5-2022

# School Garden Programs, Food Pathways, and Environmental Justice: Modeling Ethical Frameworks to Reclaim the Value of Care Work Through Education

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Class of 2022

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## Acknowledgements

The goal of this work is to engage with principles of care, care ethics, sustainability, and education. Following this purpose, it is essential to thank the individuals who have not only engaged in supporting this comprehensive project but also the sources of inspiration. First, thank you to my incredible committee members: my theis sponsor Professor Jeanette Pope and readers Professor Caitlin Howlett and Professor Jennifer Everett. Their patient support and gentle encouragement throughout this process have made the final product possible.

Another source of inspiration for this project–engaging with my passions for care and care work–are the individuals who I have witnessed participating in this work on a local level. Thank you to the educators and care workers who have been models for care and its essentialness within communities in my experiences. From my late second grade teacher Miss Zahm–who saw each student for who they truly were and for who they could become–and my fifth grade teacher Mrs. Worth–who encouraged students creativity and pushing the boundaries of the classroom–to my middle and high school teachers, Mr. Park–a science teacher who inspired my positive experiences in science and STEM–and Mrs. Goings–a Calculus teacher who prioritized creating a caring space in her classroom for students. Your efforts in creating caring spaces, caring for, and caring about your students are seen, recognized, and felt by many; thank you for engaging in this meaningful, but often undervalued, form of work.

As investigated in this project, relationships form an essential basis for care and care work. Thank you to my family members who have been a major source of inspiration for this project and my pursuit of a career in care. Thank you to my grandmother, a retired Registered Nurse, for her stories of meaningful intentional care which inspired me to pursue a career in the healthcare field. Thank you to my mother–a "stay-at-home mom" –who sacrificed a professional career to take on an undervalued role of care. From memories of her waking up every morning to make my brothers and I breakfast before school for 12 years to other small acts of daily care, she participated in shaping my understanding of the importance of care work. To my readers who engage in care work, thank you for your intention, time, and care in a system

that consistently and constantly undermines your legacies. May this piece offer you a source of validation of the value of your work, intention, and care.

## Introduction

## The School Garden and Its Potential

The concept of the school garden embodies an, oftentimes, overlooked piece of educational, environmental and urban history. This physical theory and movement ranges back to the early 1800s in the United States. According to Brain Trelstad in his work "Little Machines in Their Gardens: A History of School Gardens in America, 1891 to 1920," which examines the historical context of the school garden and its evolution: "Staying after the regular school day and into summer vacations, the children cultivate their own plots in hopes of earning a profit that could contribute to their family's income or provide them with spending money" (Trelstad, 1997). Furthermore, the later transition and split of the concept of the school garden into the Nature-Study movement–emphasized the need for early connections between humans and the environment in order to ensure more productive and profitable management of resources.

However, despite this origin of the school garden based in a capitalist framework and with capitalist intentions of profit, managing labor, and grooming the potential of a future labor force, the school garden today can be a reimagined physical space in education. By examining existing literature on school garden programs, their design, and critiques, the future of the school garden can be reimagined to incorporate tenets of ethics education and reframe caring relations between humans and nature.

Questions arise such as: How can the design of the school garden serve the purpose of both fostering connection with nature and incorporating the fundamentals of care ethics and permaculture ethics? Additionally, how can school garden education programming utilize a pedagogical design to reclaim the value of care work in the context of the classroom within capitalist structures? Through answering such questions, the thope will be to not only interrogate existing systems of education and frameworks, but create an alternative future through school garden education programming which highlights care ethics, permaculture ethics, importance of care work, and understandings of fostering reciprocity and relationships.

Society versus Nature:

Perpetuating Arguments of the Anthropocene, Effects of the Capitalocene, and Capitalist Ecology

"Such views evidently rest upon Human/Nature Dualism and its cognates. This dualism obscures

our vistas of power, production and profit in the web of life. It prevents us from seeing the

accumulation of capital as a powerful web of interspecies dependences; it prevents us from seeing

how those interdependencies are not only shaped by capita, but also shape it; and it prevents us

from seeing how the terms of that producer/product relation change over time"

-Jason W. Moore, "The Capitalocene, Part I: on the nature and origins of our ecological crisis"

Fundamental understandings of the "environment," what entities comprise this environment, and

the value of such entities and individuals is embedded in ideologies of the *Anthropocene*. However, this

framework of historicization works simultaneously to reproduce a dualist nature of Human/Nature and

perpetuate ideologies of "Society versus Nature" as distinct and independent from one another. Through

this construction of humans as independent from Nature removes any reasoning of interdependence,

relationship, or reciprocity. Given this separation between Nature/Humanity, it can also be argued that the

defining of the Anthropocene and what takes value in this system further legitimizes and serves as the

groundwork for the historization of the *Capitalocene*.

*Issues of the Anthropocene: The Reality of a Collective Human Actor*

The Anthropocene can be understood as recognizing the geological, environmental and global

effects of human actions against non-human life (Lewis & Maslin, 2015). However, many would argue

that this perspective serves as a dismissive response to humans long-term consequences on the

environment. Rather than lay blame for severe consequences on capital, systems, culture, colonialism, or

capitalism, the Anthropocene attributes this role to, "...the *Anthropos*: humanity as an undifferentiated

whole" (Moore, 2017, p. 595). This undifferentiated whole or "homogeneous humanity" fails to recognize

"inequality, commodification, imperialism, patriarchy, and much more from the problem of humanity-in-nature (Moore, 2016, p. 4). The historical account told by the Anthropocene can be understood as an "easy story" as "...it does not challenge the naturalized inequalities, alienation, and violence inscribed in modernity's strategic relations of power and production" thus, "It is an easy story to tell because it does not ask us to think about these relations *at all*" (Moore, 2016, p. 4). In other words, the historical narrative relayed by the Anthropocene intentionally fails to recognize the specific systems and frameworks that perpetuate harm against the environment.

This recognition of the collective *Anthropos*, or "collective" human actor, as playing the major active role in harm to the environment serves as a way to center the human perspective in the narrative as well as set a clear line of Society versus Nature. According to James W. Moore in his work "The Capitalocene, Part I: on the nature and origins of our ecological crisis" which interrogates the ideologies of the Anthropocene and its role in the development of the Capitalocene argues that the Anthropocene, "...fits easily within a conventional description—an analytical logic— that separates humanity from the web of life" and "...makes for a familiar story, one of Humanity doing many terrible things to Nature" (Moore, 2017, p. 595). Notably, this delineation between Society and Nature serves as a fundamental basis of the Capitalocene.

*Introduction of the Capitalocene: A Capitalist World Ecology and Cheap Nature*

The distinct binary of Nature and Society serves fundamental to the ascribed "Capitalocene." Moving beyond the superficial examination of this relationship, it is essential to examine how this relationship manifests itself in language and discourse. First, considering the phrasing of "Nature versus Society," illustrates an oppositional relationship. In this oppositional, bellicose seeming rhetoric, "Society" dominates the other. Such rhetoric and language reflects the basis for this dualist view in capitalist ecology, relying on hierarchization to determine and construct "value."

The influence of language is highlighted in Martin O'Connor's explanations of the production of nature through connections to thermodynamic theory, hierarchical structures, and need for control. In his argument, O'Connor states: "It is important to stress the idea that the environment of a system is delineated dialectical, referring to whatever is "other" to the system of analytical interest. This boundary signifies a relationship or, better, engenders a relationship" (1994, p. 60). Furthermore, "The analytical relevance of environment rests on the recognition that often the behavior of a system can be comprehended only through considering the system's interactions and exchanges with its environment. The notion of interdependence is the kernel of the concept to an open system" (O'Connor, 1994, p. 60). Essentially, the idea of "othering" according to a Human/Nature binary serves to create the framework for relationships. But the question should be asked: What kind of relationship does this "othering" of Nature (and the bodies that are bound by its definition) engender? This "othering" can be argued as not only an undermining of the value of Nature, but also a form of violence against these bodies that "fit" the category of "other." If understood as an act of violence, the questions raised in discourse framed by the story-telling of the Anthropocene and Capitalocene can provide insight into the potential hierarchization of Society versus Nature. Ideologies of the Anthropocene and Capitalocene are embedded in discourse: What bodies have value? How do we determine the value of these entities? These questions embedded in the hierarchical organization of capitalism also function to produce the idea of "Cheap Nature."

These embodiments of the Human/Nature and Society versus Nature dualist perspective in discourse not only serve as an organizing principle of knowledge but also as a "real abstraction." In Raj Patel and Jason W. Moore's book *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet*, the authors recount the history of seven major cheap "things" –or specific entities, ways of knowing, and bodies which capitalism has sought to reduce the value of–as well as define the major issue of "real abstractions." According to Patel and Moore, "Real abstractions aren't innocent: they reflect the interests of the powerful and license them to organize the world" (Patel & Moore, 2017, p. 47). In other words, the real abstraction of Nature as distinct, independent, and ranked lower than Society/Humanity in the capitalist ecology legitimize the devaluing of specific bodies that are

"bound" by Nature. These specific bodies bound by the scope of "Nature" according to the Capitalocene include: critter, fauna, and natural resources. However, these real abstractions not only manifest themselves in examples of environmental injustice and climate change but also in issues of racial injustice, the pay gap, deforestation, and animal extinction.

Similarly understood by Moore in "The Capitalocene, Part I: on the nature and origins of our ecological crisis," he argues that:

> "Such dualisms confuse modernity's historical movements (e.g. alienation) for philosophical abstractions ('separation from nature'). They elide the deep, profound and intimate porosity and permeability of human sociality, whose forms are specific, uneven and distinctive. Nature/Society dualisms cannot discern the flows of human and extra-human life as they bond and bundle with each other; they prevent us from asking questions about the connective tissues of human sociality. Green Arithmetic, in other words, offers a Human/Nature binary that can proceed only be converting the living, multi-species connections of humanity-in-nature and the web of life into dead abstractions–abstractions that connect each other as cascades of consequences rather than constitutive relations" (Moore, 2016, p. 6).

Thus, Green Arithmetic–referring to an idea in which "Nature plus Society equals the Whole" –re/produces the dualist idea of Human/Nature and leads to further legitimizes acts of violence against specific bodies and entities via "dead abstractions" (similar to the "real abstractions" discussed by Patel and Moore in *A History of the World in Seven Cheap Things*). The "dead abstractions" and "real abstractions" represent clear ontologies that have clear consequences against bodies bound by "Nature." Furthermore, these "dead abstractions" directly invalidate, undermine, and ignore the essential interdependency embedded in relations between not only humans but also humans and extra-humans.

*Global Bookkeeping, "Cheap Nature," and Green Arithmetic*

The theorizing of Green Arithmetic can also be considered an extension of the fundamentals of "Cheap Nature." Both illustrate and rely on the legitimization of violence against specific bodies–human and extra-human–based upon a sort of "global bookkeeping" central to the development of capitalism. Argued by Jason W. Moore in his work, "The Rise of Cheap Nature," is, "To put most humans into the category of Nature rather than Humanity was to enable an audacious act of global bookkeeping" (Moore, 2016, p. 10). Such "global bookkeeping" referred to by Moore takes into account the calculated movements of capitalist mechanisms in defining which forms of work and energy are compensated.

Central to these mechanisms of capitalism is the necessity in defining value. Such laws of value connect capital, work, power, and energy. Fundamentally, capitalism relies on a "metabolism of capital, power, and nature is governed by a logic of value accumulation…" (Moore, 2016). According to Moore, "Capitalism's "law of value" was, it turns out, a law of Cheap Nature. It was "cheap" in a specific sense, deploying the capacities of capital, empire, and science to appropriate the unpaid work/energy of all global natures within reach of capitalist power" (Moore, 2016, p. 9). Thus, capitalism as a world ecology relies on the conceptualization of exploited and appropriated work and energy by specific human and extra-human forces based on a logic of accumulation. This logic of value accumulation functions to reduce the world to specific "zones of exploitation (surplus-value) and appropriation (of unpaid work)" (Moore, 2016). These "zones" rely primarily on and were introduced by philosopher and political theorist Karl Marx's "Labor Theory of Value" which functions based on labor productivity of paid work.

Fundamentally, "The appropriation of frontier land and labor–Cheap Nature–has been the indispensable condition for great waves of capital accumulation…" (Moore, 2016, p. 23). In other words, these zones of exploitation and appropriation within the capitalist world ecology logic function to create a system of "cheapening" that allows for increased profit and capital generation. "Capitalism has been able to outrun the rising costs of production by co-producing manifold Cheap Nature strategies, locating, creating, mapping, and quantifying natures external to capitalism but within reach of its power" (Moore,

2016, p. 23). Simultaneously, capitalist structures define Nature as outside the bounds of value–via a process of cheapening–and wield social power in its exclusion and exploitation.

The language of Cheap Nature in terms of an act of global bookkeeping is intentional; the calculated defining of value, or lack thereof, based on the law of value of capitalism manifests itself in the form of harmful, violent abstractions towards nature. Before identifying the specific consequences of these frameworks of knowledge and power, it is essential to understand how the logic of the capitalist ecology manifests itself in the exercising of social power. Ultimately, these "cheapening" mechanisms of value, according to a capitalist ecology, impact the value of specific forms of labor, work, and embodiments.

Moving Beyond the Classroom:

Care Work in the Context of Capitalism

The implications of the "Cartesian divide" of Nature/Society central to the Capitalocene and

theorizing of "Cheap Nature" affect human and extra-human beings alike. Nevertheless, the structuring of

the Human vs. Nature divide, functioning contemporarily through mechanisms of capitalism, is embedded

with questions of race and gender. Questions raised by the dualist idea of Human/Nature include: Who

counts as human? Which bodies are bound by Nature, and thus, non-human and extra-human? If a body is

extra-human, how is their labor, work, and energy valued? Notably, the answers to such

questions–according to the capitalist world-ecology–have a deeply racialized and gendered history.

In the early structurings of "Nature" and "Human," it was made clear that specific bodies would

be categorized as extra-human life. According to Moore in his work "The Rise of Cheap Nature," the

Human/Nature distinction was divided with, "...most humans were part of Nature, and this designation

worked through the new divisions of labor" providing the example, "An African slave was not part of

Society in a new capitalist order, but part of Nature–giving a post-Cartesian twist to Patterson's

characterization of slavery as "social death" (1982)" (Moore, 2016, p. 10). The capitalist order worked to

construct the limits of the "Human" through divisions of labor. Given these divisions in labor power,

"Most human work was not labor-power and therefore most humans within capital's gravitational pull

were not, or not really, Humans…" and thus, "...the realm of Nature–as an ontological formation and

world-praxis–encompassed virtually all peoples of color, most women, and most people with white skin

living in semi-colonial regions (e.g. Ireland, Poland, etc.)" (Moore, 2016, p. 10). Thus, the capitalist world

ecology creates and re/produces systems of inequality, specifically in relation to marginalized identities.

According to author Beatrice Müller in the work "The Careless Society–Dependency and Care Work in

Capitalist Societies," the basic functionings and "logic of capitalist societies not only hinges on unequal

class relations, but also on the devaluation and externalization of elements of care and its relegation to the

private sphere where it is performed (mostly) as unpaid and invisible labor" (2019). A clear manifestation

of this devaluation of care is in the ways the value of care work is understood in the capitalist world ecology.

*What is Care?: Defining of Care and Care Work in a Framework of Cheap Nature*

Traditionally, when we think of care work, we think of jobs including educators, child care providers, and health-care providers. However, the definition of care work extends beyond these specific positions that would seem to embody values of care. For example, the care ethics approach can provide a framework to understanding what care work is, what values are embodied in care work, and who is affected by these forms of care.

First, to define care and caring in the context of care work: "Caring has at least four distinct aspects or phases, represented by different types of thoughts and actions" (Keigher, 2000, p. 83). The language and discursive elements of these four aspects of caring and care are important in evaluating care work in a framework of capitalist world ecology. One of these aspects or phases of caring–arguably the most fundamental aspect–is ""caring about others" or attentiveness–noticing when another needs care (Tronto, 1999)" (Keigher, 2000, p. 83). Notably, this form of caring incorporates "caring about" involving the recognition of another's need for care, consequent vulnerability, and fundamental interdependency. Another aspect of care is ""caring for" or "taking responsibility" for the care of others (Tronto, 1998, p. 16)" (Keigher, 2000, p. 83). Essentially, this aspect of care in care work includes questions of responsibility and obligation (to care for others). Such questions include: Who is one responsible or obligated to care for or provide care to?

Expanding from these more conceptual, abstract phases of care, "A third aspect of care is "caregiving," or "competence…" indicating, "...having skills and qualities required for giving care, or for doing actual care work" (Tronto, 1998)" (Keigher, 2000, p. 83). These skills involved in caring exemplify the physical performance of care work and presupposing qualifications to perform such work. According to Keigher, the fourth and final element of caring is ""care receiving or responsiveness" by the caregiver

so that the person cared for is safe and comfortable, and the care given improves his or her situation

(Tronto, 1998)" (2000, p. 83). In sum, this final aspect of caring requires that a caregiver be "sensitive" to

the needs of another individual and "receptive to feedback" as well as "willing to change his or her

approach" (Keigher, 2000, p. 84). Clearly, these concepts of caring involve recognizing interdependency,

vulnerability, and relationality.

A major principle–according to care ethics theorists and feminist phenomenologists–is a focus on

the relationality of care work. Rather than focus on universal rights, principles and judicial regulation, this

perspective focuses more on criticizing the underlying androcentric assumptions, specifically the

assumption that all subjects are autonomous and independent (Müller, 2019). "In contrast, care ethics

theorists build on an ontology of relationality that conceives of people as living within a network of care

and dependency (Schües, 2016, 253)" (Müller, 2019). In contrast to the stark independence emphasized

by a capitalist framework–in which "patriarchal capitalism images subjects to be autonomous, young,

white and independent"–a care ethics approach to care work highlights a fundamental interdependency

(Müller, 2019).

Another interpretation of care work from a feminst ethics perspective similarly argues that care

and care work function in direct opposition to the system of "cheapening" and devaluation perpetuated by

a capitalist world ecology. Introduced in the work, "The Challenge of Caring in a Capitalist World" by

Sharon Keigher, "Caring, according to feminist political philosophers Berenice Fisher and Joan Tronto

(1990), is a positive dimension of our lives that has been devalued socially by a capitalist and patriarchal

order" (Keigher, 2000, p. 83). In other words, caring is a relationship/relationality and embodiment that is

consistently undermined and devalued by capitalism's definition of value based on accumulation.

Despite these understandings of care and care work as a relational and embodied form of work,

such values and relationality are constantly structured as abject via patriarchal capitalism. The "abjection"

of this form of work is another form of the undermining and devaluation of care work. As previously

suggested, the subject constructed by patriarchal capitalism is "...the modern and postmodern (male

subject is pictured as free from care needs" (Müller, 2019). However, the reality of this subject is tied to

the subject's relationship with the abject as, "...the persistent sign of the subject's necessary relation to animality, materiality, and ultimately death (Grosz, 1990, 89), the threat of which must be negated and rendered abject" (Müller, 2019). Thus, abjection of care work is central to patriarchal capitalism's structures of value. Although "Patriarchal capitalism… relies and builds on care work…" it also requires that, "...the specific elements of care to be structured as abject, unpaid and invisible" (Müller, 2019). By making care work–as a form of work that reveals both interdependency, relationality, and subject vulnerability–invisible and abject from structures of the capitalist world ecology's hierarchy of value legitimizes the devaluation of these forms of "non-productive" labor and perpetuation of the "independent" subject.

The masking and invisibility of care work from hierarchies of value in a framework of "Cheap Nature" is essential to the devaluation and labeling of these values as "unpaid work." Therefore, it can be argued that, "The concept of value abjection is thus an analytical tool that enables a critique of power relations that structurally externalize and devalue care and constitute care as non-work" (Müller, 2019). The invisibility of care work from the formal economy of paternalistic capitalist economic arrangements raises the question: If this form of [care] work is invisible from the formal economy, then how can we recognize its existence and consequent value? This invisibility, and following question of existence and value leads to harmful externalizations and manifestations of this abstraction in the devaluation of care work. Ultimately, value abjection serves as one of the mechanisms of a capitalist world ecology which constructs care work and care as "non-productive" labor and produces a harmful abstraction of the value of care work. This violent abstraction of care work and care values also has a gendered and racialized history rooted in paternalistic capitalist economic arrangements.

*Theories of the Devaluation of Care Work*

In reasoning the value of care work, five theoretical frameworks have been presented. These five major theoretical frameworks are: the "devaluation" perspective, the "public good" framework, the

"prisoner of love" framework, the "commodification of emotion," and the "love and money" framework. These frameworks seek to answer questions of the role of care work in a capitalist world ecology, explain the intrinsic value of this form of work, and provide explanation to the historical and contemporary undermining and abjection of this form of work.

Upon the construction of public goods by economists as "...those that have benefits from which it is impossible to exclude people who do not pay" (England, 2005, p. 385). Given this definition of public goods, feminst and gender scholars have recently contended, "...all care work, paid and unpaid, may create public goods" (England, 2005, p. 385). Considering the social benefit value of a public good framework, it is argued that, "Care work, whether paid or unpaid, often includes investment in the capabilities of recipients" (England, 2005, p. 385). Nonetheless, such an argument for the production of public goods by care work also can provide an explanation as to the devaluation of care work. Although the social return of public good is greater than the private return, a capitalist framework functions based on ideas of surplus and profit. Thus, these benefits of care work in producing public goods are often undermined and undervalued by capitalist structures.

Other frameworks conceptualizing care work rely more on affective relations and principles. More specifically, the "prisoners of love" framework as well as the "commodification of emotion" framework understand care work through a lens of emotions involved in caring. Therefore, according to a "prisoners of love" framework, care work is devalued and undermined via an argument that, "...care work departs from traditional economistic views, which define work as an activity performed despite its intrinsic disutility, simply in order to earn money" (England, 2005, p. 389). Rather, the "prisoners of love" theory, "...calls attention to differences between jobs in their intrinsic rewards or penalties" (England, 2005, p. 389). Consistent with this idea of the "intrinsic" value of care work, the point can be raised: "...if the marginal worker sees the intrinsic properties of the work as an amenity, this permits a lower wage" (England, 2005, p. 389). Such conceptualizations of the intrinsic properties of care work–including altruism and kindness–further legitimize the decreased compensation for this sector. To summarize, "...if the marginal worker to caring occupations finds satisfaction in helping people, this will allow employers

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to fill the jobs with lower pay than in comparable jobs without the helping component" (England, 2005, p. 389). Upon examining the wage penalty of individuals in the care work field, it is clear that an argument to "cheapen" this form of labor relies on perceptions of values associated with care work including altruism, kindness, and helpfulness.

Enmeshed with the devaluation of care work based on associated values of altruism and kindness is the framework of caring known as the "commodification of emotion." As the capitalist world ecology structures value around accumulation and creation of commodities, the question should be asked: "What happens when care is a commodity?" (England, 2005, p. 391). This question of the commodification of emotion serves to examine the ways in which–once emotion or expression of emotion through labor is commodified–these forms of work associated with expressing emotion are "cheapened" and devalued. The term coined by Hochschild (1983) "emotional labor" introduces the ways in which care work is commodified, as a form of emotional labor, and thus devalued. "She [Hochschild] emphasized how being recruited by capitalists to sell one's emotion is harmful to workers" (England, 2005, p. 391). Again highlighting the devaluation of care work, emotional labor is exploited by a patriarchal capitalist economic arrangement as it forces care workers to "sell" their emotions despite appropriate compensation.

Altruism, as a value of care work, is generally used to defend the commodification and devaluation of care. Another exemplification of the functioning of values of care in the undermining of care work is represented in dichotomies of the capitalist world ecology. The "love and money" framework of care work reflects a "...deeply ingrained habit of dichotomizing spheres…in neoclassical economics as well as in Marxism" (England, 2005, p. 393). The dichotomizing and dividing of spheres is illustrated in the Human/Nature binary, the male/female gender binary, and the dichotomy between love and money. Explained by England, "Because male and female are seen as opposite, and because gender schema organize so much of our thinking, we develop a dualistic view that "women, love, altruism, and the family are, as a group, radically separate and opposite from men, self-interested rationality, work, and market exchange" (Nelson & England 2002)" (England, 2005, p. 393). Therefore, by associating specific values,

actions, and behaviors with heteronormative gender roles, defense of care work–embodying values connected to "femininity" –as needing to be compensated less to prioritize these values is perpetuated.

Connectedly, the "devaluation of care work" connects directly to gender biases embedded in patriarchal capitalist economic structures. Fundamentally, this framework explains the lower value of care work as caused by the direct association of who completes such roles in society. As explained by Paula England in the work "Emerging Theories of Care Work," the devaluation of care work framework "...as an explanation of the relatively low pay of female occupations, including those involving care" (England, 2005, p. 382). Connecting to the externalization of the abstractions of heteronormative gender roles, "Cultural ideas deprecate women and thus, by cognitive association, devalue work typically done by women" (England, 2005, p. 382). Nevertheless, this framework can be extended beyond gender roles and gender bias in society. "The devaluation perspective can be applied to race as well as to gender" (England, 2005, p. 384). Connecting to the Human/Society versus Nature binary perpetuated by a capitalist world ecology, Jason W. Moore's arguments in "The Rise of Cheap Nature" reflect:

> "That boundary – the Nature/Society divide that the Anthropocene affirms and that many of us now question – was fundamental to the rise of capitalism. For it allowed nature to become Nature – environments without Humans. But note the uppercase 'H': Nature was full of humans treated as Nature. And what did this mean? It meant that the web of life could be reduced to a series of external objects – mapped, explored, surveyed, calculated for what Nature could do for the accumulation of capital. And the substance of that value? Human labor productivity – but not all humanly productive work – measured without regard for its cultural, biophysical, and cooperative dimensions. Human work as abstracted, averaged, deprived of all meaning but for one: value as the average labor-time making the average commodity" (2016, pp. 8-9).

Overall, the abstraction of some forms of human work as "non-productive" and consequently "unpaid" labor relies heavily on a racialized and gendered construction of Nature. Such trends in which forms of work and which laborers are labeled as "non-productive" are visible in contemporary statistics.

For example, in the case of care work performed by white women versus women of color is further explored by England. "Although paid care work requiring a college degree is done largely by white women, much care work without such requirements is done by women of color, some of whom are immigrants (Hondagneu-Sotelo 2001, Misra 2003, Romero 1992)" specifically noting that, "The work done by these women is the lowest paid" (2005, p. 384). Thus, the devaluation framework is reflected in existing and contemporary compensation practices and statistics.

Further research into the issue of devaluation of care work tied to racialized and gendered mechanisms of a patriarchal capitalist economic arrangement, it was found that, "While women and minority men continue to be clustered in lower paying direct care occupations, the more technical frontline allied health occupations may be culturally reinterpreted as men's work, preserving conventional understandings of masculinity (Dill, Price-Glynn, Rakovski, 2016, p. 355). Thus, even in the field of care work which exemplifies devaluation, there exists hierarchies of value within this form of work tied to the construction of "femininity" and "masculinity" in care. This same study, titled "Does the "Glass Escalator" Compensate for the Devaluation of Care Work Occupations?" also found that, "When we included occupational control variables for all workers with production occupations as the reference group, we found that direct care workers earned 10 percent less than their blue-collar counterparts. This suggests that even in today's economy, where manufacturing jobs have declined in availability and job quality, men in direct care occupations still experience a substantial "wage penalty" for working in a feminized care work occupation, when controlling for personal demographics. These findings indicate that the glass escalator does not mitigate the lower wages in direct care occupations that are strongly associated with "women's work"" (Dill, Price-Glynn, Rakovski, 2016, pp. 351-352). These major frameworks of care work illustrate both the racialized and gendered history of conceptualizations of care work and its associated value reflected in contemporary statistics of low wages in the care sector.

*A Gendered History of Care Work: Parallels of Constructed Roles of Women and Nature*

According to conceptualizations of care work including the "devaluation of care work" framework, the undermining of care and caring is based on gendered ideas of labor and associated values. Thus, an ecofeminist perspective can provide further insight into the specific historical mechanisms which function in a paternalistic capitalist economic arrangement. Such an ecofeminist perspective focuses further on the constructed dichotomous arrangements that simultaneously define value and "productive" labor.

Ariel Salleh's work "Nature, Woman, Labor Capital: Living the Deepest Contradiction" within the book *Is Capitalism Sustainable?: Political Economy and the Politics of Ecology* investigates not only the ecofeminist perspective in the debate of care work value, but also historical examples of the structuring of woman and nature. "For ecofeminists, capitalism appears as a modern form of patriarchal relations, in which most women experience a social reality very different from their brother in capital or labor" (Salleh, 1995, p. 108). This social reality for women in capital and labor referenced by Salleh connects to the defining of care work, emotional labor, and "women's open-ended labor role" as outside of the formal economy.

The delineation of roles and work associated with women outside the formal capitalist economy was fundamentally due to women's capacity for reproduction. "Marxist-feminist authors aptly pointed out that the rationales for the sexual division of labor were patriarchal and ultimately based on women's capacity to bear children and their roles as mothers" (Müller, 2019). Thus, the construction of "...the bourgeois notion of motherhood shifted from a purely biological role to a simultaneously biological and social one (Beer, 1987, 164). Unequal gender relations can thus be considered a condition that enabled the emergence and reproduction of capitalism (Hagemann-White, 1984; Beer, 1987)" (Müller, 2019). The transition of "the mother" as well as women's connection to Nature legitimized the outsourcing of care work and emotional labor to the reproductive sphere, assigned to women (Müller, 2019). This defining of "reproductive labor" as outside that of the formal economy also forms a system of language that is

exploitative and oppressive. Noting the "discursive construction of gendered labor," work done by men is "...typified by the positive side of the symbolic gird, endorsing masculin identity as separate from nature, productive and progressive" (Salleh, 1995, p. 117). In other words, labor such as mining or engineering–traditionally male roles–although consisting of a hands-on transaction with the environment, is constructed by a patriarchal capitalist economic arrangement as productive labor. "By contrast the language that typifies women's work– "re-production" –degrades her along with nature itself" (Salleh, 1995, p. 117). In considering the ways in which care work and emotional labor are categorized as "women's labor" and, thus, within the reproductive sphere of labor, forms an ontology that such labor is "re-productive" rather than "productive." The major difference between "re-productive" and "productive" provides legitimization for the devaluation of these gendered forms of labor.

Moreover, these formations of "re-productive" labor as less valuable and "productive" rely on gendered relations to Nature. Upon evaluating the traditionally gendered labors of women including but not limited to domestic labor: "The common denominator of these activities is a labor "mediation of nature" on behalf of men, which function continues despite legal recognition of "female equality" by nation-states" (Salleh, 1995, p. 112). This role of women as "mediators of nature" legitimizes both the simultaneous exploitation and devaluation of women's bodies and labor. Accordingly, "While women's bodies under capitalism have never come to obtain a rent as land does, they are nonetheless "resources" for free by capital to provide ever new generations of exploitable labor" (Salleh, 1995, p. 112). Furthermore, constructing female bodies and labor as "exploitable" reflects a comparison to the exploitation of natural resources. "How the line may be drawn between woman as "natural resource" and woman as "not quite labor" appears to be indefinitely flexible" (Salleh, 1995, p. 112). To summarize, the "indefinite flexibility" that author Ariel Salleh refers to illustrates a patriarchal capitalist manipulation of meaning and ideology to create value, opposingly, reason for a lack of value.

Comparing the objectification of women's bodies and labors within a "Cheap Labor" framework reveals parallels to the exploitation and subjugation of Nature. "Women are doubly objectified by these two forms of structural violence. Like nature, they are readily available and disposable; and like nature

under capitalist patriarchy, they have no subjectivity to speak of" (Salleh, 1995, p. 112). Essentially, recognizing subjectivity in this case can be argued as a recognition of value. Furthermore, "In the androcentric discourse of economics, the material contribution of women remains largely unspoken in much the same way that the material contribution of nature is attributed to zero value" (Salleh, 1995, p. 113). These material contributions in a "commodity-producing patriarchy" are directly "...opposed to the logic of value with their morality of competition, profit, power, etc… (Scholz, 2011, 123)..." (Müller, 2019). Again, this opposition to the "law of value" based on "Cheap Nature" further reasons for an invisibility and zero value determination for labors and work of women and nature.

*Oppression in a Capitalist World Ecology: Introduction to the Nature–Woman–Labor Nexus*

The value of and resulting exploitation of work done by and energy and power expended by women and nature leads to the introduction of the "nature–woman–labor nexus" introduced by ecofeminist discourses. "By introducing the nature–woman–labor nexus as a fundamental contradiction…" Salleh contends, "...ecofeminism affirms the primacy of an exploitative, gender-based division of labor, and simultaneously shifts the analysis of all oppressions toward an ecological problematic" (1995, p. 110). This nuanced movement in logic–transitioning from evaluating oppression individually to analyzing oppression as an ecological problem–reveals the ways in which both women and nature are exploited in parallel. "Yet it is not just women's livelihood at stake here…" Salleh reasons, "...the natural environment is exaully externalized and decimated by these priorities" (1995, p. 111). Rather, "The structural intertwining of women's exploitation with the depredation of nature is illustrated at "development's" every turn" (Salleh, 1995, p. 111). In sum, women's association and constructed connection to nature not only define's women's work within a capitalist world ecology, but also defines the exploitation of these gendered labors and "natural resources." One example of the externalizations of these exploitations can be found in the recognition of the deterioration of the substance of women's bodies similar to the deterioration of the natural environment. Salleh points out the example of "clean-up"

programs sanctioned by the capitalist state: "...for example, battered women's refuges, addiction counseling–that parallel environmental efforts as resource recycling and restoration of toxic lands" (1995, p. 116). Although a capitalist framework recognizes the harms done and the degradation of specific spaces and bodies categorized as "natural resources," nothing is done in regard to "righting" the systems that perpetuate and perform this harm. Thus, "What ecofeminism demands is a fully amplified critique of capital's degradation of "conditions of production," based on recognition of the *nature-woman-labor nexus* as a fundamental contradiction" (Salleh, 1995, p. 117). In proposing solutions to the devaluation and invisibility of gendered labors–i.e., care work and emotional labor–from the formal economy in a patriarchal capitalist arrangement, an ecofeminist argument indicates that recognition of the ways in which this existing system frames and understands the labors, production, and energies of women and nature must be reconfigured.

Regarding potential solutions in the realm of politics and sustainability, an ecofeminist framework proposes further solutions for reconfiguration. Accordingly, these solutions and reframing of women, nature, labor, and history are organized in several clear statements. For example, ecofeminists call for the recognition of Nature and History as a material unit (Salleh, 1995, p. 119). Additionally, "Nature, women, and men are at once active subjects and passive objects" (Salleh, 1995, p. 119). Such a statement reflects the simultaneous actions of humanity-in-nature and nature-in-humanity. (Moore, 2015). In other words, this reframing of the active subject and passive object parallels an understanding that, ""Society" is not only a producer of changes in the web of life but also a *product* of it; this is the heart of a co-evolutionary method in which human history is always bundled with the rest of nature" (Moore, 2015). Recognizing women and nature as active subjects–in contrast to the historical understanding both as "passive objects" and "natural resources" for exploitation–acts to reclaim the subjectivity, and thus "voice" of both women in nature in the "formal economy." This reclaiming of subjectivity and "voice" also serves to  position these forms of labor as "productive."

Connected to this reframing of the historically gendered narrative of care work, an ecofeminist approach requires acknowledging that, "The woman-nature metabolism holds the key to historical

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progress" (Salleh, 1995, p. 119). Phrasing such as "woman-nature metabolism" illustrates thermodynamic principles of energy and work in evaluating the labors of women and nature. Thus, recognizing the power, energy, and work done by women and nature historically and contemporary serves as a means to transform future (sustainable) actions and relations.

In transforming and reimaging future actions and relations, ecofeminists propose the use of reproductive labors guided by care as a model for sustainability and sustainable action (Salleh, 1995, p. 119). Utilizing reproductive labors guided by and centralized by care opposes the logic of patriarchal values and systems/laws of value based on commodity, competition, scarcity, profit, and accumulation. Thus, such oppositional logic serves as a framework to reimagine a future of sustainability and politics outside of the historically patriarchal capitalist world ecology. Framed by systems of value grounded in models of reproductive labors centered in care allows for the recognition of care work, emotional labor, and the labor/work of nature as valuable, thus transforming relationships with nature.

## Permaculture Ethics and Care Ethics:

## Using Ethical Frameworks to Revitalize Relationships with Nature

Generally, traditional ethical frameworks rely on the distinguishing of the moral "right" and "wrong" rather than responsibility and connection. Fundamentally, these ethical frameworks rely on a "morality of rights" to code judgements. For example, Utilitarianism ethical theory considers two major principles: "(1) *the consequentialist principle* that the rightness or wrongness, of an action is determined by the goodness, badness, of the results that flow from it and (2) *the hedonist principle* that the only thing that is good in itself is pleasure and the only thing bad in itself is pain" (Quinton, 1973, p. 1). Thus, Utilitarianism focuses on a calculated approach to maximizing the benefit and minimizing consequences of a certain choice. In comparison to the Utilitarianism approach to ethical decision-making, the Rights Approach emphasizes consideration of fundamental human and moral rights of individuals affected by a decision. More specifically, the Rights Approach relies on ethical reasoning based on a listing of fundamental, inherent moral and human rights.

Both of these described theories are commonly used and acceptable in ethical decision making within the capitalist framework. Such theories align with the "values" of the capitalist world ecology including maximizing profit, value based on accumulation, and minimizing consequences that will limit a surplus. While the Utilitarianism approach takes a calculated, measured approach to decision-making–like that of the global bookkeeping required by Green Arithmetic and "Cheap Nature"–the Rights Approach to ethics requires the defining of the "human." In other words, the Rights Approach associates specific moral rights with the "human" body/being. Therefore, when considering the application of each approach, it should be asked: Who is calculating the utility of a decision? Which bodies, beings, and subjectivities are afforded meaning and, correspondingly, (moral) rights?

Beyond such questions of the ways in which traditional ethical frameworks not only define the subject but also the human, it is clear that these moral arrangements align with principles of independence and autonomy rather than interdependence and relationality. Nonetheless, if we are seeking to reframe this

structure or envision an alternative future, what sorts of ethical frameworks can be used to "right the wrongs" of the Capitalocene and harms perpetuated by a capitalist world ecology? In this case, I propose that understandings of feminist care ethics and permaculture ethics be utilized in reorganizing existing structures to recognize interdependence and relationality to foster caring relationships between "Society" and "Nature." By recognizing humans' embeddedness in an interconnected, interdependent web of life, a different form of ethical logic can be developed and prioritized in forming meaningful, intentional relationships with the environment.

*Care Ethics: Recognizing Interdependence and Role of Affective States*

In contrast to traditionally accepted and utilized ethics of Utilitarianism and Rights Ethics, a Feminist Care Approach offers an altnerative structure of ethics relying on understandings of fundamental interdependence, recognition of vulnerability, and accepting emotion in moral considerations. Originally introduced by Carol Gilligan–an American ethicist and psychologist–in her work *In a Different Voice: Psychological Theory and Women's Development* Gilligan proposes a different moral development model to that of Lawrence Kohlberg and his theory of moral development. Gilligan's Theory of Moral Development argues that women's moral development is guided by relationships as well as feelings of care and responsibility to others. Alternatively, this theory also proposed that men's moral development is guided by a focus on justice (i.e., equality, fairness). By proposing such a model for moral development, Gilligan's understandings of moral development in terms of relationality versus independence provided a basis for a Feminist Care Ethics.

Commonly understood as a form of virtue ethics and feminist ethics, "Care Ethics" has remained a rather loosely applied and understood ethical framework. Despite such vague interpretations and applications of this ethic, major tenants of an ethic of care remain the same throughout different interpretations. More specifically, broad consensus has been reached that an ethics of care emphasizes the importance of relationships and relationality. Furthermore, ethics of care recognizes the moral

significance of affective states or emotions in moral judgements and acts of care. Related to the way that an ethic of care prioritizes relationships and relationality, recognizing emotions as playing a role in moral judgements also is a clear aspect of relationships. According to Held, an ethic of care "...typically appreciates the emotions and relational capabilities that enable morally concerned persons in actual interpersonal context to understand what would be best" (2006, pp. 10-11).

Another commonly recognized central principle of an ethic of care is a focus on dependency and interdependency. In author Virginia Held's work, *The Ethics of Care: Personal, Political, and Global*, she introduces the fundamental principles of care ethics while expanding these principles to broader applications in a politics and global community. "The ethics of care recognizes that human beings are dependent for many years of their lives, that the moral claim of those dependent on us for the care they need is pressing, and that there are highly important moral aspects in developing the relations of caring that enable human beings to live and progress" (Held, 2006, p. 10). Such a recognition of humans as dependent and vulnerable beings goes against traditional subjectivities and understandings of the human as independent and autonomous. In Carol Gilligan's essays within the book *Mapping the Moral Domain: A Contribution of Women's Thinking to Psychological Theory and Education*, she discusses the perpetuated notion of the independent individual and its consequences: "The values of justice and autonomy, presupposed in current theories of human growth and incorporated into definitions of morality and self, imply a view of the individual as separate and of relationships as either hierarchical or contractual, bound by the alternative of constraint and cooperation" (Gilligan, 1998, p. 8). In sum, values prioritized in moral reasoning associated with the capitalist world ecology include justice, autonomy, and independence. "In contrast, the values of care and connection, salient in women's thinking…" Gilligan explains, "... imply a view of self and others as interdependent and of relationships as networks created and sustained by attention and response" (Gilligan, 1988, p. 8). Caring relationships and caring connections function to not only recognize both vulnerability and interdependency, but also to create a network for sustainable action and care.

In contrast to moralities built on care, connection, relationships, and interdependence: "Moralities built on the image of the independent, autonomous, rational individual largely overlook the reality of human dependence and the morality for which it calls" (Held, 2006, p. 10). In other words, an ethic of care calls for a morality following a logic of the reality of human dependence. "The ethics of care recognizes the *moral* value and importance of relations of family and friendship and the need for *moral* guidance in these domains to understand how existing relations should often be changed and new ones developed" (Held, 2006, p. 12). Inherently, in an ethic of care, is an acknowledgement of moral value in relationships and action to provide moral guidance in such relationships.

Relatedly, recognizing the reality of connection, interdependence, and relationality of the human experience also requires an acknowledgement of the role of emotions in these relationships. Rather than discredit emotions as separate from the space of moral and ethical reasoning, an ethic of care not only accepts but prioritizes the existence of such emotions. Fundamentally, care itself involves emotions: "Care, the emotion involved in tending to the physical needs of other, dependent humans holds a central place in ethical theory because of its indispensability for human life" (Groenhout, 2004, p. 24). Thus, care–as involving both relationship and emotions–requires a morality that matches such emotional relationships. Consequently, an ethic of care seeks to construct and define this morality acknowledging the essentialness of relationships and emotion. "...in the epistemological process of trying to understand what morality would recommend and what it would be morally best for us to do and to be, the ethics of care values emotion rather than rejects it" (Held, 2006, p. 10). Ethical frameworks function to guide moral and ethical action. However, the ethical frameworks widely accepted and utilized in the context of a capitalist world ecology fail to accept emotions into moral reasoning.

The argument primarily used to exclude the emotional aspect of human life into moral reasoning relies on ideas of "rationality" and "reason." In general, the ethical frameworks widely accepted by Western philosophy prioritize the need for "rational intellect" in theories of moral reasoning. A failure to define emotions or affections in terms of rational intellect has led to the exclusion of these values from moral reasoning. The logic follows: "If reason is the distinguishing feature of the human, then the

emotional relationships humans experience are seen as opposed to reason" (Groenhout, 2004, pp. 24-25).

Furthermore, it is important to note that arguments of rationality as fundamental and unique to the human experience have not only been used to limit frameworks of moral reasoning, but also in structures of oppression and subjugation.

The historical context of the exclusion of emotions from "rational intellect" extends further than the identification of rationality as unique to humans' moral reasoning. In addition, the rejection of emotions, affection, and passions from philosophical discourse of moral reasoning relies on the circulation of power and undermining of care work in a capitalist world ecology. "A second reason philosophers have not seen care as primary is that many philosophers lived lives that were characterized by the delegation of care to others" (Groenhout, 2004, p. 25). Such delegation of care and care work to "others" reflects, yet again, ideologies of "Cheap Nature" and devaluations of gendered labors. These "others" not explicitly referred to by Groenhout include those individuals "bound by Nature," or women and people of color. However, to defend such logic and active delegation of care work requires the defining of human life–by philosophers–in terms of rationality. "This ideal of rational control implies that the properly human self is not dependent on others, or vulnerable to the whims of fate" (Groenhout, 2004, p. 25). Again, utilizing an argument for the human as exhibiting rational control–more specifically, self control–further solidifies the idea of the individual as independent and autonomous.

Regarding the use of social power by many philosophers to exclude relationships and dependency from the logic of moral reasoning: "... psychological reasons for such persons to refuse to see the centrality of relationships of care and dependency in human life; if that centrality were acknowledged, their own situation of power and control would be threatened" (Groenhout, 2004, p. 25). Ultimately, the recognition of the "self" as inherently tied to, dependent on, vulnerable to, and requiring care from others simultaneously recognizes the "self's" own responsibility in providing care to others. If such a recognition were to occur, then frameworks of power dependent on the ideology of the independent individual would crumble. "Not surprisingly, then, we find that most philosophers who have ignored care and caring relationships, and those who have mentioned them tend to treat them as subhuman" (Grouenhout, 2004, p.

25). The logic of philosophers in this case aligns with the concept of "dominance thinking." "...dominance thinking, which has been the main epistemological mode of Western modernity, assumes that one's well-being ultimately depends on controlling the devalued other (whether other life forms, other humans, or other aspects of oneself)" (Fox, 2013, p. 166). Again, the epistemology of the capitalist world ecology requires a divide between the "individual" and the "devalued other." Furthermore, "Problems are about the lack of such control and involve the dominant realm (e.g., the mind, civilization, the development expert, the adult) imposing their solution on the inferior realm (e.g., the peasant, the woman, the child) to stop it from being a problem" (Fox, 2013, p. 166). In this case, philosophy has forced an ideology of care as unnecessary for the unrelated, disconnected, autonomous individual via wielding of social power through knowledge. By pushing relationships to the fringe of moral reasoning, a structure that prioritizes, lays blame, and focuses on the individual has been constructed and perpetuated.

Nonetheless, care ethics acts in direct opposition to principles of moral reasoning that fail to recognize relationships and rely on arguments of rationality. "The ethics of care, in contrast, typically appreciates the emotions and relational capabilities that enable morally concerned persons in actual interpersonal contexts to understand what would be best" (Held, 2006, pp. 10-11). Incorporating aspects of emotion, relationality, and interdependence into its moral reasoning, an ethic of care creates an alternative form of morality that aligns with the reality of the vulnerable, dependent, and interdependent human experience. It can also be argued that, "... from the care perspective, moral inquiries that rely entirely on reason and rationalistic deductions or calculations are seen as deficient" (Held, 2006, p. 10). More specifically, moralities such as justice rights, utility, and preference satisfaction are contended–from the viewpoint of care ethics–as making grave errors in calculations of moral considerations.

*Embodiment, Particularity, and "Trans-Corporeality": Physical and Material Aspects of Care*

*and Relationality*

The reality of human nature plays a fundamental role in our conceptions and perceptions of care, why it exists, and how it shapes our lives. The physical reality of human embodiment is a clear example and site of vulnerability. Considering the corporeality of the human, skin is exposed to the oftentimes harsh conditions of the outside world and potential violence and harm. "The body implies morality, vulnerability, agency: the skin and flesh expose us to the gaze of others, but also to touch, and to violence, and bodies put us at risk of becoming the agency and instrument of all these as well" (Butler, 2004, p. 26). Philosopher and author Judith Butler further explores the physical reality of the human as a site of vulnerability and interdependence. "Although we struggle for rights over our own bodies, the very bodies for which we struggle are not quite ever only our own" (p. 26). Following this thinking, "The body has its invariably public dimension" (Butler, 2004, p. 26). Thus, the physical body, undeniably, is deeply intertwined with and enmeshed in the environmental and social contexts. "Constituted as a social phenomenon in the public sphere, my body is and is not mine" (Butler, 2004, p. 26). Simultaneously, the human body is both a site of agency as well as situated in connectedness, interdependency, and relationality.

The physical reality of human nature defines the importance of embodiment in discussions of care ethics and moral reasoning: "Humans are physical beings; they have certain physical resources and limitation, a relatively limited life-span, and they experience their world as it comes to them through their five senses" (Groenhout, 2004, p. 30). Given this physical reality of embodiment, "... if we begin with a clear acceptance that physical existence is properly a part of what it is to be human, and that theory must begin from the embodied self…" (Grouenhout, 2004, p. 30). In sum, by incorporating understandings of the function of embodiment in care, then, "Embodiment also requires us to take physical harms and benefits seriously as moral issues" (Grouenhout, 2004, p. 31). Therefore, if embodiment is a central

aspect of the human experience and human nature, then such an idea must be incorporated into principles of ethical frameworks and moral reasoning.

Additionally, embodiment–which defines the body as a site of vulnerability–reveals the idea that to be disembodied is, in fact, a privilege. Considering the example discussed previously of philosophers constructing care as not only outside of but also inferior to production of knowledge, an argument could be made that the social power wielded by these figures stemmed from a positionality of disembodiment. In their case, disembodiment took the form of ignoring their own necessities of caring for as well as being cared for (i.e., their individual vulnerability and dependency on others). "... the more implicit idea here that not having a body–not thinking of one's body as oneself–is a privilege denied to people understood to be black, as well as some other kinds of people" (LeMenager, 2021, p. 229). To be disembodied, in other words, ignores any sort of care obligation as well as the idea of the embodied, physical being as vulnerable to harm and violence and dependent on others. However, "The privilege of not thinking of oneself as embodied, as a matter overwritten and writing history, is a privilege lost to all humans, including those imagined to be white in the era of climate change" (LeMenager, 2021, p. 229). Specifically, in an era of climate change, the possibility of imagining the human subject and body as disconnected from other humans as well as the environment and nature is impossible; the clear relationality of humans to nature and the dependency of humans to the earth is made visible by current issues of climate change. Ranging from natural disasters to global warming, climate change exposes not only humans' dependency on, but also vulnerability to, the environment. Thus, an argument can be made that the embodiment central to the human experience not only plays a role in recognizing interdependency within human relationships, but also can be expanded on to include relationships with non-human subjects including nature and the environment.

The theme of embodiment also highlights the idea of particularity in relationships. In a context of ethics which emphasizes a more egalitarian, justice focused approach to moral reasoning, the physical reality of relationships illustrates a need to incorporate an acceptance of "particularity" in this logic. "Embodiment, then, is a crucial part of the notion of particularity" (Groenhout, 2004, p. 32). The concept

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of particularity in caring relations is based on a fundamental acknowledgement of the human as embodied. Particularity, in turn, is a central aspect of social conditions of embodiment. To further explain the connection of embodiment and particularity: "When I care for another, I have to be concerned for this particular other who has a certain shape and occupies a certain physical spot" (Groenhout, 2004, p. 32). Embodiment–situating the body as a site of both vulnerability and interdependency–also forms a logic and language of particularity in caring relations. To summarize, the physical materiality of not only the body but also "others" (and the positionalities of these "others") provides support for an argument of particularity in relationships. By extension, this particularity of caring relations should guide actions and "doings" of care as a practice as well as ethical frameworks. "Care must involve an actual concern with the physical and psychosocial needs of particular people if it is to provide an adequate account for the moral realm" (Groenhout, 2004, p. 30). In order to reimagine a moral context which prioritizes values of vulnerability and interdependence, it is essential to connect the material reality of embodiment to the need for particularity in relations.

The importance of embodiment in discourses of care ethics can extend beyond solely relations between humans, but rather provide the basis for an interrogation of the material interchanges between human and non-human bodies. Put briefly, the theme of embodiment can be extended to analysis of caring relations between Humans/Society and Nature. The concept of embodiment–of the human body–is a manifestation of the study of material reality. Author Stacy Alaimo conducts a comprehensive interrogation and analysis of the material interconnection between human bodies and nonhuman natures in their work *Bodily Naturecultures*. "Specifically, *Bodily Naturecultures* explores the interconnections, interchanges, and transits between human bodies and nonhuman nature" (Alaimo, 2010, p. 2). These exchanges and connection points between human embodiment and the embodiment of nonhuman natures forms a basis for the interrogation of relations between Society and Nature as well as environmental ethics in general. "By attending to the material interconnections between the human and more-than-human world, it may be possible to conjure an ethics lurking in an idiomatic definition of *matter* (or *the matter*)..." (Alaimo, 2010, p. 2). To summarize, studies of the material connections and

interactions between the human and nonhuman "world" can reconfigure our understanding of caring relations and doings towards the environment. Furthermore, this study of material interconnections also makes visible the, previously masked, fundamental interdependence between Society and Nature.

First, it is essential to understand the influence of corporeality of discussions of materialization and dematerialization. As constructed by the logic of the Capitalocene and epistemology of a capitalist world ecology, human corporeality is "independent" from nature and the environment. However, this theorization of human corporeality as distinct from the more-than-human world fails to recognize the physical and social consequences of embodiment. Rather, the physical reality, as illustrated by embodiment, is that human corporeality is deeply intertwined and interconnected with the environment and Nature. Alaimo proposes and introduces an alternative way to envision human corporeality to reconfigure ethical relations with Nature: trans-corporeality. Alaimo explains trans-corporeality as a theorization of corporeality, "...in which the human is always intermeshed with the more-than-human world…" (2010, p. 2). The consequences of "Imagining human corporeality as trans-corporeality… underlines the extent to which the substance of the human is ultimately inseparable from "the environment"" (Alaimo, 2010, p. 2). The theory of trans-corporeality directly opposes the thinking of the capitalist world ecology, which structures the human as distinct and independent from the environment and Nature.

According to Alaimo, "Emphasizing the material interconnections of human corporeality with the more-than-human-world and, at the same time, acknowledging that material agency necessitates more capacious agencies–allows us to forge ethical and political positions that contend with numerous late twentieth- and early twenty-first-century realities in which "human" and "environment" can by no means be considered as separate" (2010, p. 2).

Here, given these understandings of embodiment and the trans-corporeality of the human body, it is possible to connect theories of disability studies and activism with environmental justice and ethics. In contrast to the Cartesian dualism of Human/Society of the Capitalocene, disability studies interrogate the ideology of human corporeality as enclosed and independent. "Disability studies, in particular, may reject

medial models of the enclosed body in order to trace material/social interchanges between body and place" (Alaimo, 2010, p. 12). Just as embodiment and finitude of the human experience illustrate a fundamental interdependence and need for caring relations, disability studies simultaneously reject the idea of human corporeality as clearly differentiated from the environment and physical space. As paraphrased by Alaimo, "Rosemarie Garland-Thomson explains, "Disability studies reminds us that all bodies are shaped by their environments from the moment of conception. We transform constantly in response to our surroundings and register history on our bodies. The changes that occur when body encounters world are what we call disability" (524)" (2010, p. 12). Thus, using arguments of disability studies can reimagine human corporeality in a trans-corporeal form, deeply enmeshed in and moving fluidly within spaces of the more-than-human world. Alaimo concludes, given these contentions of disability studies, that, "... then there is never a time in which the human can be anything but trans-corporeal…" given the context of embodiment from the first moments of life.

To more explicitly connect critical principles of disability studies and environmental justice, Alaimo raises the point: "Moreover, disability studies may be enriched by attending not only to the ways in which built environments constitute or exacerbate "disability," but to how materiality, at a less perceptible level–that of pharmaceuticals, xenobiotic chemicals, air pollution, etc. –affects human health and ability" (Alaimo, 2010, p. 12). Arguably, incorporating analysis of the connections between human corporeality and environmental justice at varying levels provides a fuller, more encompassing discussion of materiality and relationality in disability studies. This example provided by Alaimo illustrates the ways in which both ethical positions and understandings of justice for the environment can be transformed by utilizing an understanding of the human as trans-corporeal. Furthermore, the example illustrates the ways that this theorization of embodiment within a capitalist world ecology can influence collective understandings and knowledge of "disability" and act as a means for justice.

In sum, the conceptualization of embodiment to extend beyond an anthropocentric viewpoint allows for the inclusion of a more-than-human-world and extended applications of an ethic of care to caring relations between humans and the environment. Fundamentally, "... trans-corporeality denies the

human subject the sovereign, central position" (Alaimo, 2010, p. 16). Utilizing the theory of trans-corporeality, "... ethical considerations and practices must emerge from a more uncomfortable and perplexing place where the "human" is always already part of an active, often unpredictable, material world" (Alaimo, 2010, pp. 16-17).

Embodiment as a fundamental aspect of care reveals other principles of the human experience including finitude, the need for particularity in caring relations, and interdependency. Nevertheless, this major conceptualization of the corporeality of the human body can be extended to interpretations and relations with more-than-human-worlds. By using a language and framework of human corporeality as trans-corporeal–or deeply entangled with extra-human entities and embodiments–it is possible to interrogate existing ethical frameworks defining relations with nature. The question can be asked: how does a re-conceptualization of human embodiment as a trans-corporeal experience redefine our relations with the environment? Furthermore, how can understandings of embodiment, vulnerability, interdependence, and trans-corporeality reimagine a future of more sustainable action and environmental justice? The consequences of incorporating and accepting perspectives of embodiment and trans-corporeality ranges from productions of knowledge to the reimagination of relations with Nature.

*Care Ethics and the Environment: Rethinking Caring Relationships with Nature*

Considering the context of the capitalist world ecology–which has not only historically and contemporarily "cheapened" and undervalued not only care and care work, but also ideas of interdependency and relationality–Feminist Care Ethics and an ethic of care clearly oppose such epistemologies. Correspondingly, given the potential of care ethics to transform caring relations within Society and recognize the value of care work, this logic also has the potential to reconfigure relations with Nature. Embedded in a structure that perpetuates the idea of "Human"/ "Society" as completely distinct and independent from "Nature," the result has been the "cheapening" and harmful abstraction of nature and natural resources. Examples of this harm can be seen in the exhaustion of natural resources to create a

"surplus" –fundamental to the value system of the Capitalocene. Clearly, the consequences of these harmful abstractions is exploitation of, and thus violence towards, the environment. In this case, it becomes essential to begin asking questions regarding a transformation of Society's relationships with Nature, from manipulative to caring relations. How could an ethic of care reconfigure and reimagine humans' relationships with nature and the environment? How could transforming manipulative, exploitative, and abusive relations with Nature to caring relations result in more sustainable efforts and actions? Ultimately, the goal of utilizing an ethic of care is to transform relationships previously constructed by a logic of the capitalist world ecology, whether these relationships are between humans-humans or humans-nonhumans. Therefore, to utilize an ethic of care, it is essential to apply and expand these concepts of vulnerability, relationality, interdependence, and embodiment to change not only the language of as well as the corresponding knowledge of society.

Two major texts by author María Puig de la Bellacasa offer an expansion of care ethics and caring relations to understandings of relationality to Nature. In the work, "Ethical doings in naturecultures" author María Puig de la Bellacasa connects an ontology of the "natureculture" to realizations of care obligation and connectedness. These care obligations and connectedness to nature and natecultures can be argued as a means to create caring relationships with Nature. In "Ethical doings in naturecultures," Puig de la Bellacasa defines naturecultures as a mode of thought to appreciate interdependence and relationality to Nature: "It [naturecultures] signifies the inseparability of the natural and the cultural…" 2010, p. 157). Given the context of this inseparability, "... against an ontological split largely supposed in modern traditions (Haraway, 1991; see also Latour, 1993)" (Puig de la Bellacasa, 2010, p. 157). Naturecultures, as reclaiming the fundamental relationality of the constructed "natural" and "cultural," opposes a logic of the Capitalocene in which clear delineations and boundaries have been set between the two. Puig de la Bellacasa explains, "Naturecultures as a mode of thought is a cosmology that affirms the breaking down of boundaries of the technological and the organic as well as the animal and the human…" (Puig de la Bellacasa, 2010, p. 157). Therefore, as alternative modes of thought hold powerful potential in

producing knowledge, understanding, and logic, "naturecultures" provides a new mode of thinking to reevaluate the invisible boundaries of "Nature" and "Society."

Just as an understanding and vocabulary of "naturecultures" emphasizes humans'/Society's dependence and relationality to Nature, care ethics similarly focuses on themes of connectedness. Arguably, "naturecultures" provides a more specific framework for understanding and interpreting relationality to and with Nature whereas an ethic of care provides a more general emphasis of interdependence, vulnerability, and connectedness. Although Care Ethics provides a general framework of moral reasoning opposing the logic of the capitalist world ecology, it is essential to critique the ways in which this theory remains anthropocentric.

Another important text written by Puig de la Bellacasa is *Matters of Care: Speculative Ethics in More than Human Worlds*; this work focuses on the care obligations, "thinking-with" versus "living-with" and importance of "significant otherness" in relationality with nonhuman entities. Puig de la Bellacasa advocates that understanding care as "... a manifold range of *doings* needed to create, hold together, and sustain life and continue its diverseness…" also requires, "... an understanding of human agencies as immersed in worlds made of heterogeneous but interdependent forms and processes of life and matter, to or not to care about/for something/somebody, inevitably does and undoes relation" (2017, p. 70). Central to this message is the inclusion of different forms of life, especially nonhuman forms of life, in interpretation of relationality. Fundamentally, "Interdependency is not a contract, nor a moral ideal–it is a *condition*" (Puig de la Bellacasa, 2017, p. 70). Defining interdependency as a condition rather than a sort of ideal further expands the interpretation of care beyond anthropocentric perspectives. Puig de la Bellacasa builds on this fundamental logic to claim: "Care is therefore concomitant to the continuation of life for many living beings in more than human entanglements–not forced upon them by a moral order, and not necessarily a rewarding obligation (Puig de la Bellacasa, 2017, p. 70). In sum, care is vital to the existence of life given the undeniable interdependency and relatedness of the web of life.

Furthermore, Puig de la Bellacasa builds on a framework of care ethics to include nonhuman forms of life by forming a new, relational mode of thinking: thinking-with. "A relational way of thinking,

which I call here "thinking-with," creates new patterns out of previous multiplicities, intervening by adding layers of meaning rather than merely deconstructing or conforming to ready-made categories (Puig de la Bellacasa, 2017, p. 72). Puig de la Bellacasa pairs this relational mode of thinking with another mode of relationality that commands action: living-with. In regards to caring relations between human and nonhuman forms of life, Puig de la Bellacasa argues, "Care appears as a doing necessary for significant relating at the heart of the asymmetrical relationalities that traverse naturecultures and as an obligation created by "necessary joint futures"" (2017, p. 83). Moreover, "Relations of "significant otherness" are more than about accommodating "difference," coexisting, or tolerating" (Puig de la Bellacasa, 2017, p. 83). Moving beyond a broader system of impartiality, relations of "significant otherness" can offer specific connections that take action past just relational modes of thought (i.e., thinking-with). Puig de la Bellacasa claims, "Thinking-with nonhumans should always be a living-with, aware of troubling relations and seeking a significant otherness that transforms those involved in the relation and the worlds we live in" (2017, p. 83).

To further explore the concept of living-with, Puig de la Bellacasa references Donna Haraway's examples and stories of interspecies-love to illustrate what caring relations can look like by "living-with." Haraway's *The Companion Species Manifesto* explores an example of caring relationality in human-dog love and creation of "significant otherness." Puig de la Bellacasa paraphrases Haraway's manifesto: "Exploring the "cobbling together" of caring relationality in human-dog love, in the creation of "significant otherness," she affirms: Dogs, in their historical complexity, matter here. Dogs are not an alibi for other themes… Dogs are not surrogate for theory; *they are not here to just think with. They are here to live with*" (Haraway 2003, 5, emphasis added)" (2017, p. 82). Here, Puig de la Bellacasa is emphasizing the way in which Haraway's use of a story relaying interspecies-love can provide insight into extra-human models of care. "Interspecies love brings additional layers to a concept of more than human models of care" (2017, p. 83). This case of interspecies love illustrates that, "Care is required in processes in which humans and nonhumans co-train each other to live, work, and play together in constructing a relationship of a "significant otherness"" (Puig de la Bellacasa, 2017, p. 83).

Despite this major critique of the ways in which an ethic of care perpetuates an anthropocentric approach, using models of extra-human care and examples of interspecies love can highlight the importance of establishing "significant otherness" with nonhuman forms of life in carin relations. Nonetheless, a critique remains of a potential issue of appropriation. Puig de la Bellacasa warns, "... thinking driven by love and care should be especially aware of dangers of appropriation" (2017, p. 85). This critique highlights the issue of "thinking-for" versus "thinking-with" and "living-with." Consequently, "Appropriating the experience of an "other" precludes us from creating significant otherness, that is, from affirming those with whom we build a relation" (Puig de la Bellacasa, 2017, p. 86). When appropriation of the "other" occurs, it creates a context in which an establishment of "significant otherness" would be impossible. Lying within an establishment of "significant otherness" exists a recognition and respect for difference. Nevertheless, appropriation–based on thinking of love and care–of the "other" prevents such a recognition and respect for difference from occurring, thus preventing an establishment of a particular relationality. As contended by Puig de la Bellacasa, "A more than human thinking with care would cherish every insight for alternative relating to be found in the worlds of domestic, petty ordinariness, the difficult and playful, and the joyful and aching mediations of caring affection, crucially involved in everyday experiences of interspecies intimacies in contemporary naturecultural worlds" (Puig de la Bellacasa, 2017, p. 88).

Puig de la Bellacasa's insights from *Matters of Care: Speculative Ethics in More than Human Worlds* and "Ethical doings in naturecultures" the potential connections of an ethic of care to relationships with Nature. However, this potential connection of Feminist Care Ethics in applications of environmental justice must move beyond a merely anthropocentric theorization of care; rather, an expansion of an ethic of care requires a combined recognition of "particularity" in relationships and applied to the concept of "significant otherness." Language and knowledge created by an understanding of the "natureculture" provides a basis to connect care ethics to multi-species and non-human relationships.

*Permaculture Ethics: Applied Practices of Care for Earth, Care for People, Care for Others*

Just as principles of Feminist Care Ethics hold potential in re-imagining Society's relationships with Nature outside of the pre-established Cartesian dualist theorization of Society versus Nature, Permaculture Ethics offers another foundational framework to reconfigure relationships, knowledge and practices. Permaculture Ethics–as an alternative framework of ethical theory to proposed and accepted moral reasoning of the Capitalocene–incorporates principles of an ethic of care into a more specific manner to articulate particular relationships and values of nature.

Overall, the term "permaculture" stems from a sustainable agricultural movement originally developed by David Holmgren and Bill Mollison in 1978 (World Permaculture Association, 2020). According to the World Permaculture Association, "permaculture" was initially used as an abbreviation of the term "permanent agriculture" which then expanded to encompass "permanent culture." As a design principle, permaculture ethics creates a guiding philosophy of moral reasoning based on ideas of interdependence, relationality, and care. Defined by Holmgren and Mollison, permaculture is, "Consciously designed landscapes which mimic the patterns and relationships found in nature, while yielding an abundance of food, fibre, and energy for provision of local needs" (Holmgren, 2013, p. 3). Although permaculture originated as a design process, the definition of this term has extended beyond solely principles of landscape design. Rather, permaculture forms "principles of conduct, moral duty, moral obligation, and a guiding philosophy" of more sustainable actions centered in caring relations (World Permaculture Association, 2020). Additionally, permaculture can be thought of as using systems of thinking that "draw together diverse ideas, skills and ways of living which need to be rediscovered and developed in order to empower us to provide for our needs, while increasing the natural capital for future generations" (Holmgren, 2013, p. 3). These systems of thinking created by the theory of permaculture have been extended to a theory of ethics: Permaculture Ethics. This form of ethical theory, as establishing different moral reasoning than ethical frameworks such as Utilitarianism, has three major maxims: (1) care for earth, (2) care for people, and (3) fair share (Holmgren, 2013, p. 7). Clearly, there is overlap in

these principles not only with values of an ethic of care but also in the feasibility to apply these principles in daily life and care "doings."

The first tenet of the Permaculture Ethics theory is an ethic of earth care. This form of care consists of husbandry of soil, forests, and water (Holmgren, 2016). In sum, care for the earth or earth care involves caring for, caring about, thinking-with, and living-with nature, natural spaces, and natural resources. The principle of care for the earth is also known as "care for home," insinuating a shared proximity and familiar space with other species and embodiments of the more-than-human world. The second tenet of the Permaculture Ethics theory is an ethic of care for people. Similar to the claims of Feminist Care Ethics, this principle relies on caring relations and interdepedency. Not only does people care consist of looking after kin and community, but also includes self-care. Furthermore, this principle of care for people can be expanded to encompass the global community and network as a whole, requiring care and acknowledgement of fundamental interdependence. Finally, the third principle of the Permaculture Ethics theory is fair share. This principle of fair share requires the setting of reasonable limits and the redistribution of surplus (Holmgren, 2016). The capitalist world ecology, functioning on a value system of surplus, directly opposes this idea of fair share. In other words, fair share requires setting limits to consumption, production, and reproduction as well as redistribution of surplus. The reasoning behind this logic of fair share and the redistribution of surplus is the need to distribute surplus fairly among the individuals who need it or to fairly trade surplus for goods and services (World Permaculture Association, 2020). Ultimately, these principles allow for the creation of a system of thinking that recognizes specific caring relations between humans and the environment. Utilizing these three major principles–earth care, people care, and fair share–creates a potential for a more sustainable future.

Connected to the theory of permaculture and Permaculture Ethics are the theorizations of the "Planetary Garden." The idea of the Planetary Garden is introduced by Gilles Clément–a French gardener, garden designer, entomologist, and writer. This theorization of the environment defines the "garden" as the biome inhabited by humans: "The Planetary Garden signifies both Earth seen from space and the 'garden' that crops up on a bit of vacant land, welcoming 'vagabond' species" (Skinner, 2011, p. 264). In

Jonathan Skinner's work *Gardens of Resistance: Gilles Clément, New Poetics, and Future Landscapes*, he introduces and summarizes Clément's theory of the Planetary Garden. According to Skinner, "The Planetary Garden means that the earth is finite and its humans need to get over their alienation, to learn responsible gardening (doing more by doing less)" (2011, p. 264). Essentially, Skinner's claim here is that by first recognizing the finite nature of the environment–and human embodiment–it follows that Society will claim more responsibility (in care "doings"), acknowledge care obligations, and prioritize caring relations with nature, natural spaces, and natural resources.

Both Skinner and Clément's work in forming, interpreting, and applying the Planetary Garden theory calls for a reconfiguration of the ways humans perceive their relationships with Earth and natural spaces. To summarize Skinner and Clément's major argument, it is necessary for humans and Society to understand their role and corresponding responsibilities as Planetary Gardeners. The role of the Planetary Gardener calls for the role to be filled as stewards of the earth through care and principles of fair share.

Another connection to the theory of Permaculture Ethics and the idea of the Planetary Garden is a reorientation of society towards common thinking over a dominance approach. Directly contrasting the interdependence, relationality, and caring relations fostered by Permaculture Ethics and the Planetary Garden, a dominance approach mirrors the logic of the Capitalocene. Author Katy Fox discusses the differences of the dominance approach and commons thinking in "Putting Permaculture Ethics to Work: Commons Thinking, Progress, and Hope" within the book *Environmental Anthropology Engaging Ecotopia: Bioregionalism, Permaculture, and Ecovillages*. According to Fox, the dominance approach is categorized by its "... dualistic problem-solving approach underpinning non-egalitarian and unsustainable systems" (Fox, 2013, p. 166). This dualistic problem-solving approach–in parallel to the Cartesian dualist idea of Society versus Nature–according to Fox, must be relinquished in order to move towards a common thinking approach. "Unlike the separation into separate realms required by dominance thinking, the epistemology of commons thinking assumes that we live in a common lifeworld, not necessarily synonymous with the ecosystem or the biosphere, but recognizing the relationality of human life on Earth upon which we all depend" (Fox, 2013, p. 166). Fundamental to a commons thinking approach to the

environment and common futurity is an acknowledgement of the human as in relation with and interdependent on a "common lifeworld" or more-than-human world.

> "Commons thinking recognizes the rich resources available to us by starting from ensuring the well-being of locality and the well-being of others in their localities, rather than from a system of competition over resources made scarce by that very competition. Resources are assumed to be abundant, and are made abundant by ensuring that all people and other species (all ecosystems) have sufficient resources to meet their needs and to ensure their flourishing. This is predicated on the notion that my well-being depends on your well-being, and on the assumption that solving problems involves working to restore relationships of trust rather than to impose solutions on others (2009: 55)" (Fox, p. 167).

Central to the commons thinking approach is a recognition of relationality, the care obligations associated with these relationalities, and application of the fair share principle. To apply this commons thinking to efforts of sustainability: "Commons thinking endorses the management of socioenvironmental relations in a way that attends to the *finitude* nature of human and natural systems (which paradoxically ensures their *infinite* abundance)..." (Fox, 2013, p. 167). By recognizing the finitude nature–central to the reality of embodiment in both human and non-human forms–creates a system that ensures abundance. This creation of abundance from a recognition of finitude can be found in approaches of Permaculture Ethics; the fair share principle of Permaculture Ethics theory calls for setting limits in consumption, reproduction, and production and redistributing surplus. This setting of limits following a recognition of the finitude nature of embodiment creates a framework in which abundance can be created and shared. Furthermore, this commons thinking–not only recognizing finitude but correspondingly creating systems of abundance– "... grounds responsibility in every person" (Fox, 2013, p. 167). This responsibility referred to by Fox mirrors the call of Gilles Clément for the role of the "Planetary Gardener" to be filled.

Regarding the idea of the Planetary Garden and the role of the Planetary Gardener, it is important to ask: What does such stewardship look like given our understanding of the Planetary Garden and Permaculture Ethics theory? To answer this question, Clément presents a fundamental job of the Planetary

Gardener as having a relationship with nature/natural spaces. This relationship–more specifically, a caring relation–requires a kind of "familiarity" and "first-hand" knowledge of these spaces and more-than-human world. Clément proposes the development of such a familiarity and caring relation through the skill of observing to interact. Rather than adopt a dominance approach to creating familiarity and developing the "first-hand" central to the Planetary Gardener, observing to interact calls for a questioning of subjectivity and power relations through such embodiments and subjectivity.

Observing to interact as a means to create "familiarity" with natural spaces correspondingly requires a development of a "familiar place." In the work "Unruly Edges: Mushrooms as Companion Species," author Anna Tsing introduces the idea of "familiarity" as a source of appreciation and companionship. In Tsing's analysis, there is a focus on the development of familiar places and the consequences of this familiarity on affective relationships. "Familiar places are the beginning of appreciation for multi-species interactions" (Tsing, 2012, p. 142). Thus, familiar places hold the potential to form a caring, respectful relationship between humans and the more-than-human world. Vital to this development of familiar space is the investment of time, energy and effort [input]. These investments of time and effort can connect to Clément's idea of "observe to interact;" observation prior to action requires time, effort, attention, and intention. Additionally, "Familiar places engender forms of identification and companionship that contrast to hyper-domestication and private property as we know it" (Tsing, 2012, p. 142). As stated by Tsing, private property is a manifestation of the hyper-domestication of a dominance approach used in Capitalocene logic. Private property requires the exclusion of specific individuals and bodies that do not have the necessary capital to attain access. Therefore, engendering spaces of familiarity directly opposes a capitalist world ecology epistemology which prioritizes exclusion to create surplus and profit. In order to offset the cheapening of nature by the Capitalocene, forming familiar relations (tied to conceptualizations of family or kin) with nature/natural spaces can encourage systems of care and affective relationships.

Each of these theorizations of the environment and humans' relationality to the environment houses the potential to revitalize Society's relationships with Nature. In general, each of these approaches

calls for a recognition of relationality and interdependency, necessity of fostering caring relations with the more-than-human world, and internalizations of caring obligations required from these relationships. Permaculture Ethics theory, the idea of the Planetary Garden, role of the Planetary Gardener, and the commons thinking approach oppose the logic of a capitalist world ecology which has historically and contemporarily situated humans as distinct and independent from the environment, Nature as subordinate to Society, and reasoned the exploitation of nature and natural resources.

# School Garden Programs:

## Spaces of Care, Resistance, and Transformation

*Introduction: The Potential of the School Garden in Environmental Education*

> "Among the most daunting challenges of our era is the task of bringing about the transformation of
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> consciousness that will be required if we are to move away from a culture predicated on
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> consumption and the values of the market toward one that strives to balance human activities with
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> the requirements of the natural world. (Smith 1999, p. 207)" (Gaylie, p. 4).

Current issues ranging from the climate crisis to widespread environmental injustice have shed light on the long-term consequences of a capitalist world ecology. The logic of the capitalist world ecology–which emphasizes consumption, profit, and surplus in the law of value–perpetuates ideals of independence and autonomy. These perceptions can be considered quite dangerous and have contemporarily been used as a means to defend the exploitation, abuse of, and violence towards the natural world. In order to form a more sustainable future, it is essential to interrogate this logic as well as reimagine a future of logic recognizing relationality and valuing care.

Systems of education have been proposed as a means to reimagine this more sustainable future through a revised logic of interdependence and relationality to the more-than-human world. Specifically, in sustainability efforts, there has been an increased focus on the potential of environmental education. Given this potential of environmental education, it must be asked: what formats and structures of environmental education, in general, and the environmental education classroom, specifically, are most effective in addressing structural issues of the capitalist world ecology? One answer to the question of structures of environmental education can be found in the creation of the school garden. The history of the school garden ranges back to the era of the industrial revolution, in which urban gardens were tended to by students who profited from their labors by selling the grown produce (Trelstad, 1997). However, in the current context, a major objective of the school garden is to question how relationships with nature can be

transformed at an early age. The objectives of existing school garden programs including increased ecological awareness, nutritional knowledge, and inclusion illustrate how the intention of the school garden has developed over time.

Nonetheless, it is important to consider how the school garden–as a localized physical space of familiarity within the context of a capitalist world ecology–can be a perpetuation of epistemologies of the Capitalocene. Therefore, as school gardens are designed and implemented, it is essential to ask the question: how can the framing of the child in the school garden as well as the intention of school garden programs perpetuate harmful abstractions of the Capitalocene ranging from manipulation to exploitation? By questioning the intentions of the school garden, we can create more inclusive and meaningful spaces of care and relation. Despite issues within the design, intention, and implementation of the school garden, it can be argued that these programs have the ability to not only transform relationships between students and the environment, but also Society and Nature as a whole, directly interrogating the dualist ideologies of a capitalist world ecology.

*Haptic Experiences in the Garden: Touch as a Form of Knowledge Politics*

As previously discussed, the formation of familiar places and spaces can play an important role in creating caring relations and affective relationships between Society and Nature. The "familiarity" and "first-hand" knowledge required of the Planetary Gardener is essential in reconfiguring relationships and understanding care obligations as stewards of Earth. The question can then be asked: How can we develop this "familiarity" and "first-hand" knowledge central to the role of the Planetary Gardener? According to Gilles Clément–author of the Planetary Garden theorization of the earth– "observing to interact" is a primary strategy to establish this first-hand knowledge. Within this strategy lies the potential use of haptic experiences to engender familiar connections and create familiar places.

The term "haptic" refers to the tactile aspect of experiences. Therefore, haptic experiences refers to tactile, physically connected experiences and haptic knowledge refers to the following knowledge

obtained from these experiences. Haptic experiences result from formations of touching technologies. According to Puig de la Bellacasa, "...touching technologies are material and meaning producing embodied practices entangled with the very matter of relating-being" (2009, p. 309). When considering touching technologies, we can reflect on the ways that tactile, haptic experiences force us to recognize not only our physical embodiment, but also fundamental vulnerability and relationality to the more-than-human world. "The requirement and outcome of ongoing technohaptic learning is not here mastery of dexterous manipulation, but a skillful recognition of vulnerability" (Puig de la Bellacasa, 2009, p. 308). Yet again, haptic experiences and touching technologies expose the major theme of vulnerability in human embodiment.

Furthermore, the recognition of vulnerability "... suggests that contrary to directness, implementing touching technologies entails awareness that learning (to) touch is a process" (Puig de la Bellacasa, 2009, p. 308). The process of learning (to) touch and the observation and awareness required for this form of learning "... can serve to insist on the specificity of contact" (Puig de la Bellacasa, 2009, p. 308). Thus, in direct opposition to the logic of the capitalist world ecology which focuses on a lack of particularity and specificity, touching technologies–similar to an ethic of care–prioritizes aspects of specificity in contact and relation.

In Puig de la Bellacasa's work "Ethical doings in naturecultures," she uses an example of an earthworm and humans to illustrate concepts of the first-hand knowledge associated with familiarity, interdependency, and care obligation. "Becoming able of a care obligation towards worms is nurtured by hands on dirt, love and curiosity for the needs of an 'other,' whether this is the people we live with, the animals we care for, the soil we plant in" (Puig de la Bellacasa, 2010, p. 161). Using "digging in" as an example, Puig de la Bellacasa connects haptic experiences and "thinking touch" to affective relationships, familiarity, and establishment of care obligations. "It is by working with them, feeding them… that a relationship is created that acknowledges our interdependency" (Puig de la Bellacasa, 2010, p. 161). In this way, haptic experiences and touching technologies can function as strategies to establish caring relations specifically in multi-species relationships and relationships with a more-than-human world.

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Clearly, the example of the interaction and relationship between the earthworm and the human/gardener illustrates the ways in which haptic experiences and touching technologies can foster caring relations specifically to other species. However, these caring relations between humans and a more-than-human world through haptic experiences have further consequences on knowledge politics. These consequences on knowledge politics and knowing practices includes a transformation towards an "... ethical awareness regarding material consequences" (Puig de la Bellacasa, 2009, p. 310). Puig de la Bellacasa argues that this awareness of material consequences obtained from thinking with touch "... concerns knowing practices that take the chance to *add* relation to a world by involvement in touching and being touched by what we 'observe.' I seek a conception of touch that doesn't evoke a hold on reality with improved grapes, but rather engagement with the proximity of touching vision with the slowness and care, attention to detail, definitely not hurried efficacy and cleanliness" (2009, p. 310). Ultimately, thinking with touch as a result of touching technologies plays a role in knowledge politics and the formation of knowing practices that consider, prioritize, and respect relations and relationality.

Another example of the powerful potential of students "digging in" to haptic experiences is in soil science. In the work "Re-animating soils: Transforming human-soil affections through science, culture and community" Puig de la Bellacasa establishes the potential of "soil pedagogy" in redefining soil as alive rather than an inert object. "Interestingly, sensual intimacy with soils is also something of a 'soil pedagogy' in scientific contexts that manifests how soil scientists speak about their passion for teaching in close contact with soils" (Puig de la Bellacasa, 2019, p. 399). The ways that affective relationships can be established in soil science is in "... inciting material intimacies through bodily closeness, and aesthetic and sensual entanglements with soil substance" (Puig de la Bellacasa, 2019, p. 399). More specifically, in the school garden, students have the opportunity to "dig in" and experience tactile encounters with soil. Through these tactile encounters is the realization of the "aliveness" of soil, over a previously constructed definition of soil as an inert object.

According to traditional Western scientific methodologies, "playing" in haptic experiencing of soil is not a respected method for observation. However, these examples of thinking with touch in soil

encounters illustrates the potential development of affective relationships with the more-than-human world. "Accounts like these indicate an intimate feeling for the soil, a form of mud love, intrinsic to becoming a soil scientist, and confirm feminist enquiries that refuse restating science as an abstract knowledge enterprise of detached knowing, disconnected from specific encounters of corporeal experiencing (Kller, 1984; Myers, 2015)" (Puig de la Bellacasa, 2019, p. 399). Haptic experiences and accounts of interactions with the environment, and specifically soil, have the ability to transform an ideology of detachment–supported by the logic of the capitalist world ecology–to specific connections and caring relations. According to Puig de la Bellacasa:

> "But the sense of aliveness in these revelation stories, in these sensual and aesthetic encounters, in science as much as in artistic and community projects, has in common a sense of *enlivenment*, of transforming something deemed to be dull into more interesting than it was, something that almost didn't matter to something that we care for as we connect to it. To be enlivened is not just to be alive, enliven signifies life that is lifely, uplifted, joyful, cheerful, awake, boosted, more entertaining, a life that raises (our) spirits up. Enlivening encounters with soils encourage better knowledge of living soil and awareness of interdependence, through experiential intimacy and enjoyment. They open the vulnerability of those who mingle with soils not only to think with soils, but to be touched, and maybe even to understand this mingling as an experience of shared material destiny" (2019, p. 400).

In this account, Puig de la Bellacasa clearly articulates the powerful potential of "enlivening encounters" with the more-than-human world which has been historically and contemporarily objectified. The consequence of this objectification of not only soil, but the rest of "Nature" is an argument for the continued exploitation and abuse of nature and natural resources. In contrast to this objectification, haptic experiences as enlivening encounters with the environment can imagine an alternative futurity in which there is a shared material destiny (or common futurity) between Society and Nature.

Touching technologies and haptic experiences hold the potential to transform understandings and knowings of relationality and relationships, specifically between Society and Nature. It can be argued that haptic experiences and experiencing are "... and attempt to change our perception, to 'hone' it to perceive the 'imperceptible politics' in everyday practices with one another world is *here*, in the making before 'events' become *visible* to representation" (Puig de la Bellacasa, 2009, p. 311). In the context of the capitalist world ecology–which functions by ignoring, masking, and undermining interdependence and connection–haptic experiences shape knowings and knowing practices to focus on the daily practices of relationality and interdependence. "In these they see a chance, not only for subversion, but for creating alternative knowledge" (Puig de la Bellacasa, 2009, p. 311). Referring to haptic experiencing, it is possible to see the possibility to create alternative ways of knowing that recognize the relationality of the human embodiment with its environment and the value of care. "Haptic speculation is not about imaginative expectation of events to come; it is a (survival) strategy of the *present* in 'life below the radars' of optic orders that do not welcome, know, or even *see* the practice that exceed pre-existent representations and meaning" (Puig de la Bellacasa, 2009, p. 311). In other words, haptic experiences and thinking with touch make visible often undervalued and intentionally hidden points of connection and relationality. "This sense of haptic engagement relates well to the (knowledge) politics of reclaiming the neglected: to speculative commitments that are about being in touch, relating with, and partaking in those worlds that are struggling to make their other visions not so much *visible*, but possible" (Puig de la Bellacasa, 2009, p. 311). Through haptic experiences and touching technologies, it is possible to not only reclaim the relationality often masked by the logic of the capitalist world ecology but also foster and create these caring relations.

Related to the changes in knowing practices that result from haptic experiences, these applications of touching technologies can challenge and interrogate existing ideas of subjectivity. These challenges of subjectivity rise from the question of the reality of the term interaction. Arguably, using the terminology of interaction offers a limited scope to interpret subjectivity in relationships. "Going further than interaction, intra-action problematizes not only subjectivity, but also the attribution of agency merely

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to human subjects (of science) –as ones having power to intervene and transform (construct) reality" (Puig de la Bellacasa, 2009, p. 309). Using the term intra-action, Puig de la Bellacasa contends, provides a framework to more clearly articulate and interact with perceptions of subjectivity. "The reversibility of touch (to touch is to be touched) also helps here to trouble assumptions: who/what is object? who/what is subject?" (Puig de la Bellacasa, 2009, p. 309). In the case of the context objectification of Nature to provide an argument for its consequent exploitation, abuse, and violence by Society, thinking with touch can function directly against these epistemologies. By requiring touch as a reversible process, touching technologies and haptic experiencing not only highlights interdependence, connection, and relationality, but also the issue of subjectivity. Thus, touching technologies and haptic experiences can function to foster different ways of knowing as well as recognize other subjectivities besides the individual and the human embodiment. From this recognition of other subjectivities comes a requirement of relationship. Recognizing these other subjectivities in the more-than-human world in the garden can act to foster caring relations in multi-species relationships as well as with the environment as a whole.

In sum, it can be argued that the school garden provides the physical space and place to engender caring relationships between humans and the more-than-human world through creation of familiar places. Furthermore, the school garden as a physical space providing opportunities for haptic experiencing is able to create a space for alternative knowing practices which recognize relationality, interdependence, and more-than-human subjectivities. Such knowing practices recognizing caring relations is central to the role of Clément's Planetary Gardener. Therefore, school gardens are localized physical spaces allowing students to "dig-in" and establish "first-hand" knowledge and familiarity associated with the role of the Planetary Gardener.

Moreover, these touching technologies create opportunities for transforming the constructed 'reality' in which we live. "Haptic speculation doesn't assure material certainty; to touch is not a promise of enhanced contact with 'reality', but rather a chance for participating in re-doing it" (Puig de la Bellacasa, 2009, p. 310). This "re-doing" referred to by Puig de la Bellacasa is a form of producing alternative forms of knowledge through haptic experiencing and touching technologies. "Thinking touch

as world making, that what and how we know in the world produces specific connections…" (Puig de la Bellacasa, 2009, p. 309). These knowing practices of relationality established in the school garden and through school garden education programs have broader potential than just an individual student; rather, by establishing an ethical awareness of relationality through haptic experiences, it is possible to reimagine a more sustainable, care focused future.

*Caring Relations Beyond the Classroom: Incorporating Care and Permaculture Ethics in Education Through the School Garden*

Not only do school garden programs hold the potential to transform relationships with Nature through haptic experiences, familiar spaces, and touching technologies, but also offer a space in education to incorporate principles of care ethics. Thus, an argument can be made that incorporating care ethics principles in education as well as permaculture ethics, can transform existing education structures and systems. Caring–in educational settings today–is often interpreted in a generic, operational sense: "... recent works seem rooted in the assumption that everyone knows and agrees upon what is meat by the term "caring" one author writes "when we think of caring, we usually think of gentle smiles and warm hugs" (Rogers, 1994, p. 33)" (Goldstein, 1998, p. 244). However, this seemingly vague and merely operational definition of care does not incorporate the relationality fundamental to care ethics. "The generic, operational definition of caring in classrooms includes images of a teacher being nurturing, supportive, nice, inclusive, responsive, and kind" (Goldstein, 1998, p. 244).

Rather than position caring in terms of a moral framework, these operational definitions of caring limit the potential for caring relations. "... the commonly held definitions and understandings of caring–the gentle smiles and warm hugs–position caring in the affective domain: it is a feeling, a personality trait, a temperament that makes one suitable to work with young children (Katz, 1971). From view, caring is not an intellectual act" (Goldstein, p. 245). Structuring caring within the affective domain positions care doings in terms of the individual rather than a collective. "Caring is conceived of as a

feeling, or a set of feelings, that cause a teacher to behave in a certain way" (Goldstein, pp. 244-245).

Succinctly put, isolating understandings of caring within an affective domain positions caring as an individual trait, rather than within a relational and moral dimension of caring relations.

In the work *Caring* by educator, feminist, and philosopher Nel Noddings, she introduces the ways that care ethics can reconfigure classrooms, sites of education, and the education system as a whole. In opposition to the operational definition of caring within the education system today, Noddings uses the term "caring" to describe relation and relationality. "When Noddings uses the term "caring," she is describing not an attribute or personality trait, but a relation" (Goldstein, 1998, p. 246). Aligning with the fundamentals of an ethic of care, Noddings defines caring in terms of relationality, caring relations, and care "doings." "Caring is not something you are, but rather something you engage in, something you do. Every interaction provides one with an opportunity to enter into a caring relation, although, certainly, individuals always retain the option of interacting in either a caring or an uncaring way" (Goldstein, 1998, p. 246). Noddings interpretations move our understandings of caring from a merely operational definition in a capitalist framework, to a moral dimension of the relationality that is central to caring.

In educational models, Noddings interpretations of caring allows for a transition away from implementing "care" in education as a means to achieve desired behaviors:

> "This perspective has significant implications for schooling. Teachers who meet their students as ones-caring, and who look upon the act of teaching as an opportunity to participate in caring encounters, will be teaching their students more than academic knowledge. These children will have the opportunity to learn how to care. This moves beyond the mere modeling of desired behaviors. It is a moral stance that has the potential to transform education" (Goldstein, 1998, p. 247).

Despite this potential to incorporate care ethos into education in a way that recognizes relationality and shapes knowledge practices, it is important to recognize the location of the education system. Notably, education structures lie within a broader framework of capitalist ecology. Thus, this

context proves a challenge to incorporating these caring relations as a means to create broader structural change.

Given this challenge, an argument can be made as to how the school garden itself–as a form of alternative education–creates a distinct space from the classroom, which is centered in a capitalist world ecology and logic, to implement broader understandings of caring as relation. Furthermore, school gardens and other alternative educational models offer space to incorporate alternative ethics–such as permaculture ethics–into environmental education. Theories of permaculture ethics and its major principles, the Planetary Garden, and the Planetary Gardener are clearly connected to applications of the school garden. In this way, school gardens offer a connection between ethical and moral theories–such as an ethic of care and permaculture ethics–and environmental education.

*Critique of the School Garden*

The implementation of school gardens as a strategy and model for environmental education can be used as a means to bring values of interdependence, relationality, and caring relations between Society and Nature. However, to create effective and meaningful solutions in environmental education, it is essential to interrogate and analyze potential challenges to the fostering of such values within the localized physical space of the school garden. Including the intentions of the school garden, how the potential of the "child"/ "student" subject is constructed, and the historically racialized history of this space, such issues must be addressed to more effectively achieve the objectives of the school garden and environmental education.

A major critique of the school garden is the intention with which the space is designed and implemented. Stemming from the constructed subjectivity of the child as the ultimate embodiment of "potential," the continued manipulation and exploitation of bodies can occur. "While framed as a critical response to a globalized, industrial food system, the theme of connecting food production and consumption in the school garden is also about understanding children as consumers-in-the making"

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(Cairns, 2017, p. 312). On a surface level, the school garden is framed as a solution for connection of individuals to the industrialized food system and a means to address the structural issues of this food system; however, upon deeper analysis, it is clear that these solutions are based on a capitalist perception of the human embodiment as the "consumer." Specifically, the function of the child in a capitalist world ecology is fulfilling the role of the future consumer. This "consumer-in-the-making" role frames how children are educated and the functions of the education system overall. Following this reasoning and role, the child must be "developed" into the "good consumer," further perpetuating and participating in systems of a capitalist world ecology. Considering such logic, how does this formation of "development" actually counteract the intention of the school garden as a space for connection? In other words, how can the formation of the child subject based in an epistemology of capitalism induce further harm, not only on the potential for meaningful relations but also in the exploitation of students participating in the space of the school garden? "Analyzing the rationales commonly mobilied in support for children's gardens…" it "... situates the contemporary garden movement within a legacy of projects that claim to advance 'the best interests of the child,' year are 'loaded with undertones of unpleasant adult control' (Wake, 2008, 425)" (Cairns, 2017, p. 307). Despite the major claims of the school garden argument, there is a perpetuation of the ideal of "control" –central to the logic of the capitalist world ecology–in the physical implementation and application of the school garden.

Moreover, it is important to address the racialized and oppressive history of discourses surrounding the school garden and environmental education as well. Within the production of the school garden movement, there exists "... contrasting narratives of stewardship and salvation, which reveal racialized and classed geographies within the discursive construction of the school garden" (Cairns, 2017, p. 311). These racialized and classed contexts of the school garden contrast narratives of "stewardship" and "salvation." Furthermore, these contexts directly contradict the idea of the school garden as a space of connection, care, and inclusion. In terms of the racialized and classed history of the school garden: "Others have pointed to a troubling history in which gardens have served as moral agendas as civilizing projects that seek to 'improve' the character of marginalized groups (Pudup 2008, 1230; Biltekoff 2013,

98)" (Cairns , 2017, p. 307). Just as the intention of the school garden and the framing of the "child" impacts the actual implementation of the school garden, the moral agenda of this space can produce harmful legacies of further oppression and inequality. "Thus, the very discourse that constructs the garden as a site of *connection* simultaneously works to reinforce divisions and inequalities" (Cairns, 2017, p. 311).

To actually create meaningful, caring relations in the school garden, these "mis-matches" between the values of the garden and the discursive construction of this space cannot continue to be masked. These discursive constructions, harmful abstractions, and violent histories must be exposed and challenged directly in the designing of school gardens. Potential strategies to combat these perpetuated ideologies of a capitalist world ecology include recognizing the child not only as an embodiment of potential, but inherently valuable in the face of this potential. Additionally, the discursive construction of the school garden not only must recognize its oppressive history, but also actively work to engage and address these histories.

# Conclusion

School gardens as a physical space and educational model exemplify the connections between care, relationality, vulnerability, embodiment, and interdependence. The connections of these values extend further to include connections of frameworks of capitalist ecology, the dualist construction of Society versus Nature, the devaluation of care work, social justice, and environmental justice. Thus, the analysis of school gardens incorporates an interdisciplinary approach to broader structural issues.

Despite the consideration of education and educational models as a means to achieve broader structural and systemic changes, such is an unfair assumption. Although school gardens hold transformational potential in connecting students with Nature, and consequently Society to the environment, this arguable burden of potential should not be put on the "child"/ student. Therefore, it is important to recognize that the school garden as a transformative space is located within a broader structure of capitalist world ecology. The broader inequitable, unjust, and exploitative nature of the capitalist ecology and Capitalocene will not fully be transformed by education or school gardens alone. Educational efforts such as school gardens must be paired with efforts to move away from a capitalist world ecology and logic.

Nevertheless, school gardens and school garden programs that foster caring relations with more-than-human world, recognize and reclaim the value of care work, incorporate care and permaculture ethics into curriculum and application, and seek to create inclusionary, familiar spaces are an important step in worlding practices. By acknowledging relationality to the more-than-human world and framing moral reasoning and frameworks based on this principle, it is possible to imagine an alternative futurity. This alternative futurity would reflect ideas of a common futurity and a shared material density, reconfiguring sustainable actions and care doings in the present moment. In this way, school garden programs embody multi-dimensional transformational potential in ethical frameworks, education, and environmental justice.

# References

Alaimo, S. (2010). *Bodily natures : science, environment, and the material self*. Indiana University Press. https://ebookcentral.proquest.com/lib/depauw-ebooks/detail.action?docID=613606.

Butler, J. (2004). *Precarious life : the powers of mourning and violence*. Verso.

Cairns, K. (2017). Connecting to food: cultivating children in the school garden, Children's Geographies, *15*(3). https://doi.org/10.1080/14733285.2016.1221058.

Dill, J. S., Price-Glynn, K., & Rakovski, C. (2016). Does the "Glass Escalator" Compensate for the Devaluation of Care Work Occupations?: The Careers of Men in Low- and Middle-Skill Health Care Jobs. *Gender & Society*, *30*(2), 334–360. https://doi.org/10.1177/0891243215624656.

England, P. (2005). Emerging Theories of Care Work. Annual Review Sociology, *31*, 381-399. https://doi.org/10.1146/annurev.soc.31.041304.122317.

Fox, K. (2013). "Putting Permaculture Ethics to Work: Commons Thinking, Progress, and Hope." (Ser. Studies in environmental anthropology and ethnobiology, v. 17). Berghahn Books. https://books.google.com/books?id=uWFFAAAAQBAJ&lpg=PA164&dq=permaculture%20ethics&lr&pg=PA164#v=onepage&q=permaculture%20ethics&f=false.

Gaylie, V. (2009). *The learning garden : ecology, teaching, and transformation*. Peter Lang.

Gilligan, C. (1993). *In a Different Voice: Psychological Theory and Women's Development*. Harvard University Press. https://doi.org/10.2307/j.ctvjk2wr9.

Goldstein, L. S. (1998). More than Gentle Smiles and Warm Hugs: Applying the Ethic of Care to Early Childhood Education. Journal of Research in Childhood Education, *12*(2), 244-261. https://doi.org/10.1080/02568549809594888.

Groenhout, R. E. (2004). *Connected lives : human nature and an ethics of care* (Ser. Feminist

      constructions). Rowman & Littlefield.

Hamington, M. (2004). *Embodied care : Jane addams, maurice merleau-ponty, and feminist ethics*.

      University of Illinois Press.

Holmgren, D. (2013). *Essence of Permaculture*. Holmgren Design Services.

Keigher, S. M. (2000). The challenge of caring in a capitalist world. *Health & Social Work, 25*(2), 83-86.

      http://dx.doi.org/10.1093/hsw/25.2.83.

LeMenager, S. (2021). "12. Climate Change and the Struggle for Genre". *Anthropocene Reading:*

      *Literary History in Geologic Times*. Penn State University Press, 220-238.

      https://doi.org/10.1515/9780271080390-013.

Lewis, S. L., & Maslin, M. A. (2015). Geological evidence for the anthropocene. *Science*, *349*(6245),

      246–247.

Lockyer, J., & Veteto, J. R. (2013). *Environmental anthropology engaging ecotopia : bioregionalism,*

      *permaculture, and ecovillages* (Ser. Studies in environmental anthropology and ethnobiology, v.

      17). Berghahn Books.

      https://ebookcentral.proquest.com/lib/depauw-ebooks/detail.action?docID=1337727.

Moore, J. W. (2015). *Capitalism in the web of life : ecology and the accumulation of capital* (1st ed.).

      Verso.

Moore, J. (2016). *Anthropocene or capitalocene?* PM Press.

Moore, J. W. (2016). "The Rise of Cheap Nature". *Sociology Faculty Scholarship*, (2).

      https://orb.binghamton.edu/sociology_fac/2.

Moore, J. W. (2017). The capitalocene, part i: on the nature and origins of our ecological crisis. *The Journal of Peasant Studies*, *44*(3), 594–630. https://doi.org/10.1080/03066150.2016.1235036.

Müller, B. (2001, January 1). *The careless society-dependency and care work in capitalist societies*. Frontiers, https://www.frontiersin.org/articles/10.3389/fsoc.2018.00044/full.

Noddings, N. (2013). *Caring : a relational approach to ethics & moral education* (Second edition, updated). University of California Press. https://ebookcentral.proquest.com/lib/depauw-ebooks/detail.action?docID=1342614.

O'Connor, M. (1994). *Is capitalism sustainable? : political economy and the politics of ecology* (Ser. Democracy and ecology). Guilford Press.

Patel, R., & Moore, J. W. (2017). *A history of the world in seven cheap things: A guide to capitalism, nature, and the future of the planet*. Oakland, California: University of California Press.

PBS. (2008). *Five sources of Ethical Standards - PBS*. https://www.pbs.org/wnet/religionandethics/files/2008/09/five_sources.pdf.

Puig de la Bellacasa, M., & SpringerLink (Online service). (2009). Touching technologies, touching visions. the reclaiming of sensorial experience and the politics of speculative thinking, *Volume:28*. https://doi.org/10.1057/sub.2009.17

Puig de la Bellacasa, M. (2010). Ethical doings in naturecultures, Ethics, Places & Environment. *13*(2), 151-169. https://doi.org/10.1080/13668791003778834.

Puig de la Bellacasa M. (2017). *Matters of care : speculative ethics in more than human worlds* (Ser. Posthumanities, 41). University of Minnesota Press. https://www.jstor.org/stable/10.5749/j.ctt1mmfspt.

Puig de la Bellacasa, M. (2019). Re-animating soils: Transforming human-soil affections through science,

     culture and community. *67*(2), 391-407, https://doi.org/10.1177%2F0038026119830601.

Quinton, A. (1973). *Utilitarian ethics* (Ser. New studies in ethics). St. Martin's Press.

Salleh, A. (1995). Nature, woman, labor, capital: Living the deepest contradiction. *Capitalism Nature*

     *Socialism*, *6*(1), 21-39. https://doi.org/10.1080/10455759509358619.

Skinner, J. (2011). Gardens of resistance: gilles clément, new poetics, and future landscapes: translator's

     introduction to gilles clément. *Qui Parle*, *19*(2), 259–274.

     https://doi.org/10.5250/quiparle.19.2.0259.

Trelstad, B. (1997). Little Machines in Their Gardens: A History of School Gardens in America, 1891 to

     1920. *Landscape Journal*, *16*(2), 161–173. https://doi.org/10.3368/lj.16.2.161.

Tsing, A. (2012). Unruly Edges: Mushrooms as Companion Species. *Environmental Humanities, 1*(1),

     141-154. https://doi.org/10.1215/22011919-3610012.

*We believe in abundance*. World Permaculture Association. (2020, March 24).

     https://worldpermacultureassociation.com/permaculture-ethics/.

Creative Writing Portfolio (Stories Matter!):

*Stories and Poems of My Individual Experiences with Nature*

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DePauw University

Honor Scholar Program

Class of 2022

Primary Sponsor: Professor Jeanette Pope

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Introduction: Stories with Nature Shaping a Common Future

When considering the creative aspect of my thesis I originally thought the most effective and meaningful path forward would be to design a fully-functioning, afterschool program at the DePauw University Campus Farm. However, upon considering the practicality of actually designing and implementing such a program, it seemed an improbable and unlikely task. Although not the intention, assuming that I myself could individually design a program that would be effective in a space that is already being managed and working was a bold claim and assertion.

Therefore, my path forward with the creative portion of my thesis is to engage in storytelling. As a Biochemistry major at DePauw University my first thought when approaching this portion of the project was, "HOW am I qualified to do THIS?!" But then came the reflection of my own stories with nature. Growing up in a rural, Northeastern Indiana community, I was fortunate enough to engage on a daily basis with natural spaces and develop a familiarity with the environment in my family's backyard. Upon reflecting, I realized that the stories–whether I felt qualified to retell them or not–are an important part of resisting a capitalist world ecology. In that case, I hope that my stories can spark realization of your own individual experiences and relationality to nature. Whether challenging experiences or joyful stories, I hope that my narratives spark your own reflections of haptic experiences in nature. Your stories matter, have value, and are a fundamental form of resistance in a capitalist ecology which tells you that your relationality to the environment is not worthy.

Digging In!: Lessons from My Brother Robert

        It's a hot June day in Northeastern Indiana. The sun is beating down on my neck and the sweat is dripping from my forehead like a sieve. A piece of hair clumped with dirt swings into my eyes as I try to focus on the task at hand: turning over the hard, clay-ey soil to plant our squash seeds and zucchini plants. My brother, Robert--the plant, animal, and all-around Biology field expert and extraordinaire--has been saving the seeds from the spaghetti squash that we had been eating over the past year to plant today. Of course, my father is glad to have a source for our own spaghetti squash rather than heading to the local Kroger, 15 minutes away, to "harvest" the squash for future dinners. With diligent guidance and care, Robert is directing our family in the ways of properly planting the squash seeds in a patch of dirt that has held our tomato plants and garden in past years.

        Turning over the soil is no easy task, especially given the soil composure of Northeastern Indiana, where I call home. It must be an odd sight, three 12-year olds and two adults in tall rubber boots and old, beat-up sneakers, covered in mud and dirt, digging with shovels and raking with hoes, attempting to make the tough soil a comfortable resting place for our squash seeds. The air is filled with Robert's excited voice, offering directions, and my father's supplementary instructions for myself and my other brother, William, as we dig deep in the dirt. Robert is close to bursting with his excitement about the squash we are planting, while I, covered head-to-toe in mud and sweat, am disgruntled and tired.

        "How long will it take for these plants to grow, Rob?" My dad questions our local expert.

        *How long until we can take a break and EAT?* My inner monologue quips back.

        The afternoon continues like this until, finally, it would seem that the patch of dirt has been turned over to offer a soft bed for the seeds. Kneeling down to examine, Robert gently digs small holes, in rows, to place the small, pale squash seeds into the dirt. We all watch, as he gently lays each seed into the holes and covers them with more dark soil. With each seed, Robert takes extra time and care. While I had been wishing away our afternoon, hoping that this work would go by faster so I could return inside to our air-conditioned, clean home, Robert had been fully embracing the experience.

In the coming months, I would watch as Robert checked the garden daily after school in early August. He would hustle up our 30 meter driveway where the bus dropped us off, to the back of our house where the plot of holding the potential for the sprouts that he so eagerly awaited. In the evening, he would fill his watering can and make his rounds to the various plants and plots of our yard, ensuring that each small sprout (either visible or not) was sufficiently watered during the dry spell of late summer.

Picking Up Sticks: Learning Beyond Punishment

The sound of crunching leaves and squirrels rustling in the brush greets me as I chase my brothers through our woods. Growing up in rural Northeastern Indiana has allowed us the opportunity to connect daily with nature. For the past 22 years of my life, our family has lived in this house, surrounded by 10-acres of land, half of which is woods. The woods have been a playground for my brothers and I as we grew up. From playing imaginary games to just exploring the land, the woods has offered a deeper connection to nature and disconnect from the outside world. Building forts, climbing trees, jumping over creeks, I feel like I know these woods like the back of my hand. From sunny, cool fall days jumping in the leaves to playing hide-and-seek in the thick, green foliage in the summer to chasing each other in an empty woods covered in snow, these woods have held adventures in every season.

The only thing that would call us away from our adventures among the trees would be my mother's holler from the back door for dinner or my father's shrill whistle from the barn, a summons to end our games and exploration. Now as an adult, I have begun to realize that many children don't have the opportunity to experience nature the way that my brother's and I had in our youth. To us, it seemed only natural to run outside into our woods once our school work was done.

The woods offered not only a spot for play but also was used as a "time-out" setting rather than being stuck in the house. For our family, punishment for sass-talking, a harsh tongue, and a hit was to put on rubber boots and walk around our yard picking up sticks. Yes, picking up sticks. Seemingly a futile task as the land is surrounded by trees with only our front yard being about five cottonwood and two locust trees. Oftentimes, as I left through the back door to grab my black, heavy, worn-down rubber boots from our barn, I would be fuming. The hunt for sticks would begin with angry snatches at the ground for big sticks to throw--javelin style--deep into the woods. Eventually, my mind would wander away from angered, blaming thoughts to an emptier mind, filled with listening to the leaves under my feet, the creek bubbling in our ravine, and the birds singing in the trees. Unbeknownst to me, my parents have forced me

into a setting of self-reflection and observation. Time slows and I begin to lose track of time, lost in the task at hand and listening to the sounds around me.

"Charlotte Anne! You can come inside now!" My dad yells from our front porch, waving his hand to summon me for my lecture. Once I throw my last, big stick in hand into our ravine, I turn, trudging back, head-down towards our house; I am ready to apologize.

Now, even as I walk across campus and see a stick on the path, fallen from a tree nearby during a storm, I cannot help but pick it up and throw it off the sidewalk. My friends look at me with confusion and curiosity: *Why?* I just shake my head and laugh.

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The Story of the Big Brown Bat


When the sky gets dark,

Colored a soft purple hue.

It's a sign that the day is almost done.

But that's not true for all the critters!

A dark, swift body flashes across the sky:

The big brown bat.

As I say "Goodnight!" to the sun,

The bat says "Good morning!" to the moon.


Flying sporadically across the dusk sky,

The big brown bat begins to eat:

"Breakfast time!"

Instead of lucky charms,

These critters enjoy:

Flies with a side of wasps,

Moths, and beetles.

Feasting on the bugs

That swarm around us,

On steamy summer days.


One way we show care

Towards our furry, fast, nocturnal friends

Is by creating spaces

For them to roost,

As the sun rises in the East,

And the bat's eyes,

Droop shut for the day.


My family likes to make "bat houses,"

Using pieces of wood, nails, and paint.

These houses,

Small and sturdy,

With flat sides and an angled roof,

Are similar to the holes in trees,

And roofs of barns,

Where these bats like to make their home.


Once the house has been assembled,

With gentle hands, hammers, and nails,

Our family parades the house,

A humble abode for our nighttime feasters,

To an old large tree in our yard.

Lifting the bat house up,

And positioning it in the perfect spot,

My dad begins the process

Of securing the new home.


I hope the bats like,

My special flower designs,

Painted with care,

On the exterior.

Next time I sit outside,

As the sun sets.

Seeing these winged mammals,

Will take on a new meaning.


## Our Common Home: Sharing Spaces with Critters

Dark bodies, zooming sporadically across the dusk sky was a staple of my childhood evenings. As our family would close the day, taking a walk around our yard or eating ice cream on our back swing, I remember the arrival of the bats as a clear signal that night was beginning. Pointing out the bats we saw and where they were going as a family, licking on a melting ice cream cone is a lasting and distinct memory. As we watched our nocturnal friends fly across the cool-toned sky, my brother Robert would describe the bats, their haunts, and their favorite cuisine: bugs! The big brown bat of Northeastern Indiana and the Midwestest in general is an insectivore, chomping on a range of insects including moths, beetles, wasps, and flies. Unlike the portrayals in films of the vampire bat, with its intimidating fangs dripping in blood, my perspective on the role of bats as a child took a different form. I understood these big brown bats as taking care of the bugs that "checked" the insect population in our yard and in nature. Without these furry, winged friends, the flies, wasps, and beetles that frequented our yard would increase in population dramatically, taking over the space. Instead of fear towards bats, I felt a sense of gratitude for their presence in our yard.

As our family became more interested in the bat population of our region, we discovered that making bat houses can be a strategy to create spaces and protect the bat population. Unlike a traditional bird house, this bat house took a more unique architecture: with tall flat sides and a singularly angled roof. Given this opportunity to show reciprocity, our family took on the task of designing and building a

potential home for the big brown bats of our area. I remember being thrilled at completing the task, taking hold of a screwdriver to secure the sides and attentively selecting colors to paint the exterior that would be fastened to a deliberately selected tree at the edge of our woods. Once the house was complete, our family "ceremoniously" what could be considered, "paraded" the bat house to its final spot.

Even in the coming days and weeks after we had completed the bat house and placed it on a tree, I remember often checking the house during the day to make sure it was secure and holding together. This was an act of intended reciprocity–creating space for our nocturnal friends who in turn ate the insects that could be detrimental to the growth of our garden if allowed to overpopulate.

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My Dad and Tomatoes: A Friendship Based in the Garden


As my father's green truck,

Turns into our driveway,

Every day at 3:30 in the afternoon,

I know that he will jump out,

Grab his lunch box,

And immediately walk to our garden.


The garden,

A small plot outside our kitchen window,

Grows one of my dad's

Favorite things in the world:

The tomato.


Red and juicy,

My dad tells us he could

Bite into it like an apple.

The excitement on his face,

When he sees this member

Of the nightshade family

Is undeniable.


Standing at the garden,

Navy overalls covered in grease,

From his long day at work

Bright red lunchbox and thermos in tow,

My dad gazes at his friends,

The tomato plants.


This is the tradition of the day,

Along with his nighttime watering,

And tending of the plants.

As the sunsets,

He untangles our watering hose,

And begins the process of watering.


Especially in mid-June,

When the sun begins

To take on its summer intensity,

With little reprieve for the plants.

Watering becomes an even more

Essential task.


This act of watering,

Is an investment of care

And reciprocity,

Towards these plants,

That provide so much joy,

At the thought of enjoying their fruit.

In elementary school the staple of returning home was my father's traditional checking of the tomato plants in our family garden. After we had jumped off the bus and were enjoying a pre-homework snack at our kitchen table, the daily sight from the table was our father getting home from work and immediately checking the plants. Coming home from working in an industrial factory, the sight was a clear contradiction. My father, standing in his navy-colored work overalls, with splotches of grease, facing a backdrop of green woods and a green garden with dark soil could be considered an embodiment of a "Nature/Society" dichotomy. However, the look on his face told a different story. The look was one of admiration and appreciation. This appreciation was not based on the idea of the tomato as a "commodity" to be consumed and used. Rather, the appreciation stemmed from a reciprocal relationship of care between my dad and the tomato plants. Now, when I see tomatoes at the local Kroger, at the farmer's market, or even sliced up in the university dining hall I immediately think of my father and his appreciation and care for this plant and its fruit.