigm yields oppression and reveals hierarchical structures within the domains of society and social relations. Neoliberalism only guarantees freedoms through the market and private property rights, via the de- and re-regulation by the state, supported by civil society, resulting in oppressive hierarchical structures that yield social and environmental harms. Only certain groups of people can obtain freedom through this system, while nature and associated peoples are incapable of escaping the damage that results from this oppression. The neoliberalization of nature is a violation of eco-social justice, in that it relegates nature as nothing more than a resource base from which humans can extract from without consideration of negative ramifications. Society and nature are subsumed into the neoliberal project, producing a

limited framing in how humans understand the natural world, our relations and responsibility to it, resulting in eco-social injustice. The question arises, then, if there are other ways to engage nature within the domains of society and social relations to produce eco-socially just agriculture.

## Capstone Research Problem and Overall Research Question

This Capstone's research problem focuses on exploring alternative frameworks to conceptualize nature-society relations in order to oppose, prevent, and remedy eco-social harms that result from neoliberal ideologies and industrial agriculture. If neoliberal orientations produce such negative outcomes in industrial agriculture, then alternatives must be sought. This Capstone research asks how alternative frameworks might conceptualize nature-society relations through the four domains of society and social relations, markets, the state, civil society, and property, in ways that are eco-socially just and would prevent the social and ecological harms of industrial agriculture. These alternative frameworks are eco-anarchism, eco-Marxism, and eco-feminism, and will be used to explore different ways through which we may challenge the neoliberal ideology and develop principles and practices that can be applied to agriculture that will result in a system that is less environmentally and socially damaging. The Overall Research Question for this Capstone is: How can conceptual frameworks that challenge neoliberal orientations to nature-society relationships be applied to better understand and create more socially-just food systems and societies?

### *Research Statement*

This research addresses the negative social and ecological consequences of industrial agriculture by exploring conceptual frameworks that challenge neoliberal orientations to nature-society relationships so that we can better understand and create more socially-just food systems and societies.

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This chapter defined the food system, society, and ecosystem as the research domain of this Capstone research. These are interwoven aspects of human life, with the ecosystem as a broad stage from which society develops, and the food system that is a microcosm of broader society, reflecting the hegemonic ideology of capitalism and neoliberalism. The food system encapsulates both the social and the natural, reflecting social constructs toward the human and nonhuman. The chapter then defined eco-social justice, and eco-social problems. Eco-social justice is the absence of oppression and hierarchy, which provides the structures of oppression and privilege. Eco-social problems are those problems that have social causes, ecological and social consequences, and social cures. Eco-social justice provides a framework through which we can address eco-social problems. Next, the chapter presented the social problem of interest – the social and environmental damage that is the consequence of industrial agriculture, caused by neoliberal capitalism – and the research problem of focus for this Capstone, evaluating alternative frameworks for their potential to create more socially-just food systems and society. The next chapter will address the methodology and methods for doing so.

## Three—Methodology and Methods

This chapter defines and explains the methodologies and methods I use to address the Capstone research problem, that of seeking alternative frameworks for nature-society relations. I begin by defining research and research paradigms, clarifying, and contextualizing the one used for this research, critical inquiry. I also introduce my positionality and how that effects the research. Then I present the two constitutive research questions and the conceptual frameworks that guide the investigation, as well as the three examples that illustrate the principles of the alternative frameworks in action. Finally, I discuss my research design, and explain the methods used to answer each Constitutive Research Question.

### Capstone Research Paradigm

The purpose of research is to understand and uncover things about our world, how things function, interact, create, (re)produce and dissolve. These phenomena can be interpreted in different ways, depending on the paradigm from which they are viewed. Paradigms are composed of ontologies and epistemologies, or what is possible and available to know based on cultural and ideological framings, and how we can come to know those things, the techniques, methods and sciences that guide knowledge creation (respectively). Two paradigms that have long dominated research processes and affected the ontologies and epistemologies of society, are the positivist and post-positivist paradigms. Positivist paradigms presupposes that there is a singular reality, one that is comprehendible with verifiable hypotheses. The epistemology of a positivist paradigm is that of objectivity, which assumes that through the scientific method a singular truth can be identified (Lincoln, Lynham and Cuba 2018, Table 5.1, 110). Successive to the positivist paradigm is the post-positivist paradigm, which postulates that there may be more than one "true" reality based upon observer bias and epistemological limitations (Stanford

University n.d., 9). Contrary to these two paradigms, my research utilizes the paradigm of critical inquiry.

Critical inquiry is not an objectifying science where the researcher is absent in the results. This paradigm is how we seek to understand social structures and ideas, from a perspective of critiquing current power structures and systems, in order to liberate individuals and societies from oppression (Denzin 2017). It is not an objective methodology, the researcher and their positionality must be considered, and is important for understanding social problems and addressing them. Comstock (1994, 626) states that critical inquiry is "founded on the principle that all men and women are potentially active agents in the construction of their social world and their personal lives: that they can be subjects, rather than objects, of sociohistorical processes." By focusing on the individuals involved in social processes, we can better address social injustices, as the method requires centering the most oppressed in inquiry (Denzin 2017). The ontological basis of critical inquiry is that reality is constructed through social, political, economic, cultural, and gendered interactions and relations; truth and reality are not fixed and static (Lincoln, Lynham and Cuba 2018, table 5.1, 110). Epistemologically, the subjects of study are the purveyors and experts of their own knowledge, understandings, and experiences (Spencer, Pryce and Walsh 2014, 91). Just as the subjects of study are the experts of their own experience, influenced by their social location, the positionality of the investigator affects the research process as well.

My own positionality in relation to this research is one that overall benefits from a great deal of privilege. I am well educated, have a well-paying job, am white, cis, heterosexual, and come from an upper middle-class background, with the privilege, time, and education to enter a Master's program and engage with this material and research. By most accounts I personally

have little to be concerned with, and in fact benefit greatly from the neoliberal and capitalist order. This has and does affect my ability to fully understand the situations of those who are oppressed and marginalized. Which is why utilizing critical inquiry is so important – it does not require a reliance on my own experiences or knowledge, which are limited, but rather relies upon the real experiences and stories of those affected by injustice. However, ecological degradation and the social harms that are derived from industrial agriculture still impact me. Pollution from pesticides, fertilizers, and fossil fuel burning; climate change, extreme droughts, and storms; species extinction and biodiversity loss; deforestation and desertification; ocean acidification and oceanic dead-zones are all horrifying ecological damages caused by human activities. These all have corresponding effects on the human world, higher food, housing and insurance prices, damaged public health and psychological harms, decimation of indigenous cultures and practices. Regardless of my more privileged positionality, the destruction of the global environment affects us all, and therefore I am not objective when it comes to this research. Research is performed for the purpose of revealing, uncovering, and discovering knowledge, and through the decisions influenced by my positionality, my Capstone research will seek answers to specific questions.

**Capstone Research Questions**

This section presents my Overall Research Question (ORQ), Constitutive Research Questions (CRQ), and the frameworks that inform these questions. First, I reintroduce the concept of eco-social problem, and the Capstone social and research problems. Next, the ORQ is reiterated; then, each CRQ is presented and related to the ORQ and relevant conceptual frameworks.

To recollect, eco-social problems are socially caused, have ecological and social consequences, with socially based cures. The eco-social problem that this research addresses is the ecological degradation and social harms caused by industrial agriculture. The research asks how other frameworks, alternative to neoliberalism, conceptualize nature-society relations within the four domains of society and social relations in eco-socially just ways that would prevent social and ecological harms of industrial agriculture. In asking about this, this research will explore paradigms through which we may be able to change our conceptualizations of human-nature relations to develop principles and practices that can be applied to agriculture that will result in a system that is less environmentally and socially damaging. This research addresses the negative social and ecological consequences of industrial agriculture by asking about conceptual frameworks that challenge neoliberal orientations to nature-society relationships so that we can better understand and create more socially-just food systems and societies.

The Overall Research Question is: *How can conceptual frameworks that challenge neoliberal orientations to nature-society relationships be applied to better understand and create more eco-socially just food systems and societies?* This is an important question because the neoliberal conceptualization of nature facilitates the oppressive hierarchy that exploits nature resulting in detrimental outcomes from the lack of eco-social justice. The reinforcement of domination over nature also reflects the ideology of domination over humans (Bookchin 2005). Industrial agriculture, as a confluence of society and nature, is an area of influence and if eco-social justice can be achieved here, then it can be reflected on the rest of society. Looking at nature-society relations within the four domains of society and social relations through alternative frameworks, evaluated for eco-social justice, will produce principles that can be applied in practice to agriculture.

The first question (CRQ 1) is: *how do conceptual frameworks that challenge neoliberal nature-society relations address the social domains of property, markets, the state, and civil society?* This question delves into the three alternative frameworks of eco-anarchism, eco-Marxism, and eco-feminism, and how they address the intersection of the human and the nonhuman. I selected these frameworks because they challenge neoliberalism and neoliberalized nature in different ways. Eco-anarchism critiques structures of power and hierarchy as related to nature. Eco-Marxism has its basis in Marxist critiques that address economic structures and labor-nature relations. Eco-feminism positions the oppression of nature and women together.

These frameworks are examined through the four domains of society and social relations, property, markets, the state and civil society. Recall that neoliberalism creates unjust circumstances within each domain. Neoliberalism privileges the market and market-based freedoms through de- and re-regulation of the state, via private property rights and civil society. It is important to look at alternative frameworks to discover if there are better ways of modeling the four domains that do not reinforce oppression and hierarchy and yield eco-social justice. This question seeks answers to how eco-social justice appears within the domains under each alternative framework. The necessary analytical criteria will be derived from the Capstone definition of each domain and of eco-social justice, which is the presence of freedom and the absence of oppression and hierarchy, by human against human, and humans against non-humans and ecosystems. This question seeks out challenges to the neoliberal framework that is the cause of industrial agriculture that results in ecological and social harms. This is an important question to answer for the ORQ because it evaluates the relationship between society and nature within these frameworks for each domain such that we may derive new ways of thinking about our

relationship to nature in a way that does not reproduce the social and ecological harms of industrial agriculture under the neoliberal system.

The second question (CRQ 2) is: *how do existing agricultural projects that challenge neoliberal nature-society relations illustrate more eco-socially just orientations to the social domains of property, markets, the state, and civil society?* This question will be an application of the information derived from the prior question to an examination of the Zapatistas of Mexico, the Movimento dos Trabalhadores Rurais Sem Terra (MST) in Brazil, and Rojava in Syria. These three organizations were selected based on preliminary research indicating that these movements were based on liberatory politics and featured agricultural projects. Further preliminary research confirmed that these three examples are useful in illustrating eco-socially just agriculture. Each movement is anti-capitalist, and their ideological bases are derived from various forms of indigenous liberation, Marxism, anarchism, and feminism, with an emphasis on protecting nature. Agriculture is a construction that demonstrates the intersection of society and nature, via the four domains of society and social relations. This question seeks potential cures to the harms derived from neoliberal industrial agriculture, by presenting existing examples that challenge neoliberal nature-society relations. Now that I have laid out the questions, their purposes, and corresponding conceptual frameworks, I address how this research is designed and conducted.

**Capstone Research Design**

This section identifies units of analysis for each constitutive question, methodological approaches, scope, units of observation, as well as sources and data organization strategies. It explains how this research investigated and analyzed alternative frameworks to address the environmental and social harms that derive from industrial agriculture.

The first question, CRQ 1, is how do conceptual frameworks that challenge neoliberal nature-society relations address the social domains of property, markets, the state, and civil society? The focus of this question will be to investigate and analyze ideological frameworks that are alternative to the exploitative and unjust structures of neoliberalism that results in neoliberalized nature. Neoliberal nature utilizes and enforces oppressive hierarchical structures, which results in eco-social injustice, and the selected frameworks will provide a variety of alternative ideologies through which we can define and understand alternative approaches to nature-society relations. The purpose of this question is not to determine which framework is the best, but rather to identify principles and practices that do not reproduce eco-social injustices in the manner that neoliberalism does.

The unit of analysis is the conception of nature and society under each alternative framework within each of the four domains of society and social relations. The three alternative ideologies I have selected for this research are: eco-anarchism, eco-feminism and eco-Marxism. The units of observation are examples of how each alternative framework addresses nature-society relations within the categories of markets, state, property, and civil society. References to the market will be identified as terms and ideas related to markets, exploitation, commodities, labor, wages, profit, finance, production, consumption, and economy. The state will be identified as government and governance, authority, democracy, laws, regulations, politics, bureaucracy, and formal organization. Property will be primarily identified as ownership, private and public goods, slavery and control. Civil society will be identified as religion, science, technology, community, NGOs, non-profits, charity, and other systems of society that do not fall within the other three frameworks (non-market, non-state). These will be identified in contrast to neoliberal approaches to these domains, where the market is centralized, exploitative, and commodifies life;

the state regulates away restrictions on market forces and deregulates market functions through the monopoly of violence; property is privatized and private property is privileged over other forms; civil society is the flanking mechanism that supports the overall market prioritization of the ideology.

Units of observation will be analyzed to determine the presence of freedom, oppression, and hierarchy within the four domains of society and social relations for each framework. Analytical criteria are based on the definition of eco-social justice: freedom – the freedom from unrestrained freedom, and the freedom to act without restraint but without applying harm; hierarchy, which requires inferiors and superiors; and oppression, which necessitates various harms to benefit the privileged. The question will examine if these elements are present within each of the four domains under each alternative framework.

The method I will use for data collection and analysis is literature review, which is the method by which already existing literature is evaluated and interpreted to reveal what is already known about a subject (Jesson, Matheson and Lacey 2011, 10). Literature review is the best option for this Capstone research, as I am seeking to evaluate already existing writing on existing alternative ideologies, and how they address eco-social justice within the domains of society and social relations. The scope will not be limited in time, as some of the selected frameworks have long histories. However, I will review recent scholarship as it may be able to better address more recent incidents of environmental and social harms. My data sources will be professional publications, academic journals, grey literature, zines, and books, and will be acquired through Scopus searches, Google and Google Scholar searches, and discovery through reading. Collected data will be organized and analyzed by alternative framework, with subsections delineating the four domains, each according to the criteria outlined above.

The second question, CRQ 2, is, how do existing agricultural projects that challenge neoliberal nature-society relations illustrate more eco-socially just orientations to the social domains of property, markets, the state, and civil society? The question evaluates existing examples of the Zapatistas, the MST, and Rojava to better understand how agriculture and society could be organized in an eco-socially just way. The unit of analysis is existing, agricultural illustrative projects. The unit of observation for this question, illustrations of the three examples of how alternative principles can be applied in practice to agricultural projects through the four domains of society and social relations. Findings from CRQ 1 are to be used to develop criteria related to identifying challenges to neoliberal nature-society relations that are then be used to explore existing projects. Data sources and methods are the same as those for question one.

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This chapter explained the methods and methodology of this Capstone research, which will be conducted within the research paradigm of critical inquiry and focused on centralizing the narrative of the oppressed and harmed. The chapter described how two constitutive questions address different ways nature-society relations can be conceptualized and how these can appear in existing agriculture projects to address the eco-social problem of social and environmental harms derived from industrial agriculture, as caused by neoliberalism. Finally, the chapter explained the research design for answering these questions. The research and analysis for each question is presented in the next chapter, as well as an explanation of how this research contributes to addressing the eco-social problem of industrial agriculture.

## Four—Research Applications and Contribution:

This chapter addresses the results of my research. It provides the answers to the two Constitutive Research Questions. This chapter also evaluates the significance of the research to understand how it addresses the eco-social problem of ecological and social harms caused by neoliberalism that frames the industrial agriculture system. To reiterate, CRQ 1 asks, how do conceptual frameworks that challenge neoliberal nature-society relations address the social domains of property, markets, the state, and civil society? CRQ 2 asks, how do existing agricultural projects that challenge neoliberal nature-society relations illustrate more eco-socially just orientations to the social domains of property, markets, the state, and civil society? Each constitutive question answers the ORQ by addressing the human-nature relationship and intersections within the four domains of society and social relations, property, markets, the state and civil society, through the three alternative frameworks, eco-anarchism, eco-Marxism, and eco-feminism and exemplified through the three illustrative examples.

This chapter first presents the research findings for CRQ 1, beginning with eco-anarchism, followed by eco-Marxism, and finishing with eco-feminism. This question concludes with the identification of synthetic principles related to each domain of society and social relations for each framework reviewed; these principles are then applied to CRQ 2. The second part of this section presents the findings for CRQ 2. The criterion developed from the first question are applied to the second question to explore existing examples of alternative agricultural projects. These include AANES/Rojava in Syria, the Movimento dos Trabalhadores Rurais Sem Terra (MST) in Brazil, and the Zapatistas in Mexico. This chapter concludes with a Contribution section that explains the contributions of this Capstone research to better

understand and address the eco-social problems associated with industrial agriculture and recommendations for further research.

## Research Findings

Research findings are organized by Constitutive Research Question. The first question engages with the frameworks of eco-anarchism, eco-Marxism and eco-feminism as alternatives to the hegemonic ideology of neoliberalism. The second question reviews three illustrative examples, Rojava in Syria, the MST in Brazil and the Zapatistas in Mexico. This question looks at how the principles derived from the first question are seen in practice, to explore alternatives to adopting neoliberal ideologies in nature-society relations and agricultural systems.

### *CRQ 1: Conceptual frameworks challenging neoliberal nature-society relations*

The Capstone Overall Research Question that this question seeks to answer is: How can conceptual frameworks that challenge neoliberal orientations to nature-society relationships be applied to better understand and create more eco-socially just food systems and societies? The social problem of focus is the social and ecological harms derived from industrial agriculture, caused by neoliberalized nature-society relations. The purpose of this question is to evaluate the domains of society and social relations within each alternative framework in order to identify alternatives to neoliberal nature-society relations.

The four domains of nature-society relations explored in this research are property, civil society, the market, and the state. Neoliberal ideology frames property to focus on the privatization of public lands, goods, and services (Castree 2008a, 142). Control of private property yields a monopolistic power over many or all aspects of life for the purpose of profit. It manifests in industrial agriculture through land consolidation, land grabs, genetic patents, and possession of animals (McCarthy and Prudham 2004; Land Coaltion 2020; Lawrence and Smith

2020; Rosenburg 2020; Gonzalez 2004). Civil society, under neoliberalism, functions to support the operations of neoliberalism and its ideology and filling in the gaps left by the retraction of the state (Castree 2008a, 142). Civil society entails charities, science, religion, non-profits and nongovernmental organizations, like the Bill and Melinda Gates Foundation and its influence on industrial agriculture in Africa through AGRA (Holt-Giménez 2017; Curtis 2016). Due to its wide-ranging nature, civil society interacts with the other domains of society, like science supporting market functions through research and technological developments. Under the neoliberal framework markets are the primary driver of all aspects of society. The production and consumption of commodities, and the commodification of non-commodities (Castree 2008a, 142), and the pursuit of profit motivates the decision making and development of society as it revolves around the market. The state is the government, political and legal constructs of power. In neoliberalism, the state performs deregulation, which removes social and environmental protections, and reregulation, which promotes privatization and marketization (Castree 2008a, 142). Industrial agriculture, for example, relies on chemical pesticides and fertilizers, and through state deregulation on behalf of market forces, result in neurodevelopmental problems and cancer (Donely 2022; Dennis and Eilperin 2017; Patel and Moore 2017). In the sections that follow, each of these domains of society and social relations are explored through frameworks that challenge neoliberalism. The frameworks of eco-anarchism, eco-Marxism and eco-feminism are first defined in each section and then analyzed relative to each social domain. I conclude with a summary that synthesizes findings from each reviewed framework in order to derive general principles that constitute an alternative approach to each social domain.

Eco-anarchism

Anarchism is a radical left political theory that is often used as a pejorative by those who misunderstand the fundamental tenants of the theory. It is a mode of thought that bases its critiques on non-hierarchical social relations with a particular focus on critiques of the state (Hall 2011, 376). It is a philosophy, an attitude, a way of life, horizontally structured, cooperative and non-coercive (Hall 2011, 376; GAIA 2002, 5), not necessarily seeking a defined end-goal, but a continuous acting and way of being, a challenging of power structures and the status quo. Some would argue there is a difference between Anarchy and Anarchism, the latter becoming too fixed and ideological, versus the former's more flexible and amorphous experience (Anonymous 2000, 3-4). For the purposes of this research, I will not be making a strict distinction, but it is important to note this for it underscores the malleable nature of anarchism, anarchy, and anarchists.

Despite the various articulations that are present in anarchism, there are many shared ideas. While lacking a unified or singular ideology, there are abundant ideas and strains (Hall 2011, 375-376) and most variations of anarchism share common core ideas: critiques of the state and the practice of mutual aid. Pytor Kropotkin defined anarchism as "mutual support, mutual aid, and mutual defense," (Flood 2021). What one needs, they receive, and what one can provide to help others, they give, without hierarchy, power dynamics or debt. Matthew Hall summarizes Kropotkin's and Mikhail Bakunin's anarchist positions as: "refusing the state and imposed government; condemning all imposed power relations; and rejecting the legitimacy of authority and hierarchy – which are viewed as means to domination" (Hall 2011, 378). Under anarchism, society and groups are organized horizontally, with a basis in free association, and decisions made through consensus and not through leaders or hierarchical power structures. Eco-anarchism or Green Anarchism is the incorporation of ecological thought into the praxis of anarchism.

Like anarchism broadly, green anarchism holds both shared and variable thoughts. Green anarchists are biocentric, which is that life has intrinsic value, removes human society from a dominant hierarchical position and reintegrates humans back into the context of all other life (GAC n.d., 2; Earth First! 2015). It does not negate human society, but rather sets it within the larger context of the biosphere, rather than in a place of superiority (Anonymous 2000, 5). According to the Green Anarchy Collective (GAC), most green anarchists would agree that the foundation of civilization is the progenitor of oppression and injustice (GAC n.d., 2). This idea does fall under the umbrella of anarcho-primitivists or anti-civilizationists, and some green anarchists would balk at the total disposal of the concept of civilization. Indeed, eco-anarchism or green anarchism encompasses and overlaps a great many traditions, including social ecology and ecofeminism. The span of theories and ideas make categorizing eco-anarchism into a single definable entity difficult, and therefore some heuristic freedom through the discovery of research must be allowed. The throughline for eco-anarchism is the engagement of mutual aid as a mode of resisting hierarchy and power structures. From here I examine how eco-anarchism approaches the domains of society and social relations, and what principles we can derive from this, beginning with property.

***Eco-anarchism: Property***

Eco-anarchism rejects the concept of property, particularly private property, viewing the historical development of power relations and hierarchy to be rooted in the conception of property itself. Property relations are understood as power relations, relationships built on dynamics of force or coercion of one party over another. If a person can own parts of nature, whether that is land, animals, or genetic material, then the concept of control can be extended even to humans. Even if this is no longer the direct ownership such as in slavery, in the

neoliberal context property ownership yields monopoly control over land, goods, and services, restricting access to the reproductive requirements for life, which thereby create hierarchy and implement oppressive relations.

Some green anarchists take the creation of civilization, rooted in the development of agriculture, to be a form of injustice in and of itself, in that it is constructed on the ideology of social hierarchies that are produced from property relations. Agriculture is generally considered the so-called "beginning" of civilization, as humans moved from hunter-gatherer tribes to more settled, organized societies based around the production and cultivation of food. Eco-anarchists state that settled production necessitates ideas of ownership which enforce hierarchies based on exclusion and control. Anti-civilizationist John Zerzan claims that pre-agricultural peoples, in lacking a conception of territory and property did not engage in warfare, had little taste for violence, and lacked a conception of "work" (Zerzan 1988, 3-4). The idea being that before agriculture, there were no hierarchical structures that lead to violence and oppression. Agriculture as a system radically changed the way *Homo sapiens* related to one another, and nature, resulting in systems and structures and reification of hierarchies, particularly in the modern age, and to Zerzan, is inherently oppressive in all forms. In contrast, eco-anarchist Bob Brubaker responds to this anti-agriculture stance by countering that many peoples (like the Hopi Indians) worked *with* nature in cultivating foods (Brubaker 1989, 3), and did not necessarily seek to dominate, and certainly not own the land. What is true is the development of settled communities and agriculture manifestly altered the way humans interact with one another and the world around them.

Property relations for eco-anarchists are harmful for both women and nature. Historically women were seen as property, something to be owned by men and "no different than the crops in

the field or the sheep in the pasture" (GAC n.d., 3). This is a patriarchal conception, that women are merely objects to be possessed, lower in the hierarchy than men. Even today, some parts of the United States, and the world broadly, have a belief in the subservience of women to men. Concurrently, for primitivists and anti-civilizationists, "the more an environment is controlled, the less sustainable it is" (GAC n.d., 3). The more nature is controlled via property relations, the more harms it sustains. To restrict the freedom of any living entity is to enforce injustice. To eco-anarchists, both women and nature are harmed by the concept of property and must be freed from property relations.

Freeing wild nature from the bounds of property reflects the ultimate ideas of freedom in eco-anarchism. Freeing nature from the bounds of property relations to humans through the active creation and preservation of wild places, which are areas primarily occupied by non-humans for their purposes is called re-wilding (Hall 2011, 382). The purpose of rewilding is to free humans and non-humans from the domination and suppression that is intrinsic to civilization and domestication (Hall 2011, 382), and as discussed prior, patriarchy. Wilderness is free from property relations, it is nature existing as nature does, and humans exist as a fellow creature rather than a dominator.

Eco-anarchism considers all forms of property relations as unjust. Simply because we no longer have visible slavery, and an implied equality between the sexes, does not mean that we do not encounter power relations within our relationships to one another and nature due to neoliberal ideology. Nature under neoliberalism is to be owned and manipulated for extractive purposes, privatized, and exploited. So long as we assume that property relations are a natural phenomenon, then we will never be free from injustice. Eco-anarchism, with its complete rejection of neoliberal property relations, refuses concepts of hierarchy and oppression,

promoting freedom of humans and nature, and challenges the unjust neoliberal construction of property.

***Eco-anarchism: Civil Society***

Eco-anarchism counters the neoliberal framing of civil society in rejecting the use of science and technology to support markets, and the use of charity as a means of supporting society due to the retraction of state services. Science and technology in neoliberalism, according to eco-anarchists, engages in reductionism, reducing the human experience and emotions to simply various firing neurons and chemical interactions, rather than a holistic circumstance (GAC n.d., 4). The reductionism of science, according to eco-anarchists, alienates humans from each other and nature. This alienation is exacerbated through technology and its development; a non-neutral force, the construction of a technology typically necessitates a further development of technology to support existing technology, resulting in more and more resource extraction and exploitation (Anonymous 2000, 8). The subordination of nature to technology further distances humans from the natural world, severing our connection and inherent biological existence from our cultural and social being. This separation makes individuals "more useful to the system and less useful to ourselves" (GAC n.d., 3). Relying on the capitalist system to enhance our lives via newly developed technologies to purchase, entrenches us within the isolating, capitalist experience, limiting our abilities to survive and thrive without the materialism and individualization of capitalism.

Individualization as a central tenant of neoliberal capitalism is derived from the over-simplified, and incorrectly applied, Darwinian idea of competition, the "survival of the fittest." This ideology fed into laissez-faire economics (White and Kossoff 2007, 56) and social Darwinism. The social Darwinism of neoliberalism, with its history of explicit eugenics, and

contemporary advocacy for free markets, meritocracy and selfishness finds support in contemporary scientific thought (Leyva 2009, 365). Pytor Kropotkin, considered the grandfather of anarchism and a naturalist himself, sought out evidence of individualistic struggle in nature, and instead found that those animals who survived were ones who engaged in mutual care and association, rather than competition and antagonism (White and Kossoff 2007, 56), eventually publishing a book in 1902 entitled *Mutual Aid: A Factor of Evolution*. For humans, mutualism it is a "reasoned process" compared to other life forms (White and Kossoff 2007, 56). It is foundational to the ideas of anarchism, that mutual aid and free association are sufficient motivators for an organized society, and that external oppressive forces, like that of hierarchy, are unnecessary.

Mutualism, or mutual aid, contradicts the top-down system of charity that functions as a gap-filler in neoliberalism. In anarchism, the praxis of mutual aid is engaged, which is "about unity, self-determination, and resistance to the system that makes us poor and wrecks our communities" (Ervin 2021, 15). Mutual aid "is collective coordination to meet each other's needs, usually from an awareness that the systems in place are not going to meet them" (Spade 2020, 5). It is an act of prefigurative politics, which is the development of the future within the present, the act of embodying in the present the desired future without waiting for some revolutionary event to force change (Monticelli 2021, 106). Prefigurative politics and mutual aid create horizontal structures of equity, providing people with the means and ability to care for themselves and others without waiting for the action of some authority or dominating entity. Mutual aid advocates for self-sufficiency but rejects individualism. Self-sufficiency and survival require communal support, whereas individualism paradoxically develops a reliance on the charity of others, rather than building mutual structures of support and independence. Through

social structures of mutual respect and cooperation, freedom is attainable. It builds resistance to the isolating nature of capitalism and the harmful structures based on profit-motive that construct society. Mutual aid builds the agency required for people to change society and takes power into the hands of the people, versus the current system that centralizes power into the hands of the few. Mutual aid as a practice overcomes the social restrictions and cultural boundaries that science and technology (in service of capitalism) enforces on people and changes our understanding of, and relationship with, nature.

Eco-anarchist approaches to civil society offers more eco-socially just alternatives to neoliberalism through the rejection of science and technology as a means of structuring our society and interpersonal interactions and the use of mutual aid to create systems of resistance and social support. Neoliberal power structures limit the ability of individuals from freely living and engaging openly with nature and one another, alienating our relationships and experiences. These support structures of capitalism are undermined by the agency of individuals and nature through mutual aid and cooperation. This demonstrates that eco-anarchism provides principles related to civil society that challenge neoliberal civil society.

***Eco-anarchism: Markets***

As previously discussed under civil society, anarchist theory espouses the ideal of mutual aid, the concept of mutual exchange in which all parties benefit. Mutual aid is a radical means to meeting vital and material needs of people to achieve self-reliance and self-determination that results in anti-capitalist revolution and transformation (Ervin 2021, 15-16). Under anarchism, all needs would be met through mutual aid rather than rely on the commodity market of neoliberalism for vital and material needs. Mutual aid is not limited to economic or market exchange. Instead, because anarchism removes all such structures as the market and the state, all

human and ecological interactions are based on the premise of this mutual benefit. Under neoliberalism, workers are exploited, and nature is destroyed for the production and consumption of commodities. Therefore, it is mutually beneficial that the working class "[reorient] production toward ecologically and socially just and sustainable practices" (Shantz 2020, 4) through worker control over the production of goods as well as through the prefigurative politics of mutual aid.

The orientation of socially and ecologically sustainable production would be derived by changing from capitalist production structures to self-management. This is more commonly phrased as the workers own the means of production, with the addition of the concept of free association (Anarcho 2009, 6). This means that production would be under the control of those doing the actual labor and consuming the goods produced, with willing participants who can freely decide if they want to participate or not. Neoliberal capitalist markets exploit people's time and labor, things they must exchange for survival in the competitive system. For Anarcho (2009, 3), in *the Economics of Anarchism*, this is the selling of freedom – people are not free if they are forced to enter a system in which they must perform labor for another in order to obtain food, shelter, healthcare and other reproductive needs. Anarchism, in contrast, pushes for an abolition of work, in which people are not required to work to survive, and labor is based on free association and voluntary willingness to work (Ibid.). Kropotkin advocated for working manually four or five hours a day, leaving the remaining time for individuals to seek alternative pursuits like arts and science, (Kropotkin 2007, 141). Freeing time is liberating, allowing people to develop fully in themselves and their relationships with other people, and with nature.

Eco-anarchism challenges neoliberal market-focused ideologies as it does not promote competition, exploitation of workers, and profit for owners; instead, green anarchism conceptualizes the production of goods in terms of cooperation with humans and nature together.

Eco-anarchism advocates for sustainable practices of production which means that the environment is not unfairly subjected to excessive exploitation or negative externalities. People and nature are not subsumed into the market-based hierarchies of neoliberalism, instead eco-anarchism promotes equitable relations that challenge the neoliberalized markets.

***Eco-anarchism: State***

At its core, anarchism is a critique of power structures, the most salient of which is the state. The state restricts individual and community freedoms through concentrated violence and power and directly opposes self-determination (Hall 2011, 376). Rather than concentrating power in a central authority, anarchists advocate for people to govern themselves, engaging in mutual aid and decentralized, direct and participatory democracy. Self-sufficiency requires the development of a "broader sense of citizenship… integrating both human individuals as well as non-human life" (Toro 2021, 193). Eco-anarchists see the state as weak under the influence of the market, contributing to ecological degradation through coercive control over the environment on behalf of the market, without input from the people (Toro 2021, 191-194). Anarchists' critique of the state is not limited to only the neoliberal conceptualization of it, though. Green anarchism critiques other leftist environmental movements because these traditions still advocate for some form of state and its influence over environmental issues, despite "the failures, limitations and inefficacy" of the state (Toro 2021, 191). Greater inclusion and active participation in organizing society, and an expanded idea of citizenship reflects eco-social justice and challenges the neoliberal construction of the state, in that there may be less hierarchical organizing, and with greater democratic participation, a greater conception of freedom.

Proposed methods of organizing and decision making in anarchism are direct democracy and participatory democracy. This is designed through federations comprised of freely

associating groups based on bioregion (Toro 2021, 196-197). Anarchists argue that free societal associations, rather than large bureaucratic governments, can respond faster, and perform better regarding environmental changes, particularly as most changes regarding environmental protections have not come from top-down government enforcement, but by bottom-up social pushes (Toro 2021, 193). Some eco-anarchists, such as bioregionalists and social ecologists, believe that community should be decentralized, self-sufficient and non-hierarchical with communal organization based on the local ecosystem, with the watershed as the best way to divide regions (Toro 2021, 196). Dividing regions based on the organic area of rivers and streams spatially rejects the rigid, inflexible, hierarchical, bureaucratic framework of the state structure. Spatial flexibility combined with decentralized communal administration is more capable of managing and responding to non-linear environmental problems (Toro 2021, 195-196) that have thus far manifested in neoliberal capitalism. However, some eco-anarchists, like the anti-civilizationists, reject all forms of "social, political and economic coordination" and any forms of representation that prohibit direct experience (GAC n.d., 5), including the potential need for representatives regarding federated associations.

Despite some disagreements around the proposed organization of society, the overall rebuke of state structures by eco-anarchism is important for challenging neoliberal ideology. The state, generally, and the neoliberal state in particular, are violent mechanisms of control over people and the environment. Humans and nature are explicitly coerced via state mechanisms so there is as little interference with market machinations as possible. Eco-anarchism, in dismantling the state and this centralized, violent power, and its support for exploitative market forces, frees individuals to engage with one another, through democracy and mutual aid, and with nature in a sustainable, non-oppressive, manner.

In sum, eco-anarchism as a framework has a unifying throughline through all the domains of society and social relations of free association, mutual aid, and rejection of power relations. Freedom for humans and nature is of utmost importance within eco-anarchism and is only achieved through dismantling of hierarchical power structures and elimination of oppression through all domains. Neoliberal property relations privilege property owners with control and domination over the things (e.g., nature, means of production, even people) they own. Eco-anarchism rejects private property in favor of freely accessible, publicly owned land, and protection of nature. Civil society under neoliberalism reinforces the overall ideology, like the use of science and technology to justify and enforce the individualization of the market. Eco-anarchism counters this with mutual aid and free association, ways of people working with each other without coercion to produce what is necessary for life, rather than relying on the misinterpretation of Darwin's theories to produce fascistic social Darwinism. Neoliberal markets buy workers' freedom through labor relations and by hoarding the means of production and forcing society to compete and engage in the commodification of life itself. Eco-anarchism proposes that workers own the means of production, eliminating competition through mutual aid. In doing so, workers produce more sustainable and just interpersonal relations with one another and nature. Finally, the neoliberal state supports the market through a monopoly of violence and concentration of power into a central authority. Eco-anarchism proposes a decentralized power structure, free association, direct and participatory democracy, and even total restructuring of polities based on natural features like watersheds. These various rejections of the neoliberal ideologies in society mean that living beings can flourish through sustainable relationships and mutual support, and ultimately realize freedom. These principles of eco-anarchism demonstrate that the eco-social injustices of neoliberalism are not immutable.

Eco-Marxism

Marxism is the mode of thought derived from the writings and theories of Karl Marx and Freidrich Engels, with the basic precept that the workers should control the means of production. Marx advocated for a form of economic and political governance called Communism, achieved after capitalism, through revolution. Communism eradicates the need for the state, class divisions and private property, and institutes common ownership of the means of production and natural resources, following the idea of "from each according to his abilities, to each according to his needs" (Dagger and Ball 2022) which is similar to the anarchist idea of mutual aid. Eco-Marxism is the connection of ecological and social struggles, through a Marxist lens, that includes Marx's analysis that nature contributes as equally as labor does to creating wealth and value (Burkett 1999, 5-6). Humans are nature in that we are biological animals, therefore our labor is derived from nature; our connection to nature is inherent in our very existence. The primary throughline for eco-Marxism is worker-controlled production and the rejection of centralized capitalist structures.

***Eco-Marxism: Property***

Overall, the concept of private property is viewed negatively in eco-Marxist thought. John Bellamy Foster (2000) and Ellen M. Wood (2000) write that the rise of capitalism is derived from the development of private property being owned by a select few, with the accumulation of said property being derived from alienating the peasantry from the common lands (Foster 2000, 74; Wood, 2000). According to Marx, property relations were the foundation of conflict between humans, and humans and nature (Foster 2000, 79). Alleviating such conflict requires the abolition of private property, and the development of communism. *The Communist Manifesto* clearly delineates the abolition of private (bourgeois) property as a reappropriation of

the means of production (Marx and Engels, 1848). *Personal* property is not abolished, as it is not a social property, nor based on class exploitation. Private property, however, is a form of social property, one that is based on class exploitation (Burkett 1999, 231). While private property is a source of centralized power in neoliberal capitalism, under communism, private property is converted into communal property. Bourgeois private property encompasses the means of production, which is wrested from the capitalists and reappropriated to the workers as communal property (Burtkett 1999, 231). Once established as communal property, individuals have access to the means of production without hierarchical or structural constraints or coercion.

The benefits of abolishing private property are not limited to humans but extends to nature and our relationship to it as well. Through communism, private property and its abolition relieves people of the alienation derived from capitalism, reunifying humans, and nature (Foster 2000, 79). This reunification resolves the conflict "between man and nature, and between man and man" (Ibid.), meaning that because the land is not mediated through property relationships, humans are free to associate with the land and one another freely. John Bellamy Foster writes that Marx declared in *Capital*:

> From the standpoint of a higher socio-economic foundation, the private property of particular individuals in the earth will appear just as absurd as the private property of one man in other men. Even an entire society, a nation, or all simultaneously existing societies taken together, are not owners of the earth. They are simply its possessors, its beneficiaries, and have to bequeath it in an improved state to succeeding generations as boni patres familias [good heads of the household.]" (Foster 2000, 165)

The very concept of private property in any form is akin to slavery. Ownership of the earth is a restriction of freedom for both humans and nature. Humans are to tend to the Earth, caring for it as a father care for his children, leaving it better than it was before, and in an unrestricted state.

Barring the potential patriarchal implications of the statement, the point being made is humans are to tend, care, and improve the earth, rather than own, hoard, and violently exploit it.

The concept of property under neoliberal ideology is an eco-socially unjust phenomenon, by prioritizing ownership and the privatization of production, resulting in the exploitation of people and nature. Eco-Marxism challenges this ideology through presenting alternative principles, which include the abolishment of private property, worker-owned means of production, and liberation of the earth from property relations. Private ownership is exchanged for communal, equitable, and just property relations.

***Eco-Marxism: Civil Society***

Science is an important aspect of civil society, and can either support neoliberal market structures and exploitation, or, under eco-Marxism, produce pathways through ecological study to challenge neoliberal ideology. Civil society under neoliberalism serves as a flanking mechanism that supports the dominance of market powers. This occurs through various non-state, non-market mechanisms, including non-profits, religion, and science. Science is subsumed into capitalism as a means of profit accumulation. Science develops the technology and machinery of production, furthering the alienation of, and ultimately dominating labor (Burkett 1999, 160-161). The study of nature and its functioning serves to objectify nature further, as the knowledge gained from its study is used in service of subjugating it as a consumable resource; the science used by capital to render nature into a tool for capital accumulation (Burkett 1999, 161). Only through seizing the means of production and reversing the alienation produced by neoliberal capitalism can science work as a genuine force for free thought and liberation (Burkett 1999, 163). Doing so would result in the study of ecosystems for the sake of increasing and improving our understanding of nature and our place within it.

Studying human and nature interaction is part of the study of ecology. Gare (2021b) writes that the science of ecology should be utilized to form new ways of existing and of constructing our markets and state structures. Ecology is derived from *oikos,* the root meaning 'household', so ecology is the study of biotic households, namely the relationships between species, and organic and inorganic elements of the environment (Foster 2000, 195; Gare 2021b, 6). The use and application of ecology will "redefine our place in the world, practically as well as theoretically" (Gare 2021b, 6-7). In doing so, we then contribute to the health of the ecosystem of which we are a part (Gare 2021b, 8) and use scientific knowledge for the benefit of "free human development" instead of capital accumulation (Burkett 1999, 219). The alienation of humans from nature can be challenged through the study of ecology and the use of science as a public good.

Neoliberal civil society, in particular science, contributes to the broader market functioning in developing technologies to oppress and exploit nature for the accumulation of profit, which goes hand in hand with the concentration of market control and oppression of workers. Yet, Science does not have to contribute to the maintenance of capital, and hierarchical structures and limitations on freedom. Under eco-Marxism, the potential for science is great, and could yield improved and deeper connections with the environment and surrounding ecosystems. Illuminating the ideas of ecology contribute to the broader sustainability and structure of society is a place to challenge the neoliberal framing of civil society under an eco-Marxist framework.

***Eco-Marxism: Markets***

Eco-Marxist ideology challenges the neoliberal market forces through reconnection of labor and nature, eliminating commodity fetishism and establishing trade unions. The neoliberal market structure alienates workers from themselves and nature, commodifying nature, labor, and

their relationships. Alienation for Marx is the result of the hierarchical capitalist system of wage-labor, in which the workers must sell their labor-power to capitalists, and therefore do not own their own products; the power of the worker is relinquished to the capitalist through their own labor power (Marxists Internet Archive n.d.; Ahuja 2022, 2). Social relations become material relations through commodity fetishism, which is when commodities are granted social characteristics, and obscure the true social relations behind the production of such commodities (Gunderson 2014, 109-110). The exchange of products becomes the relationship between people, thereby naturalizing capitalism as the way to develop and maintain social relations and reinforces the idea that the system is immutable (Marx 1976, 166-169; Gunderson 2014, 109-114). Commodity fetishism obscures interpersonal relations through market forces, and it is only through de-fetishization that alternatives to neoliberalism are possible (Gunderson 2014, 112). Nature is also obscured by market forces, and our relationship to it is mediated through turning it into a commodity. It is seen as a resource, or a raw material to be transformed into a commodity, and this affects people's understanding and relation to it (Ahuja 2022, 5). Our relationship with nature is mediated through the consumption of commodities, and nature is an exploitable commodity and resource. Nature has been objectified through commodity fetishism, just as labor has.

Nature and labor are connected by the extraction and manipulation of natural resources into products by workers. For eco-Marxists, the linkage between the laborer and nature is more than one manipulating another. "Workers are both natural and social force" (Burkett 1999, 215), as human beings, living, biological creatures, we are a natural product of millennia of evolution and the ecosystems through which we thrive. We are linked both through social metabolism (labor processes) as well as biological metabolism (natural processes) (Foster 2016, 2). Value is

derived from nature itself and through human effort that abstracts the former (Burkett 1999, 215). This process exploits nature and labor together and reinforces the capitalist system. Humans and nature are one in the same, and so the exploitation and oppression of one, means exploitation and oppression of the other. Humans (and nature) require "variety, interconnection, and mutual respect and tolerance… a caring, nurturing attitude" in order to develop freely, something that is explicitly absent in capitalism (Burkett 1999, 215). Indeed, these requirements are in opposition to neoliberal capitalism and its prioritization of profit accumulation over all else. Unsustainable exploitation of nature will result in destructive restrictions (Burkett 1999, 215) that can be countered through eco-Marxist ideas of free development and unionization.

Free development can only be achieved through resistance by the people to neoliberal capitalist control over nature and labor. In the framework of eco-Marxism, workers must come together in the form of associations and trade unions, and resist capital's alienation and control over social and natural processes (Burkett 1999, 216). The resistance to capital's alienation of labor goes hand-in-hand with the resistance against capital's alienation of nature, and this resistance "will enable humanity to produce wealth in a more pro-ecological and human-developmental fashion—a socialization giving both people and nature their due instead of artificially dividing, devaluing, and ruling over them, as the regime of capital does" (Burkett 1999, 216). Rather than allowing capital and capitalists to enforce a system in which workers must sell their labor to obtain the means to survive – severing workers from their very biological needs and using nature as a consumable resource – workers must come together to resist the exploitation capitalism engages in. Eco-Marxism advocates for the reunification of humans and nature, where the production of goods will be under the control of the worker, and produced for the worker, in a way that is ecologically sustainable and just.

Eco-Marxist principles of the market system reflect eco-social justice and challenges the neoliberal ideology about markets. In terms of labor, workers must own the means of production, engage in de-fetishization to reconnect with authentic social relations and nature. Nature must be recognized "as the very substance of human development" and the binary between humans and nature must be overcome to achieve successful proletarian revolution, a revolution that recognizes this inherent unity (Burkett 1999 218). Through changes in market forces and structure, particularly in production, alienation and oppression of the worker and nature can be alleviated and freedom of development for both humans and nature realized.

***Eco-Marxism: State***

The eco-Marxist ideology toward the state varies somewhat in structure depending on time period, but ultimately emphasize proletarian control, decentralization and workers cooperatives, in contrast to the neoliberal idea of the state, that regulates controls to protect the market, and leaves the environment and people open to exploitation and harms. Perhaps the first thing one things of when they hear the words "state" and "Marxism" together, is Communism. In the *Communist Manifesto,* Marx writes that the State will be the manifestation of proletarian rule after the revolutionary overthrow of the bourgeoisie (Marx and Engels 1848, 26-27). The transitional stage is, as admitted by Marx, to be "despotic" in which the expropriation of property from the ruling class, the abolition of inheritance, and monopoly of centralized State banking (Marx and Engels 1848, 26-27) is one that would be met with deep resistance by the bourgeoisie, and likely violence on both sides. Despite the despotic nature of some of the steps toward a classless society, there are expected benefits. These include the abolition of child labor and free public education; the liberation of women and abolition of marriage as a property relationship; and the closing of the gap between city and town (Marx and Engels 1948, 27) – recall the

metabolic rift between the two as a foundation of environmental disaster. After the overthrow of the bourgeoisie, the proletariat will seize power temporarily, afterward a classless society will manifest.

Modern conceptions of the state under eco-Marxism are based on the tenants of Communism and emphasize the necessity of worker's cooperatives and ecologically oriented decentralized democratization to eliminate state monopoly of violence. Worker's cooperatives result in the elimination of the need for managers, and is facilitated by the government (Gare 2021b, 12). Workers will own the means of production, and in doing so eliminates the alienation that develops under capitalism through the decommodification of labor power and communal property rights via cooperative democracy (Burkett 1999, 230). Decentralized, worker-controlled governance via an ecological framework reflects a more eco-socially just state, potentially eliminating the monopoly of violence held by the state. The capitalist drive to extensify (expanding territory for exploitation) and intensify (increasing the amount of exploitation) results in the use of state power and violence to increase the accumulation, use, and exploitation of natural resources. According to Gare (2021a, 12) most of the major wars of the 20$^{th}$ century were waged over resources. The monopoly of violence held by the state is used to enforce market expansion and exploitation, which results in both labor and nature exploitation, and is a global phenomenon.

To transform the global neoliberal system, new ecological thinking and state action is required. Gare (2021b, 10) writes that through the use of an ecological framework and Marxist critique, we must develop a society based on decentralization with multiple levels of federations and institutions such that local communities "regain control of their own destinies and develop their full potential to augment the conditions of life. That is, it will be an ecological civilization."

Specifically, Gare (2020b, 10-11) proposes democratic federalism from the local to the global level. The proposal of power being "decentralized as much as possible" comes with requirement that local governments engage in activities and decisions that promote life and health of the local to the global (Gare 2020b, 10-11).

Under the ideology of eco-Marxism, the state is a decentralized, ecologically oriented, and worker-controlled system that results in freedom for humans and nature. This challenges the neoliberal state that uses the monopoly of violence to engage in extractive measures on behalf of the market. Taken with the other three domains, eco-Marxism and the domain of the state reflect eco-social justice through the rejection of hierarchy and oppression and offer a significant alternative to neoliberalism.

In sum, the ideology of eco-Marxism is centrally focused on the critique of capitalism and its ill effects on workers and nature. The primary throughline is workers owning the means of production which requires the dismantling of capitalist hierarchical structures through the four domains of society and social relations. Neoliberal property relations privileges private property above communal property. Private ownership and privatization mean owners have total control over resources and productive capacities, and laborers must exchange their time and effort in exchange for wages to survive. Eco-Marxism flatly rejects private property, with Marx predicting that ownership of the earth will eventually be seen as foolish as slavery. Civil society under neoliberalism reinforces market functions, and science in particular is used as a means of dominating nature and labor. Eco-Marxism advocates the use of science for the benefit of society, not markets or corporate owners, with particular emphasis on ecology. Basing society on principles of ecology can reposition ourselves within the broader context of ecosystems and nature, and ideally results in a redefinition of science as being in service to society, rather than

the market. The neoliberal market alienates workers and nature by commodifying social and natural relations, resulting in commodity fetishism that obscures the way commodities are created. Eco-Marxism, through worker-owned cooperatives, and ecologically just production methods counter this alienation and reestablish authentic social relations. Finally, the neoliberal state uses the monopoly of violence to enforce marketization and exploitation under a hierarchical and centralized government structure. The eco-Marxist state on the other hand, is horizontally organized through worker cooperatives and decentralized, local community control. These varying challenges to neoliberal ideologies in society mean that labor and nature can enter sustainable relationships with one another and engage in mutual free development. These principles of eco-Marxism demonstrate that the eco-social injustices of neoliberalism are not immutable.

Ecofeminism

Feminism is a theoretical tradition with complimentary and contradictory branches and waves. Branches and waves of feminism share a general understanding that patriarchy (male and masculine domination) has constructed society and social relations to the detriment of women and other genders. Eco-feminism is a philosophy, theory, and movement that reveals the dual oppressions between women and nature, and bonds the two in analysis, with the end goal of dismantling patriarchy and all oppressions (Thomas 2022, 29; Besthorn 2002, 224). Living in a capitalist and patriarchal society results in oppression of both women and the environment, and the presence of one is an indicator of the presence of another (Thomas 2022, 29). There are two strains of eco-feminist thought: cultural eco-feminism and radical eco-feminism. Cultural eco-feminism associates traditional gender roles, biology, and religion as evidence for women's connection to nature (Thomas 2022, 30). Arguably, this ends up supporting the patriarchy as it

reinforces stereotypes about women and nature and excludes other genders. Radical eco-feminism sees the connection between women and nature as commodities to be exploited in the capitalist and patriarchal society (Thomas 2022, 30). Both are engaged in this research and analysis as it is a review of eco-feminist ideas rather than a prescriptive or proscriptive analysis. The throughline presented in this review of eco-feminism is the idea of care work and women as caretakers of people and nature, in various forms through the domains of society and social relations.

***Eco-feminism: Property***

Eco-feminism views the concept of private property as inherently in opposition to both women's and nature's liberation. Property under neoliberalism is based on the idea that the owner has the right to extract value from their property by any means desired. Exploitation of land, animals or people is the right of the owner, regardless of potential or actualized harms. During the 15$^{th}$ century, the enclosure of the commons by wealthy landowners resulted in the expulsion of peasantry from communal lands. This provided the landowning class the ability to extract profits from rent and taxed labor, and resulted in environmental damages and increases in pests. The enclosing deeply affected women specifically. The connection of women to the common land was a vital part of their social lives. In *Caliban and the Witch* by Silvia Federici (2004), women's connection to the surrounding land intersected with community building through shared labor. While women serfs did not hold the same legal titles as men did, and performed sexually divided labor, the common lands they were often relegated to, rather than "being a source of isolation, was a source of power and protection for women" (Federici 2004, 25). Women, on communal land, were able to share stories, advice, and organize, with a level of freedom that they were not ordinarily afforded in their lives. For women, men were higher

hierarchically just as the lords were higher than the men. Women were subservient to many layers of hierarchy, but within the commonly held areas, found some levels of freedom. The enclosure of the commons removed this area of freedom from women and exacerbated the already existing hierarchical structures. According to Engels, quoted in Gaard (1993, 238), "the development of private property also led to 'the world historical defeat of the female sex'." The concept of privatized property harmed the environment and destroyed the power women had in community building and social networking on communal lands used for food, resources, and gatherings. Private property reinforced the patriarchal hierarchy of the day while simultaneously expediting the exploitation of nature.

Eco-feminists like Vandana Shiva address the ways nature is further exploited in the modern age through privatization over less-tangible concepts like intellectual property over genes. Genetically modified organisms (GMOs) and their related patents restrict the free exchange and saving of seeds and other agricultural materials. Seed-saving, particularly of indigenous and native seeds, is often done by women (Swiderska 2018), and the patenting of genetics restricts the ability of women to protect biodiversity and cultural autonomy. Women saving seeds protects the environment from the development of "super weeds" and the need for pesticides and chemical fertilizers. As discussed in Chapter Two, farmers who purchase patented seeds are legally not allowed to save, share, or sell them, and may face consequences if it is discovered that there has been genetic drift between genetically manipulated plants and native ones. This is the result of neoliberal property relations, that those who own the very genetics of a biological entity get to enforce and protect their market-based ownership. This is an example of a reductionist understanding of nature that separates its components "from their contexts in living nature and society" (McAfee 2003, 204). Dividing nature into non-contextual components, gives

corporations and patent owners greater ease of control over nature and the women who rely on their products. Just as women were separated from the communal context of the commons and the land that provided them with resources and freedom, thereby instituting greater patriarchal control, the control of genetic material separates the very building blocks of life from the end-product, food, instituting greater capitalist control. Neoliberal conceptions of private property are ways of instituting control that results in oppression. Eco-feminism, in opposing private property relations, combats the reductionism of cultural and ecological contexts that are caused by neoliberal and patriarchal control over nature and women.

The shared placement within the hierarchy of neoliberalism of women and nature is the result of patriarchal and capitalist exploitation. Women and the land historically share a connection, whether that is through the cultural and social, and therefore physical, exclusion of women from decision-making, or the traditional saving of seeds and close interaction with nature. What can be owned can be exploited, and women historically have been exploited and oppressed, as has nature. Under neoliberalism, privatization allows property owners to fully exploit and control access to resources. This manifests in the removal of women from communal spaces and restricted access to natural cycles and cultural traditions around seed saving through legal restrictions around GMOs.

The goal of eco-feminism is to alleviate the patriarchal, and neoliberal hierarchies in which women and nature reside. Eco-feminism strives to reestablish the connection between humans and nonhuman (Barthold 2022, 1799), reversing and rejecting the reductionism that comes with property relations and neoliberal ideology. By bringing society and nature together in equitable, non-oppressive relations, eco-feminism provides an alternative to oppressive neoliberal property relations.

***Eco-feminism: Civil Society***

Eco-feminism addresses the patriarchal structures of society and the division of women's labor from men's, and the connection to nature through shared oppression. Civil society under the ideology of eco-feminism emphasizes the incorporation of traditionally women's care work into broader society and challenges the neoliberal ideology that civil society should function to support marketization. The root of women being associated with care work and the home is derived from the 17th century scientific revolution and Enlightenment. This development simultaneously shifted the conception of nature from an organic being to an inert machine and resource base (Tickner 1993, 60-61). The scientific revolution was focused on control and power, and the domination of nature was discussed in gendered terms, with women associated with the environment (Ticker 1993, 61). The scientific revolution and the Enlightenment expanded the presence and influence of men and capitalism, pushing women into the private sphere and nature into a resource base, both locations of exploitation and oppression. These gender divisions occurred simultaneously as capitalist expansion of the state and market through the domination of nature, putting women and reproductive care into the private, moralistic, sphere, and men into the public spheres of politics and economics (Tickner 1993, 61-63). The division created and reinforced patriarchal notions that women and femininity are inherently related to maternal instincts and care work. This positioning of women within the private sphere of caretaking resulted in the exploitation of women and women's work in support of the patriarchal, capitalist system.

The unpaid labor of women supports neoliberal civil society through obscuring the negative impacts of neoliberalism by the retraction of the state and its services, through individual care work. Care work under neoliberalism is seen as a free resource, a naturally

occurring, if often hidden, feature of capitalism (Oksala 2018, 221). Under neoliberal capitalism and state de- and re- regulation, women's caring and reproductive labor is intensified, and women bear a greater burden in this realm as the gendered privatization of public services is exacerbated (MacGregor 2004, 68-69). This extends beyond simply social familial relations, to the relationships to nature and the environment.

Women's unpaid care work and the implication of them as natural caretakers are connected through environmental advocacy. Care work is understood by eco-feminists to extend to the environment and is held up as a key trait of women by some (MacGregor 2004, 58). The positive of active care for the environment offers a unique challenge to eco-feminists. How can women's care for the environment be upheld while simultaneously questioning the patriarchal assumptions about women's care and capitalism's reliance on women's unpaid care labor (MacGregor 2004, 57). Ultimately, Sherilyn MacGregor concludes that care should be brought into the concept of citizenship and expanded beyond the individualistic, private, and feminine labor of women, particularly in regards to environmental issues (MacGregor 2004, 77). In this view, care work and care for the environment become less reliant on unsustainable women's labor, becomes a political ideal, and breaks the link between the concept of care and maternalism that is so often considered natural for women (MacGregor 2004 79). Rather than relying on women to take care of the family and fight for the rights of the environment, these actions become inherent to what it means to be a citizen, a political being. Environmental protection and advocacy become as important as any other feature of being a member of society.

Women have historically been connected to nature, while relegated to the private, feminized sphere of the home. In doing so, their unpaid labor has filled in care gaps left by the retraction of state welfare services. This reinforces patriarchal assumptions about women, and

together with historical connections between women and nature, have resulted in oppression and hierarchy within neoliberal civil society. Under the eco-feminism framework, women are not delegated to private sphere care-work, and it becomes not solely a woman's task to take care of others and the environment, but a factor of good citizenship. Caretaking becomes a normalized and de-gendered activity for both reproductive purposes and for the environment, freeing women from the patriarchal restraints of the neoliberal structure. The eco-feminist principles regarding civil society contrast and challenge the oppressive neoliberal construction of civil society.

***Eco-feminism: Markets***

The market under eco-feminism emphasizes changing consumption and production patterns to be more socially and ecologically sustainable. Women's labor is simultaneously exploited and undervalued under neoliberal market ideology. Women's reproductive labor, as well as nature, have been and still are undergoing primitive accumulation, the necessary first (and ongoing) step of capitalism to expropriate value to capitalists (Oksala 2018, 221). Capital accumulation requires an otherness, developed through classism, sexism, racism, and naturism; these categories are the result of objectification, and objectification functions as a means of oppression of othered beings, including the planet (Oksala 2018, 219). Objectification as oppression is both the commodification of women's work, as well as the exploitation of women's labor. Women and nature "do not 'count' in the international market economy" (Gaard 1993, 240); care work and the environment have intrinsic value that cannot be financially or economically measured (Oksala 2018, 226). The United Nations System of National Accounts (UNSNA) has no method to account for nature's value, or the majority of work performed by women. Women carrying water has no value, but water flowing through pipes does; forests have no economic value despite providing women with "food, fuel, and fodder" but once logged and

processed, they do have economic value. These primary states that are associated with women and their work and are valueless. However, once transformed into a commodity through primitive accumulation, they enter the realm of men and thus, gain economic significance (Gaard 1993, 240). Women's work is fundamental in meeting human needs, and society cannot function without this necessary labor.

Labor is necessary to produce goods, and under neoliberal capitalism, waged labor is necessary to purchase goods to meet fundamental human needs. Broadly, fundamental human needs consist of subsistence (food, health, shelter); protection (care, solidarity); affection (love, care); understanding (by others, study, learning); participation (responsibility); leisure/idleness (curiosity, imagination, fun); identity (belonging, self-esteem) and freedom (autonomy, equality) (Mies and Shiva 1993, 255). In neoliberal industrial society, meeting these fundamental human needs is achieved through purchasing items in the market, but according to eco-feminists Maria Mies and Vandana Shiva (1993, 255), the goods produced are "pseudo-satisfiers", or destructive satisfiers, things that provide little to no actual satisfaction and fulfillment of fundamental human need. Needs cannot be met by purchasing commodities or commodifying our relationships as it is in neoliberal capitalism. The commodification of things like food, healthcare, education and even freedom, limits the ability of individuals to fulfill their needs. Global hunger, for example, is not caused from lack of food production, but food prices. Identity in neoliberalism is often tied to consumption of brands, rather than a genuine sense of community. Commodities are created through exploitation of laborers and nature, creating alienation and further exacerbating the failure to fulfill needs through consumption. Relying on the neoliberal market to fulfill our needs entraps society within the confines of consumerism that reinforces patriarchal hierarchy and environmental destruction.

To find liberation as consumers we must change our conception of how to meet our fundamental human needs. We must alter our idea of what a satisfier is, finding ones that are not reliant on market relations and exploitation, are self-sufficient in meeting needs, are ecologically balanced, and builds mutual relationships (Mies and Shiva 1993, 254-256). Eco-feminism proposes that choosing consumer liberation, and changing our lifestyles, what consumption means to us and what truly satisfies our needs, we can end and reverse the "further deterioration of the relationship between human beings and the ecology" and eliminate "patriarchal relations between men and women" (Mies and Shiva 1993, 255). In changing our consumption model, we alleviate exploitation and oppression, of workers, of women, of the Third world and the environment (Mies and Shiva 1993, 256), potentially yielding eco-social justice. Rich countries must voluntarily choose to reduce their standard of living, changing consumption patterns which then reduces exploitative production and damage to the environment, and harms to women and children (Mies and Shiva 1993, 253-257). This requires the elimination of the sexual division of labor between men and women, where men must face challenges to their macho identities, and become fellow caregivers in support of life – much like care work must become an aspect of citizenship - or else women and children will remain victims in the patriarchal and capitalist war against nature and women (Mies and Shiva 1993, 257). Active participation in community, support of life, changing consumer patterns, and adjusting what it means to be fulfilled are all important in the domain of the market under eco-feminism.

The domain of the market under eco-feminism challenges neoliberal ideologies about the market by proposing consumer liberation from commodity markets, valuing women's labor and nature, and voluntary changes in lifestyle to alleviate exploitation of women and nature. Eco-feminism encourages mutual care, decommodification of women's work, and a reaffirming of

women and nature's intrinsic worth. Nature must be acknowledged for its intrinsic value not through financialization or commodification via neoliberalism, but as the necessary living object in which society exists. Rather than subsuming women's labor and nature into the hierarchies of patriarchy, capitalism, and neoliberalism, eco-feminism seeks to release women from the hierarchy of patriarchy and capitalism, such that neither women nor nature are oppressed and have the freedom to exist in sustainable and life-fulfilling ways, a fundamental challenge to neoliberal ideology.

***Eco-feminism: State***

Just as in the domain of property, the neoliberal conception of women and the state has its foundation in previous centuries and has present day impacts on the status of women as caregivers. J. Ann Tickner in her 1993 paper "States and Markets: An Ecofeminist Perspective on International Political Economy" discusses the development of the modern state through the 17$^{th}$ century scientific revolution and Enlightenment and the changing relationship between society and nature. It was through this changing relationship, from considering nature a living organism to an inert machine, that motivated changes in the state. It was men who dominated nature and other humans through the market and the state, and as the state expanded globally through colonialism, political conflicts ensued (Tickner 1993, 62). Non-western relationships to nature were eradicated through the ideology of the scientific revolution via colonialism as the European state expanded (Tickner 1993, 62-62). The modern-day state is derived from this historical one, and the present-day environmental damage derived from state activities on behalf of capitalist markets cannot be adequately addressed by state action (Tickner 1993, 65). Under neoliberalism the state enforces market expansion but retracts away from social services, leaving women, who dominate the private sphere, uncompensated for their reproductive labor.

This type of work is seen as a reaffirmation of supposed inherent traits of women, namely that they are maternal and caring, both in a way that is negatively reinforcing of patriarchal stereotypes, but also as a positive strength that must be more included in the political realm. Sherilyn MacGregor (2004, 58) asks whether it is logical that if destruction of nature and oppression of women is derived from patriarchy and masculine ideology, then tacking toward a more feminine ideology must be an adequate solution. She finds the complete rejection of masculine politics potentially dangerous as it reaffirms the femininity of care work, as does Val Plumwood, who declares an "uncritical celebration" of women's nurturing to be incompatible with equality (MacGregor 2004, 66-67; Plumwood 2004, 49). Uncritical acceptance of women and their connection to care work as an inherently feminine attribute, risks reinforcing patriarchal beliefs and structures of women.

What is needed, according to MacGregor, is to not categorically associate women with care and maternalism, and men with rationality and politics. Changing our view of care "demands a reconsideration of the boundaries between private and public values and may contribute to an improvement in the way societies treat those who do the work of caring" (MacGregor 2004, 75). Breaking this boundary allows "everyday practices in the private sphere [to] contribute as much to social change as action in the public domain" (MacGregor 2004, 66). Women and attributes associated with women should not be relegated to the private sphere as it has historically, but rather should enter the political sphere, potentially guiding state policy. The political sphere is a place of communal decision-making and MacGregor (2004, 73-74) advocates the simple category of "citizen" be applied to women. Simultaneously, an "ethics of care" should be brought into politics, with the understanding that care is a gender-neutral value, rather than a purely feminine virtue. By expanding the virtue of care from the private to the

public, greater ethical treatment of others and nature is possible. It is a grand shift in thinking and interacting in opposition to the violence and control of the neoliberal state.

The neoliberal state serves to support market forces through retracting itself from social and environmental protections. Environmental damage is not restricted by state boundaries, and so remedies to ecological harms must come from a shift in global thinking about nature and women (Tickner 1993, 65). These ideas have a long history but can be changed. The scientific revolution developed the modern-day state and reinforced patriarchal domination of women. A transformative shift into an ecological way of thinking, on the scale of the scientific revolution, is needed to liberate nature and women from the patriarchal and capitalist, state, and market domination (Tickner 1993, 65). The ethics of care as a gender-neutral virtue entering the political sphere from the private echoes this call for an ecological zeitgeist. These eco-feminist principles challenge the neoliberal state, presenting an alternative to realize greater freedom for women and the environment.

The eco-feminist framework links all the domains of society and social relations through the critique of patriarchy and the association of women and nature in the oppressive structures of neoliberalism and capitalism. A significant throughline is how women are associated with care work, how this supports neoliberal structures, while simultaneously providing a grounding for liberatory versions of the domains of society and social relations. Neoliberal property rights give owners the authorization to extract value by any means, even if that requires the theft of land, and reductionist beliefs about nature. Eco-feminism views private property as inherently in opposition to women's and nature's liberation. Shared organizing and ownership in the thread of the commons, cultural autonomy with seed saving, and reconnection to nature are ways eco-feminism reflects eco-social justice in the domain of property. Civil society under neoliberalism

encompasses the private sphere, which is traditionally considered feminine. The private, unpaid care work women engage in fill the gaps left by the retraction of the state. Rather than abandoning the concept of care for others and the environment, it should be brought into the political realm as a gender-neutral factor of citizenship. The neoliberal market commodifies nature and relationships and attempts to fulfill fundamental human needs through the production and consumption of goods, but this results in exploitation of nature and women. Liberation of consumers through changing lifestyles and quality of life measures, and shifting to a moral economy based on cooperation, decentralization, and sustainability, are possible means to rejecting the eco-socially unjust neoliberal market system. The neoliberal state retracts itself from public services, leaving not just civil society to bear the burden of providing care, but also to women specifically. Eco-feminism counters this by advocating for the integration of an ethics of care for society and nature as a political virtue rather than a gendered one. Eco-feminism is a framework that offers significant alternatives to the neoliberal injustices of oppression and hierarchy, through the rejection of patriarchal hierarchy and oppressive gender roles.

### Summary Analysis of CRQ 1

This section reviews the ways in which the frameworks of eco-anarchism, eco-Marxism and eco-feminism approach each of the four domains of society and social relations in order to delineate a synthetic list of principles and practices that have the potential to challenge neoliberal ideologies in nature-society relations. The synthetic results presented here suggest analytical criteria applied in answering CRQ 2. Table 1, which follows the synthetic description of each category property, civil society, market, and state, summarizes these findings.

## Table 1. Approaches to Property, Civil Society, Markets, and the State in Nature-Society Relations

| Property | Civil Society | Markets | State |
|---|---|---|---|
| **Neoliberalism** | | | |
| ○ Privileges property owners<br>○ Privatization, particularly of public goods and lands<br>○ State protections of private property<br>○ Opposition to nationalism and collectivization<br>○ Alienation<br>○ Owners can extract value by any means necessary | ○ Flanking mechanisms<br>○ Science and technology support market drive<br>○ Non-profits, science, religion, NGOS fill gaps left by retraction of the state<br>○ Obscures negative impacts of neoliberalism | ○ Marketization<br>○ Closely related to state – protected and supported through de- and re-regulation<br>○ Markets are primary driver of society<br>○ Owners hoard means of production<br>○ Commodification of life itself<br>○ Alienates workers<br>○ Wage-labor and exploitation | ○ Deregulation of social and environmental protections<br>○ Reregulation to protect privatization and marketization<br>○ Supports market through monopoly of violence<br>○ Retraction from social services<br>○ Many 20th century wars waged over resources |
| **Eco-Anarchism** | | | |
| ○ Rejects private property<br>○ Free access to land<br>○ Publicly owned and shared property<br>○ Protection of nature rather than privatized exploitation<br>○ Property relations are power relations<br>○ Patriarchy is a property relation | ○ Mutual aid as total community support<br>○ Free association eliminates coercion<br>○ Charity seen as hierarchical, top-down mechanism<br>○ Science can be harmful when reductionist, separating humans from nature and authentic experience | ○ Workers own means of production<br>○ Mutual aid to meet the needs of people<br>○ No commodity markets<br>○ Sustainable production<br>○ Sustainable relations between humans and nature<br>○ Cooperation over competition | ○ Decentralized organizing<br>○ Free association – no coercion<br>○ Mutual aid to build solidarity rather than reliance on central state<br>○ Direct/ participatory democracy<br>○ Bioregional organization<br>○ Nature should be incorporated into citizenship<br>○ Local power |
| **Eco-Marxism** | | | |
| ○ Private property is class exploitation<br>○ Private property must be abolished<br>○ Communal ownership<br>○ Workers own means of production<br>○ Earth to be tended to, not owned | ○ Science and research should be publicly oriented<br>○ Ecology can be means of organizing and reunifying humans and nature<br>○ Share resources as needed for community | ○ Worker owned co-ops<br>○ Workers own means of production<br>○ Nature contributes to production as much as labor does<br>○ Workers and labor are both natural and social forces<br>○ Ecologically just production | ○ Communism<br>○ Decentralized society, local control<br>○ Classless society<br>○ Horizontal decision making |
| **Eco-Feminism** | | | |
| ○ Property is inherently in opposition to women and nature<br>○ Private property leads to female subordination<br>○ Commons, shared access/ownership<br>○ Cultural autonomy through seed sovereignty | ○ Ethics of care should be expanded from private sphere to public<br>○ Care for environment should be expanded | ○ Consumer liberation from market restraints<br>○ Meet fundamental, vital human needs with genuine satisfiers<br>○ Moral economy, cooperation and sustainability<br>○ Active participation in community, support for life<br>○ Decommodification | ○ Ethics of care should be in political sphere<br>○ Care as element of citizenship<br>○ Politics as common area to help people<br>○ Care for environment not limited to women |
| **Synthesis** | | | |
| ○ Property is a negative power relation<br>○ Communal ownership and sharing<br>○ No private property<br>○ Earth cared for, not owned | ○ Mutual aid<br>○ Science and technology publicly oriented<br>○ Care for society and nature emphasized<br>○ Share resources and labor<br>○ Give what you can, take what you need | ○ Workers own means of production<br>○ Mutual aid<br>○ Nature as equal contributor to production<br>○ Consumer liberation through genuine satisfiers<br>○ Decommodification<br>○ Defetishization | ○ Decentralization<br>○ Horizontal decision making<br>○ Free association<br>○ Local control<br>○ Direct and participatory democracy<br>○ Care as political and aspect of citizenship |

## Property

Neoliberalism privatizes previously public goods, either through extra-legal means or through state-sanctioned actions, and privileges private property over communal property. Owners are allowed to extract value from their property, whether that is land or non-human beings, regardless of environmental or social harms. Overall, among the alternative frameworks reviewed, the concept of property is seen negatively, particularly in the case of private property. For eco-anarchism, property relations are considered power relations, related to class exploitation and, as with eco-feminism, oppression of women and nature. Private property restricts freedom and reinforces hierarchy and is fundamentally in contradiction with eco-social justice and therefore must be reduced or eliminated. Eco-anarchism and eco-Marxism describe that property should not be held in centralized, privatized forms, but rather held in some form of communal, shared space, held and freely accessed by the broader population. And all three emphasize the importance of recognizing the intrinsic worth of nature and life. In sum, the alternative frameworks present property as leading to exploitation and oppression and are in favor of communally oriented ownership.

## Civil Society

Neoliberalism requires the flanking mechanisms of civil society to perpetuate the market-prioritized activities of the ideology. Civil society, in its broadness, covers many aspects of society, like NGOs, non-profits, science, technology, religion and charity. Science and technology, when used in service of furthering neoliberal goals, reinforces hierarchical beliefs, and strengthens marketization of life. Eco-anarchism and eco-Marxism advocate for science to be publicly oriented and ecologically based, so it can be a means of reunifying nature and humans, eliminating anthropocentric, hierarchical concepts. Expanding care for the environment,

and for society more broadly, from a privatized sphere to a public one, is the ethics of care promoted by eco-feminism. Care as a foundational citizenship concept, rather than a gap-filler for state-abandoned social welfare, intersects with horizontally structured mutual aid and community-oriented sufficiency that builds resiliency and rejects top-down oriented organizations like NGOs and charities. The alternative frameworks present civil society as a non-exclusionary and equity-based people and nature-oriented domain of society and social relations.

Markets

Neoliberalism prioritizes the domain of the market, with the other three domains functioning in service of it. The means of production are centralized, all aspects of life are commodified, resulting in commodity fetishism, alienation and exploitation of workers and nature. The alternative frameworks reject all contemporary neoliberal formulations of the market. The frameworks of eco-Marxism and eco-Anarchism state the means of production are to be owned in collective by the workers, in a horizontal manner, with the market organized by society for the benefit of society, in an environmentally sustainable way. There is a recognition of the importance of nature as equally contributing to the production of goods as labor, and labor is recognized as fundamentally natural. Eco-feminism advocates for a fulfillment of fundamental human needs that does not rely on market forces or commodities mediating relationships, but rather depends on cooperation, active participation in community and direct experience. Hierarchical structures are eliminated because there is no hoarding of wealth and economic oppression is not possible. The alternative frameworks present the market as a domain in which freely associating worker-oriented production and liberated consumers protect the environment and equitably provides for society as a whole.

State

The neoliberal state functions as a regulator and protector of market function, and deregulator of environmental and social protections. It holds a monopoly of violence and has historically been utilized to open new markets and obtain new resources, resulting in oppression and reinforcement of harmful hierarchies. Eco-anarchism advocates for the complete dissolution of the state, eco-Marxism holds that governing structures should be worker-oriented, and eco-feminism calls for the incorporation of care into the political realm. Eco-anarchism and eco-Marxism advocate for organizing society in a horizontal, decentralized, free associative, direct/participatory democractic manner, and, in addition to eco-feminism, ecologically oriented. with care for society and the environment as a means of achieving eco-social justice. The alternative frameworks in sum promote structures focusing on, and organized by, the broader population, rather than upholding centralized, hierarchical state.

This section answered the first constitutive research question, how do conceptual frameworks that challenge neoliberal nature-society relations address the social domains of property, markets, the state, and civil society? To summarize, the four frameworks address the domains in varied but common ways, with a shared result being a focus on non-exclusionary, non-coercive and freely associated community and communally-based organization. Neoliberalism is a very individualized, privatized and market-focused ideology that views nature as an inert resource, but these alternatives contradict this framing, rejecting the hierarchical and oppressive structures of neoliberal ideology. Eco-social justice is the presence of freedom and absence of hierarchy and oppression, and the alternative frameworks of eco-anarchism, eco-Marxism and eco-feminism produce principles that have the potential for eco-social justice and

challenge the unjust structures of neoliberalism. The next question addresses illustration of these principles.

*CRQ 2: Illustrative examples of alternative approaches to agricultural projects.*

This question asks, how existing agricultural projects that challenge neoliberal nature-society relations illustrate more eco-socially just orientations to the social domains of property, markets, the state and civil society. It addresses the Overall Research Question by reviewing agricultural projects that represent alternatives to social and ecological harms of industrial agriculture. Three examples, selected based on their challenges to neoliberal capitalism, are reviewed based on the principles and practices derived from the alternative frameworks examined for CRQ 1. Each case presented is explored through the four domains of society; these cases are Rojava in Syria, the Movimiento dos Trabalhadores Rurais Sem Terra (MST) in Brazil, and the Zapatistas in Mexico.

AANES/Rojava

The Autonomous Administration of North and East Syria (AANES), or commonly called Rojava, is an area of northeastern Syria that is majority Kurdish and founded in 2012 in response to the authoritarian Ba'ath regime. Over the years through skirmishes and war with ISIS, invasions by Turkey, and the Syrian civil war, by the end of 2019 AANES encompassed roughly 8 regions and 1000 $km^2$ (386 square miles) (RIC 2023b). Despite constant battles and attacks, the area has developed a society organized around participatory, and local democracy, gender equality, and ecological regeneration (RIC 2023a). In a report for the Rojava Information Center in 2019, the importance of ecology is emphasized, in particular the parallel to men's domination over women, and humans over nature (and other humans). The report states: "In order to develop an environmentally sustainable society, an economic system advocating collectivizing natural

resources and land is proposed" (RIC 2019, 15). Already in the foundations of the Kurdish region we can identify principles that reflect aspects of eco-social justice. The following analysis of agriculture through the four domains of society and social relations primarily derive from Joost Jongerden's 2021 paper "Autonomy as a third mode of ordering: Agriculture and the Kurdish movement in Rojava and North and East Syria" published as a special issue article in *Journal of Agrarian Change*. We begin with property, a reminder of the derived analytical criteria from question one followed by Jongerden's findings; following that in similar fashion is civil society, market, and state.

***AANES/Rojava: Property***

Neoliberal conceptions of property in industrial agriculture entail hierarchical power relations through centralized land ownership, where extraction and exclusion enforce hierarchy and oppression. In contrast, property in relation to agriculture in Rojava is organized by and under control of local councils, with peasantry having the right to use the land. In the mid-20$^{th}$ century, the Syrian government took land and property from the Kurdish peoples and gave it to Arab peoples, as part of an ethnic cleansing campaign, resulting in loss of citizenship and more (Jongerden 2021, 596-598). State-controlled farms enforced strict monocrops, particularly wheat, with Rojava considered "Syria's Breadbasket." To this day around 90% of Rojava's agriculture is still based on this crop and includes ancient varieties of which have been grown in Syria for centuries (GEO 2023; Mauvais and Amin 2022). Decades of oppression in Syria in turn produced decades of organizing, so that in 2011-2012 when the Arab Spring uprisings turned to civil war, the Kurdish majority regions of north and east Syria, took autonomous control of the region. The state farms were reallocated to households and village cooperatives – not as owners, but as individuals with the rights to use the land for necessary reproduction and agriculture

(Jongerden 2021, 600). Since then, farmers have begun to diversify crops (GEO 2023). Land that had previously been taken from the Kurds and peasantry were now under control of local councils. Rather than taking back land and reinstituting the same property power relations that allowed the al-Assad regime to dispossess the Kurds in the first place, public and shared ownership and working of the land in Rojava was enacted. It is a redevelopment of a commons, of sorts, and is an ongoing process, with many environmental and international political hurdles, but the basic structure of free-access and shared ownership and control is present.

Property relation in agriculture in Rojava demonstrate principles and practices that challenge the neoliberal construction of property. Specifically, these relations are illustrative of an alternative land tenure model that prioritizes shared space that is freely accessible to the populace and expands the types of agricultural crops planted, in opposition to neoliberal property that prizes privatization and centralized ownership.

***AANES/Rojava: Civil Society***

In Rojava, a particular organization in civil society acts as a counterbalance to possible development of state-like hierarchy, supporting the democratic confederalism of AANES. TEV-DEM (*Tevgera Civaka Demokratik*, or Movement for a Democratic Society) (Jongerden 2021, 599) is unlike neoliberal civil society organizations like the Bill and Melinda Gates Foundation that serve to open markets to industrial agribusinesses and reinforce oppressive hierarchical power structures. TEV-DEM engages in supporting democratic confederalism through horizontally structured mutual aid and organizing unions. It further acts as a complementary counter power by bringing critiques from the local communities to the Autonomous Administration, and in doing so "'preventing it [the Administration] from reproducing itself as a state and protecting the values of democratic confederalism'" (Zelal Jeger quoted in RIC 2019,

37). TEV-DEM, in protecting the interests of the people are willing to threaten uprising against the Administration if concerns are not adequately addressed (RIC 2019, 37). TEV-DEM is organized by communes and collectives, which reflects the overall organization of the region. This mode of organizing is a "third, self-constituting, or autonomous mode of ordering" as opposed to organizing via capital or the state, and doing so supports repeasantization and diverse agricultural production (Jongerden 2021, 595, 604). The non-governmental organization protects the interests of the people and will willingly and actively oppose the governance structures should it fail to uphold the principles of democracy and decentralization.

The autonomous mode of ordering challenges market and state modes of organizing and is maintained through the non-governmental organization TEV-DEM, which contributes to improving agricultural production and reclaiming land for the use of peasants and opposing oppressive hierarchical state structures. This prevention of the development of state structures and protecting the public interest are in direct opposition to neoliberal civil society that supports the absence of the state and presence of exploitative market forces and illustrates how civil society can be organized and utilized to support a people-oriented agricultural society.

***AANES/Rojava: Markets***

The agricultural economy of Rojava is based on the principle that agricultural production should prioritize the needs of the society, with fair wages and an emphasis on protecting local food security over exportation, unlike neoliberal agricultural markets that focus on the accumulation of wealth and pursuing profit at the expense of environmental and social protections. AANES/Rojava organizes market forces, like production, processing, distribution, and consumption in a communal agricultural economy, as inspired by philosopher and political prisoner Abdullah Öcalan's principles of democratic autonomy and democratic confederalism

(Jongerden 2021, 601-603), which will be further elaborated on in the next section on the state. Repeasantization of the land introduced key elements of market governance, rules and regulations enforcing fair price for labor and products, set minimum wages, maximum prices for goods, local, regional markets, diversified agriculture (as opposed to the former state-sanctioned monoculture), and short production chains (Jongerden 2021, 594-603). To protect local agriculture and food security, exports are disallowed when production fails to meet necessary objectives; rather than a traditional market economy, AANES organizes a social economy, where fair prices, social justice and ecological needs are met (Jongerden 2021, 601). The Rojava project encourages and supports social and ecological protections through the market structures, in opposition to the neoliberal market forces that override such protections for the sake of profit.

The agricultural market system is based on communalism, fair wages and economic equality; however, these features alone are not enough to liberate the region from powerful market and international forces. Turkey, the neighbor to the north, has built dams that block a majority of the Euphrates River from flowing to Syria, creating massive droughts, and forcing farmers to abandon plots, or rely on diesel generators to pump salinized well water that exacerbates environmental damage (Rushton 2023; North Press Agency, 2022). Reliance on diesel and chemical fertilizer imports limits the Rojava project's freedom in the domain of the market. In 2016, only 10% of chemical fertilizers needed were able to be imported due to embargoes and war. The solution proposed is to create local, organic fertilizer, so that the region can be self-sufficient, and local farms do not need to rely on expensive imports to fertilize their crops (Rojava Plan 2016). Acquiring necessary water resources, however, is a more complicated endeavor and one that will likely require international players defending the autonomous

region's right to water. This demonstrates that despite the stated goals of the project, there are limits to locally oriented initiatives within the global framework of neoliberal capitalism.

The structure and planning of AANES/Rojava's agriculture market illustrates eco-socially just principles of horizontal structures and decision-making. Farmers and workers collectively own the land, are paid fairly, with fair prices for goods with a focus on meeting the needs of the society at large by securing local food needs before exportation and profits, and a goal of ecological sustainability. This system contrasts with the hierarchical industrial agriculture system that relies on exploitation and oppression for the purpose of capital accumulation for a select and centralized group of business and corporate owners. Despite struggles to access water and chemical inputs and resisting global neoliberalism that limit the freedom of the Rojava project, the practices and application of principles that reflect eco-social justice to the agricultural market system in Rojava offers a strong alternative to the market of neoliberal industrial agriculture.

***AANES/Rojava: State***

The state structures in Rojava are minimal. The region is organized through locally and autonomously administered local councils, which structure the communal agricultural system. The state in neoliberal ideology functions to support the market, including by reducing protections for the environment and society and by increasing opportunities for marketization and privatization. The development of Rojava's autonomous administration was preceded by bureaucratic management and neoliberal privatization. Prior to the collapse of the central state of Syria in the region due to civil war, the government micro-managed agriculture through bureaucratic control and enforced monoculture cultivation (Jongerden 2021, 597-598). Eventually neoliberal practices began creeping, and agriculture was privatized, as were services

like education and healthcare; farmer support was eradicated, and wealth was increasingly accumulated by landlords and politicians, ultimately contributing to the destabilization of the country (Jongerden 2021, 598). The collapse of the autocratic Syrian state in the region made space for the development of the current Autonomous Administration.

Today, Rojava is governed through locally based, autonomous, and democratic organizations that comprise the Administration. The organization of society in Rojava is in opposition to the neoliberal hierarchical state that retracts itself from public services in favor of market protections. After the collapse and retreat of the central state in the region, "a network of local administered communities emerged that assumed responsibilities for the systematic provision of security, justice, fuel, and food" (Jongerden 2021, 598). These locally administered communities are autonomously organized, with assemblies or councils as a central organizing feature, based on the ideas of democratic autonomy (self-constitution, direct engagement, and collaboration) and confederalism (networks of autonomous beings and groups, local administration, and councils at varying levels) (Jongerden 2021, 601-602). Democratic confederalism, according to its progenitor Abdullah Öcalan, is "a democracy without a state." It is multicultural, anti-monopoly, and consensus-oriented, with ecology and feminism as central pillars (Öcalan 2011, 21). He emphasized the importance of ecology and of recognizing the connection between the oppression of nature and the oppression of humans, women in particular (RIC 2019; Öcalan 2011, 21). Öcalan, was inspired by the social ecology of Murray Bookchin, particularly the idea that social hierarchies are the basis of social ecological problems (Jongerden 2021, 601). He further stated that the state and capitalism reflect patriarchal relations; the state and capitalism are oppressive, controlling, and centralized, but the alternative democratic, egalitarian, and collaborative systems, are more socially just (Jongerden 2021, 601-602). The

communal agricultural economy being developed in Rojava is comprised of freely associating regional and local networks, rejecting bureaucratic and centralized state agriculture (Jongerden 2021, 603). The significance of these ideas and the structuring of the Administration of Rojava is that it centers the needs and desires of the people in the region and allows direct participation with local forces to make collective decisions to maintain that centering.

The autonomous and self-organizing communities of Rojava continue the experiment of democratic confederalism and autonomy in developing a decentralized agrarian society. In doing so they are liberating the system of agriculture from typical neoliberal business practices and state control. Rather than maintaining hegemonic and monocultural control over the agriculture of the region, the new, democratic, and autonomous way of organizing society constitutes an alternative to the eco-socially unjust neoliberal agricultural state.

Altogether, the four domains of society and social relations within the context of AANES/Rojava, illustrate alternatives to neoliberal ideology in the governance of nature-society relations and agriculture. Agriculture does not have to be organized in an oppressive, confrontational relationship to nature, but can be a more ecologically oriented and just system. This is achieved through repeasantization and public ownership and cultivation of land that focuses on the priorities of the population and ecological protections. Additionally, through democratic autonomy and confederalism that organize the society, and the complementary non-governmental organization TEV-DEM to maintain public trust and integrity of the system, the AANES/Rojava project demonstrate that it is possible to organize agriculture, and society more broadly in a more eco-socially just manner.

Movimento dos Trabalhadores Rurais Sem Terra (MST)

The Movimento dos Trabalhadores Rurais Sem Terra (the Landless Rural Workers Movement, or MST) was formed in 1984, the result of decades of resistance by peasants and landless peoples in Brazil. They fight against the centralization of land, insecurity, and lack of rights (MST 2023a). MST has three main objectives: to fight for the land, for agrarian reform, and for social changes. In their words, "We want to be producers of food, culture, and knowledge. And more than that: we want to build a country that is socially just, democratic, with equality and in harmony with nature" (MST 2023b). Currently, the MST occupies land in 24 states in 5 regions of Brazil, with around 450,000 families participating (MST 2023c). Much of the examples used here are derived from Hannah Wittman's paper "Reframing agrarian citizenship: Land, life and power in Brazil" from 2009, published in the *Journal of Rural Studies,* and the MST's own website. As before, property is the first domain of society and social relations explained here; it is followed by civil society, the market, and the state.

***MST: Property***

The MST organizes agricultural property through family farms in an approach that centers the needs of the people, where land is reappropriated from industrial farms and redistributed to members of the MST. This reverses the process of depeasantization and exclusion that are hallmarks of unjust property relations. In the 1960s the military junta in control of Brazil established a plan to modernize the country's agriculture by subsidizing large, capitalist farms (Vergara-Camus 2009, 369). The result of this was the expulsion of around 28 million peasants and rural farm workers from the countryside, between 1960 and 1980 (Ibid.). Monoculture crops began to be implemented, and the number of smallholder farmers began to shrink, as families were less and less able to pass on land to their children (Ibid.). Traditionally,

property ownership in Brazil was a prerequisite for citizenship (Wittman 2009, 120), and the loss of inheritable land negatively affected families, but under the conception of agrarian citizenship established by the MST, land ownership has been decentered; it is no longer a requirement of citizenship, but is considered a right (Wittman 2009, 121-123).

Treating land as a right requires the reappropriation by the peasantry of land that fail to provide social value and uses. These lands include farms that are fallow, damage the environment, or engage in slave labor (MST 2023d). The process of expropriating land practiced by the MST involves occupying the property and setting up schools and planting subsistence crops (Wittman 2009, 124) and is part of the process of redefining agrarian citizenship. The practice of reappropriating land for the people also changes the social relations and political orientations of those involved and reorients food production and consumption to prioritize the needs of the people (Wittman 2009, 124-129) rather than hierarchical market-oriented ownership and production. Rural workers and peasants regain control of agricultural lands taking power from the capitalist landholders and focusing on local food production and consumption.

The practices of the MST reflect eco-socially just principles of property that challenge the neoliberal ideology regarding property relations. The transfer of land from negligent landowners addresses the hierarchical structures between people and the state, and workers and landowners (Wittman 2009, 125-129). It does so by reorienting ideas of citizenship to include the right to land and agricultural reproduction. The goals of the MST prioritize liberating people from hierarchical neoliberal capitalist property relations and centering the needs of the collective over that of the individual. Through organizing, shared politics and lack of hierarchy, property under the MST, while divided by family, engages in creating communal and shared

responsibility, and demonstrates an alternative to neoliberal industrial agriculture and its hierarchical structuring of property.

***MST: Civil Society***

Education and mutual aid to equitably and sustainably meet the needs of the people are two aspects of civil society that the MST engages in to expand the definition of agrarian citizenship and create strong community ties. Neoliberal ideology positions civil society as a flanking mechanism to compensate for the absence of the state and promote market-based engagement. The centering of the market enforces hierarchical structures by limiting the ability of people to afford goods and services. Alternative approaches to organizing civil society reviewed for CRQ 1 include supporting society through mutual aid that shares resources and cares for society and nature, and publicly oriented science, which includes research and education.

The agricultural and political education offered by the MST create opportunities for mutual aid and solidarity. The agriculture-based courses offered are livestock management, agroecology and agroforestry, organic farming, forest restoration, and environmental stewardship; political education includes literacy classes and organizing health clinics (Wittman 2009, 125). Through educational opportunities, sustainable agriculture systems and environmental stewardship are connected to the broader collective good which assists the MST in promoting mutual assistance between families (MST 2023e). Soil preparation and cultivation, planting, harvesting, and marketing become easier when done together with mutual aid, each individual contributing as they can, receiving what they need, for the good of the society. Mutual aid and solidarity extend beyond the MST organization and extends outward to the wider society. The MST provided over 2,800 tons of MST-produced food to people during the COVID-19

pandemic (Forsetto 2020). Mutual aid and education within MST are meant to improve collective understanding of agriculture systems, politics, protecting the environment and health, and build solidarity within the MST community, and society more broadly.

The MST organizes education and the practice of mutual aid to develop a strong sense of unity within and beyond the organization. Agrarian education expands the notion of what it means to be a citizen, expanding beyond limited boundaries of the individual and local, and extends it to the broader society (Wittman 2009, 124). This is a foundation of the practice of mutual aid, looking to support others in a mutually reinforcing and equitable way that is not limited by state or market forces. MST's approach to civil society challenges the neoliberal ideologies about civil society that serve to support exploitation of people and nature by the market and the abandonment to those harms, by the state. Instead, the MST shows that it is possible to engage civil society in ways that support people and agriculture in equitable and just ways.

***MST: Markets***

Neoliberal ideology positions the market as a centralized profit-making enterprise, where competition between businesses, corporations and even individuals is considered a net good. In contrast, MST understands agricultural production as a process to organize agroecological methods, producing healthy foods and equitable distribution of profit. Food is partially produced through agroecological models, which moves from the traditional agribusiness mentality of the soil as simply a structural support for plants, to the idea of it as a living organism that works in concert with other living organisms (Forsetto 2022). Agroecology is a means of equitably producing food that "explicitly considers political, economic, social, and environmental aspects" and relies on Indigenous and local knowledge to farm with as little degradation of water, soil,

and ecosystems as is possible (Kerr, et al. 2023, 1). It also emphasizes the production of healthy diverse foods with direct consensus decision making between producers and consumers to actively reduce social inequalities (Ibid.). This method of production underscores the connection between the importance of protecting the environment and equitable social relations. In one settlement, Contestado, one-third of the 160 families there work the land with exclusively agroecological methods, and sell the produce through the Cooperativa Terra Livre, much of which is purchased by the government for use in public schools (Forestto 2022). Food is produced with the goal to be beneficial to society, rather than producing for capital that yields benefits for only the few (Wittman 2009, 123; 125-126). This method of production reinforces connection to community and environment, both locally within the MST farms but also the country and environment more broadly.

Connection with those beyond the MST is important for developing a non-oppressive and environmentally sustainable market system. The political education engaged by MST connects local farmers and their struggles with the broader neoliberal framework. Connecting individual and local struggles to the wider context underscores how personal actions can yield positive collective changes (Wittman 2009, 124). While individuals are subsumed into the larger global economic framework, they still have agency and can make decisions that either further support or challenge the hegemony. The MST and other associated rural groups have organized and engaged in protests and demonstrations pushing for improved salaries and retirement benefits, against GMOs, and state support for farmer's markets (Wittman 2009, 128). The agrarian reform MST seeks would change the economy such that it equitably distributes profits, rather than centralizing them for a few, with food production focusing on local, healthy foods (MST 2023f). The economic equality MST seeks also combats agribusiness' slave-like conditions as resulting

from monoculture, land centralization and capitalist business practices; since 1995, over 60,000 people have been rescued from such conditions (MST 2023g). MST argues that these agricultural lands should be transformed into agrarian reform settlements, for the benefit of the people (Ibid.). The MST challenge neoliberal market ideologies and industrial agriculture through collective landholding, coupled with shared profits and the dismantling of for-profit systems, with production, power and organizing in the hands of the people.

***MST: State***

The MST is organized around non-hierarchical, horizontal participatory democracy that focuses on family farm production and sustainable agriculture, in which families are free to associate or not. This is in contrast with neoliberal ideologies of the state that position it as a hierarchical force to protect the market and its exploitative activities, and enforce participation in those activities, but not as a force to protect society or the environment from neoliberal market harms. The organization and structures of the MST explicitly oppose hierarchical formations, as a participant quoted in Wittman (2009, 125) states: "This horizontal structure functions in circles and not from top to bottom. This thing of hierarchy doesn't have space within the MST." The horizontal structure the participant is referring to is the form of participatory democracy advocated by the core agrarian citizenship principle held by the MST and its members. With over 1 million members, MST pushes for social transformation such as advocating for family farm production and sustainable agriculture along with changing rural citizenship and rights. It does this through organizing at informal local, regional, and national levels rather than through the formal process of legislative constructs (Wittman 2009, 121-123). The MST supports LGBTQ+ farmers, Black, Indigenous, Afro-Brazilians, in both rural and urban locales (Forestto 2022), which is important because these identities are often marginalized and excluded through both

formal state structures and informal cultural beliefs around the world. Actively supporting members of marginalized communities is social justice in action. This support also requires a way for people engaged in personal transformation to be actively involved in organizing and running the organization.

The structure of MST organizing as delineated by Wittman (2009), is based on groups of families (around 25 to 30) who elect one man and one woman to attend settlement coordination councils. There are also elected individuals to attend one of the many committees (e.g., health, security, education, environment). The organization of the MST requires an openness to personal transformation and encourages such transformation through political education and involvement with committees. Part of the purpose of the committees is to create responsibility to the community through assigned tasks that benefit the settlement (Wittman 2009, 124-125). These tasks and their connected meetings often yield disagreements, and sometimes results in families leaving the MST, though they keep the land. Rather than organizing collectively within the MST, these families rejoin traditional organizations, like Rural Worker's Unions or Municipal Agricultural Offices (Wittman 2009, 123). Despite the political differences that often lead to such splits, the various families still collaborate on alternative agricultural practices, new markets, and environmental protections (Wittman 2009, 128). The eco-socially just principles that are practiced by the MST affect even those who are no longer directly participating in the organization.

The principles of an eco-socially just state identified among the alternative frameworks reviewed for CRQ 1 indicate that it is comprised of freely associating individuals or groups and is horizontally structured with local control. The organizational structures of the MST are explicitly non-hierarchical, with small groups democratically electing several members to

participate on various committees, and no coercive tactics attempting to maintain control over family groups. The allowance of free association may yield disagreements and separations, but still results in cooperative living and challenges to the status quo. Thus, the organization and practice of an alternative agricultural state under the MST effectively challenge neoliberal industrial agriculture state structures.

Altogether, the four domains of society and social relations within the context of the MST, illustrate alternatives to the neoliberal ideology that structures nature-society relations and industrial agriculture. The MST demonstrates that it is possible to organize agriculture in an eco-socially just way, that resists the hierarchical oppression of neoliberalism. MST reappropriates land from agribusinesses into the hands of the peasantry. The engage in agroecological methods that are shared through collective education and practiced with mutual assistance, alleviating individualized labor. The organization of society is via decentralization and free association with democratic and horizontal decision making. These practices are all counter to neoliberal industrial agriculture. The MST demonstrates that it is possible to organize agriculture through more eco-socially just principles that challenge neoliberalism, showing that it does not lead to an immutable set of ideologies and practices.

Zapatistas

The Zapatista movement (Ejército Zapatista de Liberación Nacional, or EZLN) in Mexico is guerrilla movement and organization, fighting for indigenous rights, democracy, and land, and against capitalist globalization (Thelmadatter 2022; Hemispheric Institute n.d.). Exploding forth on January 1, 1994, the Zapatistas declared war on the Mexican government and took over much of the Mexican state of Chiapas (Romero 2014). In the First Declaration of the Lacandona Jungle in December 1993, the EZLN declares the purpose of their war, that the

dictatorship of Mexico and the Mexican government does not care "that we have no… land, no work, no healthcare, no food nor education. Nor are we able to freely and democratically elect our political representatives, nor is there independence from foreigners, nor is there peace nor justice for ourselves and our children" (EZLN 1993b). The EZLN has held control over Chiapas for almost 30 years. Much of the discussion of EZLN in this section is derived from Carol Hernández, Hugo Perales, and Daniel Jaffee's 2022 paper "'Without Food there is No Resistance': The impact of the Zapatista conflict on agrobiodiversity and seed sovereignty in Chiapas, Mexico" published in *Geoforum*.

***Zapatistas: Property***

The Zapatistas conceive of agricultural property as something to be shared and worked collectively, and non-agricultural ecosystems as something collectively protected for the benefit of all people. Industrial agriculture relies on the privatization of land and expansion into non-cultivated areas, for the purpose of accumulating profits. In December 1993, the Zapatistas issued the Revolutionary Agrarian Law, stating the expropriation of all agricultural lands for those who would work it – taking land from agribusinesses both national and foreign, and lands that are 100 hectares or more of poor quality, or 50 hectares of good quality (Hernández, Perales and Jaffee 2022, 240; EZLN 1993a). The lands taken were to be given, upon request, to landless peasants, to be worked collectively, for the benefit of all Mexican peoples, with the means of production in the hands of the laborers (EZLN 1993a). The local peasantry was given access to agricultural land for subsistence and reproduction, rather than having that land be hoarded for the exclusive use by a centralized force. Regarding the surrounding environment, "virgin jungle areas and forests will be preserved, and reforestation campaigns will be carried out in the main areas... the springs, rivers, lagoons and seas are the collectively property of the Mexican people

and will be taken care of, avoiding contamination and punishing their misuse" (EZLN 1993a). Nature in its wild form is just as important as productive agricultural lands. By protecting the wilderness, the natural functioning of the native ecosystem is allowed to persist, with the understanding that it is for the Mexican people to care for and cherish. In contrast to neoliberal ideology, this characterization of property relations involves protecting the environment, particularly recognizing its value to humanity.

Collective value and protection are also extended to native seeds. The seed sovereignty project is an outshoot of the Zapatista agroecology project, arguing that native seeds are a "common heritage or part of the universal commons of humankind" and rejecting GMOs and intellectual property rights imposed by agribusiness corporations (Hernández, Perales and Jaffee 2022, 245). This sovereignty over seeds is the basis of subsistence agriculture, and agrobiodiversity conservation of the region and the Zapatista movement (Hernández, Perales and Jaffee 2022, 237). This contrasts with industrial agriculture and neoliberal ideology that declares that genes can be patented, and the very building blocks of life can be controlled and commodified, limiting access to seeds through financial exchanges.

The EZLN Revolutionary Agrarian Law indicates that property relations in agriculture are to be based on worker and peasant-oriented ownership, with protection of seeds and wilderness, for the benefit of all Mexican peoples and humankind. This aligns with the eco-socially just principles that state property should not be privatized but shared and freely accessed for the benefit of society. This rejects the neoliberal industrial agriculture that privatizes and centralizes property and production for the benefit of the few. The eco-socially just principles seen in action here, lead to the conclusion that the agricultural property relations within the

Zapatista organizing is a powerful challenge to neoliberal ideologies in property relations and industrial agriculture.

***Zapatistas: Civil Society***

Civil society within the Zapatista organizing involves a particularly important organization. The organization, DESMI (Economic and Social Development for Indigenous Mexicans) is a non-governmental organization that, while not directly a part of the EZLN, has been organizing indigenous communities in Chiapas since the late 1960's (Hernández, Perales and Jaffee 2022, 242). DESMI works with indigenous groups, many of which are associated with the Zapatistas; they also refuse to work with anyone hostile to the Zapatista movement. Their goal is to create a solidarity economy that focuses on fair exchange for farmers and consumers, expand the use of agroecology, and support seed sovereignty, food sovereignty, gender equality and indigenous autonomy (Hernández, Perales and Jaffee 2022, 242). DESMI is one of many non-governmental and grass-roots organizations the Zapatistas have connections with; others provide financial and material support for indigenous autonomy and bring scientific education to adapt agriculture to climate change (Hernández, Perales and Jaffee 2022, 242-246). The EZLN also has committees created to assist in the transition from conventional to agroecological methods, though adoption has been slow (Hernández, Perales and Jaffee 2022, 244). Civil society organizations like DESMI working with the Zapatistas support the goals of the revolutionary group, to break free of neoliberal capitalism, liberate land from private ownership and advance indigenous autonomy.

The Zapatista civil society in relation to agriculture demonstrates that it is not necessary to organize civil society as a flanking mechanism to neoliberalism. Neoliberal civil society functions to support the market and its exploitative machinations by fulfilling the role of the state

regarding public services. DESMI and other non-governmental organizations challenge the role of civil society by supporting local sufficiency, scientific education, and care for the environment. They develop equitable markets, support sovereignty movements and educate for ecologically sustainable agriculture methods. The Zapatista movement, working with DESMI and other non-governmental organizations, challenge neoliberal ideology of civil society and demonstrate in practice alternatives to industrial agriculture.

***Zapatistas: Markets***

The Zapatistas engage with eco-socially just principles of the market, that of worker-owned production, with a focus on supporting the local community and protecting the environment. In neoliberal ideology, agricultural markets extract value at the expense of both the environment and workers, accumulating wealth at the top and leaving those below destitute and damaged. One of the ramifications of this is the accumulation of debt, which the Zapatistas directly address. At the time of the Agrarian Revolutionary Law, the Zapatistas declared all debt null and void (EZLN 1993a). In doing so they liberated people from the entrapment and cycles of debt that so often plague farmers and farmworkers, that subsequently often result in social and environmental damages.

The EZLN organizes the agricultural market to protect the environment and people from further agribusiness influence and damage. They do so by implementing agroecological methods and ensuring fair pricing for consumers and fair pay for producers. The Zapatistas created committees "to secure the minimum environmental conditions for [the milpa's] sustainable reproduction" and in 2003 declared agroecology as the primary agricultural method to be used in the autonomous communities (Hernández, Perales and Jaffee 2022, 242). These committees were also created to support locally based food production, and seed sovereignty, in response to the

political and economic ramifications of NAFTA, GMOs and national and industrial seed production (Hernández, Perales and Jaffee 2022, 245). Using agroecological methods is advocated to resist and remove the use of agrochemicals like the Monsanto (Bayer) product, round-up (Hernández, Perales and Jaffee 2022, 245) for both environmental protections, as well as in resistance to capitalist globalization and corporate control over food production. The Zapatistas prioritize meeting local needs through food production, before exporting agricultural products.

The Zapatistas also prioritize the needs of the people through regulation of trade. Trade between regions in the Chiapas is declared fair and equal, with production primarily remaining in-country, unless there are surpluses that are unneeded locally, in which case exportation is allowed (EZLN 1993a). Exportation and accumulation of profit are subordinate to the needs of the people. Trade centers are created to maintain fair, dignified prices for farmers and consumers (EZLN 1993a). Through appropriation of land from agribusinesses (EZLN 1993a) the local population are provided the means of survival, and through trade centers have their rights to fair and equitable production and consumption protected. The Zapatistas center the market and market processes around the people and the people's needs, rather than allowing businesses to amass wealth at the expense of society.

The ELZN demonstrate market practices that contrast starkly with those underwritten by neoliberal ideology. Instead of prioritizing the accumulation of wealth by agribusinesses at the expense of people and the environment, markets and farms are collectively run by workers who are freed from previous debts, implement agroecology to protect the environment, and prioritize the needs of the populace before capital accumulation. The market under the Zapatistas

challenges the neoliberal ideology and illustrate that it is possible to construct agricultural market systems that do not result in eco-social injustices.

***Zapatistas: State***

Zapatista governance is horizontal, circular, and autonomous, with a focus on resisting the neoliberal state constructions that seeks to support market exploitation and enforce subservience to neoliberal forces. The structures of the Zapatista communities are called Juntas de Buen Gobierno (JBGs, or Good Government Councils), sometimes called "snails" due to the horizontal and circular decision-making methods (Hernández, Perales and Jaffee 2022, 241). These communities are autonomous yet interrelated. Autonomy in this case is "understood as relational, dynamic, and borderless, instead of a fixed territorial self-governing unit" (Hernández, Perales and Jaffee 2022, 241), which indicates a level of free association based on varying needs and contexts, rather than a single designated government authority used for all purposes. To prevent the development of a central, powerful government, the Agrarian Revolutionary Law declares that no taxes will be levied on any collective, communal, or cooperative individuals and groups (EZLN 1993a). Rather than rely on a single government to perform public services through the extraction of money, the Zapatistas prioritize autonomy, sovereignty, self-sufficiency, and solidarity through the JBGs and other worker-owned cooperatives.

Resisting state control and industrial agriculture are intertwined within the practices of the Zapatistas. Food and seed sovereignty, through sustainable, autonomous agriculture and agroecology are tools for the political project of resisting state oppression and international corporations; ancestral agricultural practices are political action within the context of the EZLN (Hernández, Perales and Jaffee 2022, 246). Further, one of the primary goals of the Zapatistas is indigenous autonomy, which is partially achieved through subsistence agriculture, and refusing

to receive funding or services from any government organizations (Hernández, Perales and Jaffee 2022, 241-246). The neoliberal state and industrial agriculture function together to oppress people through socially and environmentally damaging ways, particularly through varying state structures that protect market priorities. Through horizontally structured councils, an emphasis on autonomy and agroecological methods, the Zapatistas provide a more expansive liberation not limited to central state systems and produce an effective challenge to the neoliberal structure.

The eco-socially just principles of the state, horizontal and democratic decision making with an ecological focus, are enacted in the EZLN through the horizontal organization of the Juntas de Buen Gobierno, the emphasis on indigenous autonomy, food and seed sovereignty, and the active resistance against control by the central Mexican state. In contrast the state within neoliberal ideology is hierarchically structured with the express purpose of protecting the capital accumulation of the market, without protections for society or the environment. The Zapatistas demonstrate that it is possible to develop a state system that does not contribute to social injustice and environmental harms through agriculture.

Altogether, the four domains of society and social relations within the context of the Zapatista movement, illustrate alternatives to neoliberal ideology in the governance of nature-society relations and agriculture. The agriculture of the Zapatistas demonstrates a potentially eco-socially just system that is not confrontational to the rights of people or the environment. This is achieved through the redistribution of agribusiness land to the peasantry for collective work, the protection of wilderness and seed sovereignty; the engagement with non-governmental organizations to develop fair exchange and solidarity economies and educate on agroecological methods; the centering of the rights of workers, local community and environment over profit, and the development of horizontal and circular decision-making structures. Through these

practices, the Zapatistas demonstrates that it is possible to organize agriculture, and society in a more eco-socially just manner.

**Contribution**

The purpose of the Contribution section is to evaluate the results of the research, review how it increases our understanding of the social problem of industrial agriculture as caused by neoliberalism, and explain how this research addresses the research problem of seeking alternative frameworks that challenge neoliberal orientations to nature-society relationships. To accomplish these purposes, I reiterate the Capstone Social Problem, and the Capstone Research Problem and then review how the research problem addresses the social problem. Then, I discuss how each CRQ addresses the ORQ, the research problem, and social problem, indicating how through this research, we can better understand that eco-socially just alternatives to the industrial agriculture system and neoliberal nature-society relations are possible. This section and the chapter conclude with recommendations for further research.

The social problem of focus in this Capstone research is the environmental and social harms derived from industrial agriculture, as caused by neoliberalism and the neoliberalization of nature-society relations. For CRQ 1, this research investigated three alternative frameworks, eco-anarchism, eco-Marxism, and eco-feminism, all of which have historical legacies of liberatory politics and anti-capitalism. For CRQ 2, three existing agricultural projects – AANES/Rojava, the MST and the Zapatistas - were used as illustrations of how principles from alternative frameworks might be applied in practice. These illustrative examples demonstrate that there are ways to organize agriculture that are not exploitative to people or the environment. Despite different, specific foundational circumstances, each example provides a significant demonstration of how to organize eco-socially just agriculture, even within the constraints of

neoliberalism. In what follows I offer more detailed summaries of how each CRQ contributes to answering the ORQ.

CRQ 1 asks, *how do conceptual frameworks that challenge neoliberal nature-society relations address the social domains of property, markets, the state, and civil society?* The findings of this question answer the Overall Research Question by examining alternative frameworks of eco-anarchism, eco-Marxism, and eco-feminism. From these frameworks I derive a set of principles that challenge the neoliberalizaiton of nature-society relations in the four domains of society and social relations: property, civil society, market, and the state.

Examining the alternative principles for organizing nature-society relations synthetically, we can see how all three alternative ideologies challenge neoliberal nature-society relations. Neoliberal ideology privileges property owners over all others and owners may extract value from their property in any means desired, even if that results in environmental and social harms. The synthetic principles that oppose this state that private property is a power structure, where owners, whether it is of land, or the means of production, hold more power than those who do not. Instead, alternative approaches argue that private property should be abolished, with production owned in common by workers, and land freely accessible to those who need it. The earth is to be cared for by everyone, rather than possessed and exploited by a few.

Neoliberal ideology wields civil society as a flanking mechanism that functions to support the neoliberal ideology within society. Science and technology, related research and education, and non-profits and non-governmental organizations (NGOs) are often put into service of the market and support state retraction and contribute both historically and contemporaneously to exploitation. The synthesized principles reject the use of science for privatized use by the market, suggesting it should be publicly oriented. Rather than engaging

with charities or non-profits that may ultimately support neoliberal capitalism, mutual aid and solidarity are advocated. Mutual aid is a way of providing support wherein people give what they can and take what they need, in mutual support with one another. This process strengthens connections among people, building solidarity and enabling resistance to centralized power structures. Also emphasized in the frameworks is the ethics of care. Care for one another and nature is an important feature to be expanded beyond the private to the public and political.

The market is the primary force behind neoliberal ideology, with profit accumulation the ultimate good and corporations owning the means of production resulting in alienation and exploitative wage-labor. The synthesized principles challenge neoliberal approaches to market governance by reorienting production to be ecologically sustainable, which is achieved through the workers collectively owning the means of production and recognizing of the importance of nature in the production process. Recognizing the connection between labor and nature results in socially and ecologically sustainable production. Consumers must be liberated from the constraints of commodification, meeting needs through active and direct experience and participation in the wider community.

Lastly, the neoliberal state functions to support the market through deregulation of social and environmental protections, retraction of state welfare programs, and reregulation to protect the privatization and commodification of life. The principles derived from the alternative ideologies advocate for a decentralized, horizontally structured, democratic system of organization. These can be centered around workers or the general populace, but the vital aspect is local control rather than external, hierarchical governance. Finally, the principles of the ethics of care should be incorporated into the definition of citizenship, rather than relegated to the

private sphere, in order to emphasize the importance of protecting and uplifting society and nature.

The three alternative frameworks address the social problem of industrial agriculture by challenging neoliberalism and the neoliberalization of nature-society relations. Industrial agriculture is embedded within and reflects neoliberal approaches to nature-society relations. There is rampant land grabbing and accumulation of property, excessive extraction and exploitation of land and people, the state subsidizes and supports the use of toxic chemicals, and the non-profits simultaneously declare they want to address the harms of the system while paving the way for marketization and commodification of seeds and genetics. The alternative frameworks examine the exploitative relationship humans have with nature and offer alternative means by which we can interact with it. To exist, even comfortably, on this planet does not require damaging the environment and contributing to oppressive structures. The alternative frameworks have provided a set of principles that can be applied to nature-society relations and, therefore, to develop alternative agricultural practices.

CRQ 2 is, *how do existing agricultural projects that challenge neoliberal nature-society relations illustrate more eco-socially just orientations to the social domains of property, markets, the state, and civil society*? CRQ 2 addresses the Overall Research Question through an exploration of three illustrative examples, organized by the principles identified in CRQ 1. The three examples, AANES/Rojava, the MST, and the Zapatistas, show that it is possible to organize agricultural systems that oppose the oppressive and hierarchical structures of neoliberalism through the domains of society and social relations, property, civil society, markets, and the state.

Agriculture in Rojava contrasts with industrial agriculture through its collective organizing of property, decentralized and democratic organization, non-governmental organizations working to maintain autonomous organizing to protect agricultural lands for peasants and prohibit hierarchical organizing, communalism, and fair wages. It is still subject to the broader influence of the global neoliberal framework with its reliance on chemical fertilizers, but they are seeking to produce locally-derived organic fertilizer to become more self-sufficient and reduce the influence of neoliberal capitalism. The principles from CRQ 1, that of decentralized democratic organizing, fair wages and non-governmental organization that supports the rights of the people, in practice in Rojava constitute a rejection the notion that neoliberal ideology and industrial agriculture are our only options.

The MST takes back land held Inappropriately by agribusinesses and those who do not contribute to overall social value with their ownership. For the MST, land is not a prerequisite for citizenship and it opposes industrial agriculture and neoliberalism through political and agrarian education, mutual aid, and equitable distribution of profits. The political organization of the MST is horizontal and non-hierarchical, which is in direct contradiction to industrial agriculture which is hierarchical – agribusiness and corporations influence everything in the food system with their outsized economic power. The principles from CRQ 1 that of shared work and profit, and shared land ownership, that are in practice here, challenge the idea that neoliberal ideology and industrial agriculture are unchanging forces in our lives.

Finally, the Zapatistas directly confront neoliberal capitalism through the principles of communal property, seed sovereignty and protection of wilderness as universal human heritage, engaging in mutual aid, protecting the environment from harm and corporate control through the use of decentralized, horizontal decision making. The synthetic principles derived from CRQ 1

including communal property, decentralized structures, and environmental care as practiced by the Zapatistas show that there is the possibility to arrange a non-oppressive agricultural society, challenging neoliberal ideology.

Each of the three examples reviewed for CRQ 2 engage in repeasantization through the appropriation of capitalist and agribusiness property, redistributing it to the local populace for shared ownership, labor, and subsistence agriculture. Each also demonstrates horizontal and democratic decision making, and a decentralized governance structure that focuses on meeting the needs of the people. Finally, each also focuses on ecologically sustainable agricultural practices with the MST and Zapatistas specifically engaging in agroecological methods. An eco-socially just agricultural system is organized to prioritize the needs of the people and the sustainability of the production of food, rather than the needs of capital. We are not required to accept neoliberal injustice and the harms derived from industrial agriculture. It is possible, as demonstrated, to reverse and avoid this damaging relationship by changing how society organizes agriculture and relates to nature. We can reduce the consequences of the social problem if the principles and practices that are reviewed in this research are applied.

The principles and practices derived from CRQ 1 and CRQ 2 present challenges to neoliberalized nature-society relations and its concurrent consequence of industrial agriculture. CRQ 1 addresses the Overall Research Question by discovering and synthesizing principles that reflect eco-social justice and challenge neoliberalism. The illustrative examples explored in CRQ 2 contribute to answering the ORQ because they present the principles in practice, demonstrating that challenges to neoliberalism are already in action, and achieving an eco-socially just food system is possible. The social problem is addressed by this research because by challenging ideologies that underwrite the social and ecological harms of industrial agriculture, we challenge

its causes and, therefore, its subsequent and harmful consequences. The examples provided demonstrate that agriculture does not have to be socially or ecologically harmful, and thus that eco-social justice is possible within food systems and society.

This Capstone research contributes to social justice in the food system and society overall because it presents existing alternatives to the neoliberal industrial agriculture system, in particular, and neoliberal ideology, in general. Neoliberalism affects all aspects of society, including at an individual level and how we as people relate to nature. Just as society is neoliberalized, so too is nature. Through the domains of society and social relations, we can see how nature is subsumed into the neoliberal ideology, and how societal relations to nature are mediated through neoliberalism. While the focus of this Capstone research was on the food system and agriculture, these principles and the point that alternative approaches are possible have wider relevance. We do not have to submit to the hegemonic ideology of neoliberal capitalism and industrial agriculture. Another world is possible, and we must act in resistance and in eco-socially just ways to achieve it; this research indicates that these efforts are underway, despite the external forces working against them. We do not need to be dominated; we can build on already existing relationships and ideologies that do not have exploitation as their foundation.

The recommendations of this Capstone research are to seek out and build alternative economies, societies, relations, and ways of organizing agriculture. There are alternatives to our current world, and we must build them if we are to have a just, equitable, and environmentally sustainable future. Recommendations for further research are to evaluate more deeply each of the frameworks; evaluate more alternative ideologies like social ecology and permaculture; and further examine the presented examples to better understand the principles and practices used. This Capstone, by its nature, is not able to address every aspect of each framework or existing

alternative system, each of which has a depth and breadth unreachable in this context. It is also recommended to identify and explore more examples of agriculture that are eco-socially just, to further support the challenge to neoliberal industrial agriculture.

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This chapter summarized the research that answered the Overall Research Question: *how can conceptual frameworks that challenge neoliberal orientations to nature-society relationships be applied to better understand and create more socially-just food systems and societies*? Through literature reviews of the frameworks of eco-anarchism, eco-Marxism and eco-feminism, principles that evaluate alternatives to neoliberal nature-society relations were derived and used as analytical criteria to present three illustrative agriculture examples. Together, these research findings demonstrate that it is possible to challenge oppressive systems in agriculture and instead produce nature-society relations that are just, sustainable, and liberating.

## Five—Conclusion

This chapter reviews this Capstone research and its contribution to social justice, the food system, and society. It examines what has been learned about social justice, social problems, and the role of critical inquiry in addressing the social problem of industrial agriculture. It will review key ideas around nature-society relations, discuss the important conceptualizations of social justice and the importance of critical inquiry, and conclude with the relevance of the Capstone for society and social change.

Society is the physical and ideological structures that guide our way of being, learning, interacting, and both encourages and limits our agencies to change. Society can be changed by the people within it, if given enough agency, or, more often, if agency is taken from those who would restrict it. Nature should be a factor when discussing society and social justice because of the intertwined impacts each has on the other. While nature should in some ways be separated from society, as it has its own distinct modes of being and requirements, it is inextricably linked, as I have demonstrated through this Capstone. Humans are biological beings, we rely on nature and natural systems for food and cannot survive without it, despite our best attempts to distance ourselves from our naturalness. The environment is the stage on which society is built, it is ultimately our home.

Social decisions are never limited to just the individual or group making them – others are inevitably affected. Individual choices are inevitably limited by the broader social structures, and because of that may seem inconsequential, but in fact have wide-ranging effects through either supporting or resisting the injustices of the system. Social justice can only be achieved if we acknowledge that even though we may feel our decisions are small and ineffectual, together

we can make significant changes. This Capstone presents how if we change our ways of thinking, being, and doing, we can make strides toward social justice.

Social justice is a complicated, nuanced topic that can encompass many aspects of life. My definition of social justice, the existence of freedom and the absence of hierarchy and oppression, is but one way of defining social justice. In this Capstone I expand social justice to actively include the ecosystem and the environment, making it eco-social justice. Expanding the definition to include more than just humans, opens the path to recognizing that the environment is inextricably linked to humans, and humans are a part of nature. Nature has the right to be included in the quest for justice, and if we do not alter our ways of relating to it, we will fail to fundamentally change society and achieve what we fight for. This research draws attention to alternative ways of relating to nature so that we can develop more equitable and eco-socially just agriculture. The theoretical framings investigated developed principles that are then found in practice in real world actions and examples, that challenge the current inequitable framing of nature-society relations.

Alternatives to neoliberal framings of our relationship to nature and resulting industrial agriculture can be extremely useful in imagining and enacting positive changes to our world that address social problems. My definition of social justice relies on a critique of hierarchy, and I find that the most potent framework discussed here is that of eco-anarchism. The fundamental rejection of hierarchical power structures of this framework addresses some of the deepest roots of oppression and injustice. This ideology is also more radical, and thus likely more difficult to apply, especially since we as a global society, are very entrenched in hierarchical ideas and psychologies. As a way of critically engaging with the world around us though, I find it particularly powerful.

Using powerful frameworks like eco-anarchism in research makes research more potent in the quest for social justice. Rather than reiterating or merely observing the world and its inequities, research should offer radical critiques of all aspects of society and offer alternatives when possible. Research should be more radical, as we must turn the tide against injustice rapidly – climate change is not abating, fascism around the world is rising, and we cannot be complacent in our actions. The necessity of a radical element to research corresponds with the need to utilize critical inquiry as a research paradigm.

Critical inquiry encourages us to act, to avoid complacency, because it forces the researcher and reader to actively engage and try to understand what inequality looks like and feels like. Critical inquiry has the stated goal of centering the most harmed, allowing them to tell their stories and guide the research. If, like me, the researcher and reader are more privileged, it is of vital importance that critical inquiry is used to address social problems. Our positionalities prohibit us from knowing the other without active engagement and learning on our part. Critical inquiry offers the ability to see into another's world, to hear directly from the most affected, so that we can better root out the causes of social problems and fix them. This notion of centering the most marginalized, uplifting others as they speak truth to power, coupled with radical frameworks will result in building paths to achieve social justice. It is this idea that this Capstone has attempted to demonstrate, that there are ways of changing the food system to be more socially just.

The conceptual relevance of this work to social justice and social change in food systems and society is that it organizes an overview of different frameworks and develops principles that are radically different from the neoliberal world we live in now. Further, it demonstrates existing practices of ways of organizing society and agriculture such that there is an active challenge to

neoliberal injustices. This Capstone is meant to be a salve to the justly negative worldview that many radicals hold. The overwhelming power of neoliberalism, capitalism, and their concurrent damages, socially and ecologically, seem insurmountable. Even those who dream of a better world may feel lost, overwhelmed, or hopeless. I hope this Capstone demonstrates that there are actions being taken around the world, that there are other ways of doing things if we have the courage to take the actions needed to change the world for the better. The food system and society broadly do not have to be places of inequity and pain but can be used to organize a better world.

There are an endless number of ways to organize our society. What we have now, may seem perpetual and impossible to change. But we do not need to invent wholly new ways of being, and we do not need to do it alone. There are others out there seeking the same thing, there are others out there doing the same thing. We need to find each other, and together we can make a new world possible.

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