

ENVIRONMENTAL MATERIALISM  
A STUDY OF RELATIONSHIPS AMONG MATTER

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## DEDICATION

This paper is dedicated to April Dawson. To her I owe my motivation for coming back to school. She gave me strength and love through good times and bad. This paper contributes to a body of knowledge that April was passionate about, and I know she would laugh at my use of Calvin and Hobbes. She would be proud of my accomplishments which in part I contribute to her. I love her and miss her dearly. May she rest in peace.

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## ABSTRACT

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Environmental materialism is a theory of relationships split out in a tripartite formula that looks at the relationship between A and B, with C being the relationship between A and B. Currently, the status quo of human relationships with nature is that of human superiority over nature. Environmental materialism redefines this perspective to that of viewing humans as nature in a relationship with non-human matter. This is important because it raises important questions about matter, agency, ethics, spirituality, and social justice. This thesis looks at each of these concepts grounded in current theory and in conjunction with environmental materialism to create a pathway to comic books as social justice and as accessible education. I create this bridge by putting environmental materialism into conversation with *Calvin and Hobbes*, the comic strip by Bill Watterson, and concluding my thesis with a historical account of education as activism through Ida B. Wells-Barnett and *Black Panther*, the comic strip and movie.

## TABLE OF CONTENTS

DEDICATION .....	II
ACKNOWLEDGMENTS .....	III
ABSTRACT .....	IV
TABLE OF CONTENTS .....	V
Chapter I. INTRODUCTION .....	1
<b>Literature Review</b> .....	5
<b>Deep Ecology</b> .....	6
<b>Agency</b> .....	7
<b>Environmental Materialism</b> .....	8
<b>Feminist Materialisms</b> .....	9
<b>Methodology</b> .....	12
II. ENVIRONMENTAL MATERIALISM .....	16
<b>Relational Capabilities</b> .....	17
<b>Definitions</b> .....	20
<b>Premises</b> .....	28
<b>Goals</b> .....	30
<b>Conclusion</b> .....	31
III. DATA ANALYSIS .....	32
<b>Relationships</b> .....	33
<b>Agency</b> .....	35
<b>Ethics</b> .....	39
<b>Nature</b> .....	42
<b>Spirituality</b> .....	43
<b>Conclusion</b> .....	44
IV. CONCLUSION .....	46

<b>Social Justice .....</b>	<b>49</b>
<b>Reflection .....</b>	<b>55</b>
<b>REFERENCES .....</b>	<b>57</b>
<b>APPENDICES .....</b>	<b>61</b>
A. Questionnaire .....	61
B. Comic Strips .....	65

## CHAPTER I

### INTRODUCTION

*Calvin and Hobbes* presents a world of vivid imagination and philosophical commentary that provides a backdrop against which to do my own imagining and exploring of the theoretical world. When I was a child, *Calvin and Hobbes* created a universe that gave me the means of expressing my lived reality. While taking an ecofeminism class in Spring of 2018 for my master's degree, I began to see how the author, Bill Watterson, engaged with environmental topics, philosophy, and even the metaphysical nature of Hobbes. At this point, I realized that this comic strip was not just for entertainment but also engaged in social commentary and philosophical dialogue that contained tenets of ecofeminism and materialism. These are concepts that I will elaborate on below, as they help create the theory of environmental materialism, which provides a foundation for social justice activism.

This project is divided into three parts. In the first part, I outline the theory of environmental materialism. The second part explores how the comic strip series *Calvin and Hobbes* by Bill Watterson embodies the theory of environmental materialism to discuss ideas central to ecofeminism and materialism. Lastly, I will suggest ways in which environmental materialism can lead to applied social justice activism.

This section introduces the concepts explored as I theorize environmental materialism. It begins by introducing *Calvin and Hobbes* and ends with the appendix that includes all of the strips I used for my analysis. At this time, I ask readers to pause

and flip to the appendix and read some of the strips (see Appendix B). My aim is that the combination of visual and textual elements will create a feedback loop for the reader. The visual and textual parts of this paper will work together to create further comprehension of environmental materialism.

*Calvin and Hobbes* is a comic strip series that was created by Bill Watterson in 1985 (Watterson, 1995). The strip follows a nuclear heterosexual family with a white-collar father and a stay-at-home mother whose lives revolve around Calvin, a loud-mouthed six-year-old boy. Calvin is an autobiographical character “in the sense that he thinks about the same issues that [Watterson does],” suggesting that Calvin’s struggles are metaphors for Watterson’s own (Watterson, 2005, p. 21). Calvin is a child who embraces long-winded philosophical thought and uses his best friend Hobbes as his sounding board. He is a character that embraces the perspective of a child on topics that plague the adult world as experienced by Watterson. A big part of Calvin’s world is his backyard that resembles a national forest (Watterson, 2005). Watterson states that “Calvin’s woods is important to the strip because it is the place where Calvin and Hobbes can get away from everyone and be themselves” (Watterson, 2005, p. 104). This is one of the main environments that Calvin and Hobbes interact with, and it connects the materiality of the strip to an environmental context.

Hobbes is Calvin's more sensible friend, who happens to be a stuffed animal tiger to others and both plush and live talking tiger to Calvin. This dual manifestation is "the so-called 'gimmick' of the strip" (Watterson, 2005, pp. 13-22). In this sense, Hobbes is neither a doll that comes to life nor a figment of Calvin's imagination but, instead, is more about the “subject nature of reality” (Watterson, 2005, p. 22). Watterson finds the



dual embodiment of Hobbes uninteresting, as “the two versions of reality makes complete sense to the participant who sees it” (Watterson, 2005, p. 22). Hobbes’s existence and embodiment are the important aspects of the strip as opposed to the unexplained way he transitions between real and stuffed. How he transitions is unimportant to the context of the strip; however, I will show how imagination and even spirituality play a large part in how he transitions. While “how” is unimportant to Watterson in the strip, it is important to how we understand the world through the perspective of environmental materialism.

I approach this project with the objective of creating an applied theory I call environmental materialism. Environmental materialism is an ecofeminist thought process that seeks to break down the dichotomy between humans and nature as it reflects on the ethics of matter and dismantles anthropogenic, or human-based, power dynamics. It offers a new perspective on human/non-human relationships by theorizing relationships between all forms of matter and embodiment, including that between humans and the environment. This theory expands conventional ecofeminist theorizing by drawing on feminist materialist concepts such as vibrant matter and trans-corporeality to posit that matter has agency, that all relationships are an embodiment of this agency, and that the relationship between humans and non-humans can be explained through matter’s agency.

Environmental materialism suggests that the analysis of the relationships between humans and non-humans can lead to a foundation for environmental social justice through the acknowledgment of nature’s agency and the positive and negative consequences that come from the inevitable relationship with nature. Environmental

materialism does not reinforce the human/nature binary but asks us to accept that humans are part of nature and that as humans, we must accept our own complicity in environmental destruction, which includes the deterioration of the human condition. Rather than being a “new” way of doing things, environmental materialism is instead a new perspective for looking at relationships within the world grounded in the presumption that matter has intrinsic value.

This theory contributes to feminist scholarship by expanding the field of ecofeminism by broadening and deepening the definition of nature through the reconfiguration of the human/nature binary to the human/non-human relationship. This means that non-humans are being placed in a broader context of non-human matter in order to disrupt the human nature of relationships and reconfigure our perspective on matter to that of matter deserving equality and value. Rather than reproducing a binary relationship, I propose a universally encompassing tripartite relationship. This relationship is defined as humans, non-humans, and the relationship between the two. Importantly, by reconfiguring the human/non-human relationship, environmental materialism provides a platform for social justice activism.

This thesis brings together the metaphysics of ecofeminism and materialism with the genre of comic books by analyzing *Calvin and Hobbes* through an environmental materialist framework. I not only create a new perspective on nature that works to derail domination and degradation caused by humans, but I also build a model for examining other visual arts projects as mediums for social justice activism. *Calvin and Hobbes* is not unique in its value as a starting point for social justice activism. It should also be

noted that other creative works should be considered as having potential for knowledge production.

### **Literature Review**

My first assertion is that environmental materialism is ecofeminist. A core project of ecofeminism is recognizing how different types of power reinforce each other and dominate the environment to survey what happens to the earth and its inhabitants (Adams & Gruen, 2014). Carol J. Adams and Lori Gruen (2014) described ecofeminism as a theory that engages with the different ways that sexism, heteronormativity, racism, colonialism, and ableism are informed by power and domination and how analyzing these intersecting forces can create less violent and more just practices that benefit both humans and the natural world.

Greta Gaard suggests that the intersectional analysis of nature and marginalized identities; thus ecofeminism “emerged from the intersections of feminist research and the various movements for social justice and environmental health explorations that uncovered the linked oppressions of gender, ecology, race, species, and nation” (2011, p. 28). An ecofeminist approach understands how power dynamics are analyzed all the way down to the human/nonhuman dichotomy (Adams & Gruen, 2014). Ecofeminist social justice activism aims to dismantle the violence caused by power and domination of the environment by humans (Adams & Gruen, 2014). I engage ecofeminist thought by focusing specifically on the relationship between Calvin and Hobbes, how Calvin and Hobbes experience nature, and the embodiment of Hobbes. When observed through a human/non-human perspective, Calvin could be seen as a partner and friend with Hobbes rather than as a leader of Hobbes. These relationships exemplify the tenets of

environmental materialism and expand ecofeminism by redefining nature to include humans.

### **Deep Ecology**

One thought process I explore and analyze is that of *deep ecology*. In the 1970s, Arnes Naess broke environmental reform efforts into the categories of deep and shallow. *Shallow ecology* is the conglomeration of actions that address the symptoms of anthropogenic environmental degradation such as pollution and resource depletion (Naess, 1995). Deep ecology explores and addresses the fundamental reasons that humans engage in behavior that causes them to treat the environment in harmful ways. It is based on a relational approach towards environmental and biospherical egalitarianism (Naess, 1995). There are eight platform principles of deep ecology: all life has intrinsic value, richness and diversity contribute to the value of life, humans have no right to interfere with these values except for vital needs, the human population must decrease so that non-human life may flourish, current human interference is excessive, policies need to change, ideological values need to change, and those who agree with these points must try to implement these changes (Naess & Sessions, 1995).

Deep ecology espouses a platform that has benefits for the ethical guidance of environmental materialism. First, like ecofeminism, it shows the need for the creation of environmental ethics because rules of relationships need to be defined in order to extend to non-human subjects the rightly deserved access to social justice. In juxtaposition with deep ecology, environmental materialism does not agree with the idea that the human population should decrease, but instead believes that the ethical treatment of the Earth and its inhabitants will lead to a balance of life forces that will

create a sense of harmony. Environmental materialism believes, like Naess, that humans need to change their relationship with their surroundings and that policies, values, and ideologies need to change in order to create sustainable social justice at the environmental level. Lastly, environmental materialism is a theory that believes in social justice, so like Naess, it is important that one not just agree, but that they act. As I engage with *Calvin and Hobbes*, I must consider the ethical implications of their relationships with each other and with their environment. The richness and diversity of the ecological world is something to be celebrated and helps build a biophilic attitude, which is necessary to implement social justice activism projects

### **Agency**

Agency becomes an important part of environmental materialism. Using scholars such as Kortemaki, Colebrook, and Bennett, I define agency as the possession of capabilities and therefore link agency to the access towards social justice because all matter has agency; thus, saying that all matter is worthy of social justice. Environmental materialism posits that all matter has worth because all matter is capable of relational agency. Teea Kortemaki writes about agency through the lens of expanded or environmental capabilities approach, or ECA (Kortemaki, 2018). In her article, Kortemaki questions if species have capabilities, which she defines as “opportunities to do or be something” (2018, p. 311). She also looks at functionings, realizations of capabilities, and flourishing, which “requires certain capabilities which in turn enable the actual realization of one’s characteristic form of living” (Kortemaki, 2018, p. 311). She claims that species, defined as evolutionary groups, have integrity and thus the potential

possession of capabilities (Kortemaki, 2018). idea and the ramifications of each approach to justice (Kortemaki, 2018, p. 320).

Kortemaki extends her discussion of capabilities by writing about the four dimensions of broad ecological justice. Each dimension builds a case for why matter possesses capabilities and why the possession of capabilities requires that matter be extended social justice. The first dimension is distribution, which refers to how economic or material resources are distributed with attention to structures and practices that are unjust and cause maldistribution (Kortemaki, 2016). Next are recognition and participation; these two dimensions focus on acknowledging non-human entities as proper recipients of justice and giving these entities the ability to participate in their own fate (Kortemaki, 2016). The last dimension of broad ecological justice is discourse of extended capabilities. This means looking at the capabilities of non-human entities and discussing what they are able to do and to be and how this contributes to the flourishing of nature (Kortemaki, 2016). These dimensions are key to the social justice aspect of environmental materialism and developing the guiding environmental ethics. I expand upon her use of the ECA and capabilities by using a relational approach to extend the possession of capabilities to all forms of matter.

### **Environmental Materialism**

Environmental materialism posits that all matter has agency. Agency does not mean having a will or intentions but rather the possession of capabilities or potentialities (Kortemaki, 2016). In order to understand my definition of agency we need to look at physics. Mechanical energy in physics is broken up into kinetic energy and potential energy. For example, a rock at the top of a hill has potential energy because it's not

rolling down the hill, but if an outside force such as the wind blows hard enough, or an animal hits the rock, it could roll down the hill and its potential energy would change into kinetic energy. The rock, therefore, has agency because of its potential to move, to interact with its surroundings. To do so requires a relationship with some outside force to help the rock convert its potential energy to kinetic movement. The rock also has agency through its own existence, as the rock's existence is comprised of multitudes of relationships from its atomic makeup to its relationship with the Sun to have the capability of creating shade.

### **Feminist Materialisms**

I show how matter has agency through its vibrancy, leading to how environmental materialism expounds its main principles of the idea of human/non-human relationships. These relationships are integral to environmental solutions as they acknowledge the agency of humans, non-humans, and the relationships formed between all matter. Feminist materialism, as manifested in vitalism, vibrant matter, and trans-corporeality, is important theoretical groundwork for my theory of environmental materialism because it emphasizes the material interconnections of the human body with the more-than-human world and acknowledges that understanding agency “necessitates more capacious epistemologies” (Alaimo, 2008, p. 238). Materialism asks how we can define the “real” and how we can describe non-human agency (Alaimo & Heckman, 2008), which explores the dichotomy of language and reality and tackles the concept of the real or the material. This dichotomy between language and reality broadens the conceptualization of matter by expanding beyond language to include other mediums of communication such as material objects and materialist perspectives.

By this I mean art, music, fashion, and other conglomerations of matter to create meaning, which in turn produces communication. This "new way of understanding the relationships between discourse and matter that does not privilege the former to the exclusion of the latter" (Alaimo & Heckman, 2008, p. 6) informs my approach to developing environmental materialism through the study of Hobbes as he embodies both static and dynamic energy and live and inanimate existence at the same time.

The materiality of Hobbes exists separate from discourse. His material embodiment creates a sense of reality that Watterson chooses to not put into words. The embodiment of Hobbes and the many relationships formed through both his bodies creates questions of Hobbes as matter, Hobbes's agency, and Hobbes as a part of nature. Hobbes, himself, and his relationships and interactions are important as they incorporate main tenets of environmental materialism. These tenets include the assertion that all matter has value and agency and thus deserve social justice, which I elaborate below through feminist materialist theories. Karen Barad argues that language has been given too much power and that the idea of performativity contests this excessive power to determine what is real (2008). Barad promotes the idea of combining the knowledge production of social and scientific communities together in a way that provides enlightenment (2008). This interdisciplinarity is a goal of this paper and of environmental materialism.

Earlier, I stated that Alaimo and Heckman see feminist materialism as the answer to the problem of social "constructionist's" turn towards the linguistic and discursive modes of knowing. Colebrook continues this thought by saying that when language is material that it resists relationships and vibrates within itself (2008). This enters



conversation with Jane Bennett and vibrant matter to say that when language is made material, such as written down in a book or in a comic, this language is vibrant matter, which means it has the agency and potential to enter into relationships (Bennett, 2010). I further this idea with the concept that everything is engaged in relationships and that art or literature is not only discursive and linguistic but also material. It is matter and it matters. Alaimo's transcorporeality also challenges the turn to linguistics by showing the importance of embodiment as a form of communication and empowerment of the object (Alaimo, 2008).

Feminist materialisms shifts our perceptions of material reality, thus expanding how we can conceive of and work toward social justice. According to Claire Colebrook, vitalism is "one of the most intense expressions of the desire and imperative for life to be productive and creative" (2008, p. 57), which is the "effect of a divine and spiritual force that endowed matter with its own properties of movement" (2008, p. 57). Bennett, in contrast, understands that life force is not imbued matter with spirit, but that matter's vibrancy is intrinsic. Therefore, all matter has agency and the capacity for dynamic relationships with itself and others that are not divinely or spiritually inspired (Bennett, 2010). Hobbes's embodiment also manifests vibrancy through his interactions with the world around him, regardless of the material state of his existence at the time. Perceiving Hobbes as vibrant matter creates a pathway from which to create and imagine the theory of environmental materialism through the relationships between and among the interactions of matter. The spirituality of matter is further discussed in later chapters as I look to Womanism as a source of enlightenment.

Stacy Alaimo's concept of trans-corporeality works with Bennett's concept of vibrant matter to build a theoretical bridge between environmental theories and corporeal theories that does not privilege humans over animals or other non-animate entities and creates productive ways of knowing and thinking about matter and reality (Alaimo, 2008). Trans-corporeality is a phenomenon in which the flesh and material reality of humans are inseparable from "nature" or "environment" (2008, p. 238). Like vibrant matter, trans-corporeality deconstructs the human/nature binary and further asserts that matter has agency. Unlike vibrant matter, trans-corporeality looks at the relationship between the embodiment of matter rather than the relationships between matter. This means that the theory looks at the relationships between all potential variations of embodiment of the subject of matter. The character of Hobbes is the epitome of this interconnection between the material body and the more-than-human world since his human characteristics and feline instincts and personality intertwine. Hobbes's transformation from live tiger to stuffed animal throughout the strip embodies this phenomenon of trans-corporeality and agency, which creates a useful site for theorizing.

### **Methodology**

I developed a theory of environmental materialism that asserts humans as nature and provides a framework from which to examine relationships between all matter and then based on this analysis show how *Calvin and Hobbes* is a form of environmental activism and can be used for social justice activism. Because environmental materialism is about relationships between all matter, I analyzed this comic by looking at the interactions between the human characters and their non-human environment. I utilized

a bricolage approach of qualitative methods data collection based on methodologies from visual arts studies, comic studies, feminist studies, and environmental studies to create a two-part approach of visual and narrative analysis.

My data come from *The Complete Series of Calvin and Hobbes*. I used 28 strips, one per every 4 months the series was actively being published, to provide a comprehensive view over the 10 years it ran. I selected strips from three ranges: January to April, May to August, and September to December. I used the criteria that the strip must take place outside and include both Calvin and Hobbes engaging with their surroundings, which allows me to reconfigure the status quo ethics that shape human/non-human relationships. I required that both Calvin and Hobbes be in each strip as their relationship with each other further encapsulates the shift in perspective. Lastly, the engagement with their surroundings helps to showcase the complexity of relationships.

Patricia Leavy provides a four-step methodology for analyzing visual arts that guides my bricolage approach (2009). First, I observed the 28 strips to assess the narrative for context to examine the elements contained within the full storyline. This included looking at the plot of each storyline and the actions of the characters. I qualitatively assessed the plots of each strip through thematic analysis.

Second, I created an inventory of the parts of each storyline and categorized them based on three elements: panel composition, representations of the natural world, and character actions and interactions. I tracked, for example, different visual elements of a storyline such as the number of panels, their arrangement, the scenery, and how

many times Hobbes shows up as stuffed or alive. I kept track of the frequency of themes and patterns.

Third, I created another inventory, this one focused on the relational structure of each strip, the qualities of characters' relationships and actions, and the language used (Duke Writing Studio, 2019). I examined the mood and emotion of the characters as well as the mood and emotion invoked by the strip. Facial expressions, punctuation, word choice, and actions helped me determine the mood and emotions of the characters.

This methodology is recursive because it is partly grounded in the analytical process itself. If one storyline made me think of a new question to ask, then I went back to previously analyzed storylines and to ask that question so that by the end of my analysis I had a consistent set of data. As environmental materialism posits that all matter has agency, I view my data as having agency and thus as capable of having experiences and creating relationships through their interactions with me and the tools I use in my methodology. Each step in the methodology addressed both narrative and visual elements in juxtaposition because both are integral to telling the story in each strip. The omission of one of the elements would create the loss of a significant part of the narrative.

Above all, I employed feminist research ethics throughout my data collection and analysis. This requires reflexivity on my part to maintain an ongoing vigilance about the ways in which my project challenges and reproduces hetero-patriarchal research methods (Jaggar, 2008). To avoid creating hierarchies, I gave attention to all parts of my data collection and analysis process and actively sought to deconstruct binary

relationships through my theory and in my research process so that each tool, theory, and method I used were put on equal footing. Although it is impossible to approach this project without bias, I want to engage generously with all the tools and resources that will influence my project. To do this I questioned and reflected on the methods I used to interact with the data so that I did not limit and erase the experiences of my data that I observe in my analysis.

This thesis project used concepts from ecofeminism and materialism to create a theory called environmental materialism. This theory reframes the status quo notion of the human/nature binary to the human/non-human relationship that defines matter as having agency, ethics, and spirituality. The next chapter will synthesize and elaborate the full theory of environmental materialism based on the theoretical concepts from the literature review. My third chapter will analyze *Calvin and Hobbes* in conversation with environmental materialism and will present my findings based on a two-tiered analysis. Finally, I will conclude by explaining the significance of the project in a social justice activism framework with suggestions on how environmental materialism can be used for activism.

## CHAPTER II

### ENVIRONMENTAL MATERIALISM

Environmental materialism is a theory based on relationships that challenge the status quo created by the patriarchal capitalist perspective of nature. As mentioned in the introduction, I came into this theory through a reflexive process while taking an ecofeminism course and reading *Calvin and Hobbes* for leisure at home. Upon further study and reflection, I saw a need for reframing the human/non-human relationship. This is not a binary in the sense of either/or but rather two objects that encompass all that is known at this moment within the universe. This binary I create is intentional and I actively seek to not have any hierarchies created within this theory. I will show how the binary is actually an all-encompassing tripartite relationship with the third part being the relationships between the first two parts. I offer this perspective as a reframing that will support feminist efforts for sustainable and accessible social justice. This new perspective combined with several premises and built on a foundation encompassing both ecofeminism and feminist materialism merges together to create the theory of environmental materialism. This new theory then becomes a basis for new models of social justice activism geared towards improving the relationship between humans and non/human matter.

I approached this theory through the lenses of ecofeminism and feminist materialism. Ecofeminism helps me show how various forms of discrimination are informed by and support speciesism, or the idea that one species (in this case, humans)

are better than other species and can thus dominate and degrade the world around them as they see fit (Adams & Gruen, 2014). It is therefore radical to invoke the idea that humans are not all-powerful and that all forms of matter have a right to exist and coexist peacefully with each other.

Feminist materialism as conceived by Alaimo and Heckman also argues for the reframing of the nature/culture dualism (2008). Alaimo and Heckman assert, like Salleh, that feminists who are also environmentalists cannot be happy with theories that replicate this very dualism, which Salleh points out creates a double bind (Salleh 1997). Instead of reframing the status quo like Salleh, Alaimo and Heckman suggest reframing the very concept of nature itself (2008, p. 4). Alaimo and Heckman claim that nature is agentic and that the actions of nature have consequences for both human and non-human entities (2008). Salleh contributes to the environmental materialism's tenet of anti-capitalism. The turn towards materialism and towards nature that Alaimo and Salleh propose is exactly what environmental materialism seeks to do. I seek to make matter *matter* and build a foundational theory that reframes the status quo and redefines nature in order to create a new pathway towards social justice for nature that includes women.

### **Relational Capabilities**

I argue that all matter, meaning all things in existence, has value and worth as well as a spectrum of agency based on capabilities and relational capabilities. Relational capabilities refer to the abilities something has when in a relationship with something else. The rock, as referenced periodically through this thesis, cannot move on its own, but in relationships with wind, animals, or other forces at work, the rock has the relational capability to move. The rock also has internal relational capabilities such

as its own sustainable existence. To further the point, all matter, including humans, has agency only in relation to other forms of matter. The human brain requires synapses to transmit messages that tell the body what to do. A human cannot function or exist by itself; it only has agency in relation with matter from the atoms to the universe itself. The spectrum of agency is horizontal rather than vertical, meaning that there is no point on spectrum that is better or worse than any other point.

Environmental materialism expands Alaimo and Heckman's ideas into the deconstruction of the androcentric definition of nature, which I explore further later on, and the construction of the human/non-human relationship that challenges the heteropatriarchal status quo. Alaimo and Heckman assert that postmodern and feminist theorists have turned their attention away from the material and towards social constructionist models (2008). In their anthology *Material Feminisms*, Alaimo and Heckman collaborate with other scholars such as Karen Barad and Claire Colebrook to flesh out material theory and apply feminist materialisms to real world situations. I use Alaimo's, Heckman's, Barad's and Colebrook's work as my basis for defining feminist materialism throughout this paper. In regard to nature, Alaimo and Heckman claim that "since the denigration of nature and the disregard for materiality cannot be entirely disaggregated, material feminism demands profound-even startling-reconceptualization's of nature" (2008, p. 5).

The goal of feminist materialism is to deconstruct the material/discursive dichotomy while still letting matter *matter* and the linguistic turn to social constructionism exist together without privileging either (Alaimo & Heckman, 2008). Alaimo and Heckman assert that materiality, especially of bodies and natures, has been a volatile



site of contention within feminist theory (2008). There became a turn towards discourse and linguistics as well as the social constructionist models that privileged discourse over materiality. Colebrook contends that “the idea that the world is constructed through language merely repeats a centuries old privilege of the formal and logical over the material (2008). The linguistic approach and discursive approach to understanding the world privilege those who have access to these skills of communication and logic and exclude experiences of the material such as the lived experiences and realities of marginalized people and matter.

Environmental materialism shares the above goal and builds upon Colebrook’s logic while engaging in deep conversation with ecofeminism to build a theory that addresses the very reasons that matter has value and why we must work together to build an accessible model for social justice that will hopefully create sustainable and positive changes to the way we view nature and human nature and ultimately how we understand the relationships between human and non-human entities. An ecofeminist political perspective by Salleh asserts that women are in a double bind (Salleh). Since women are seen as closer to nature and nature is seen as something to be dominated, women can either “side with nature and face the possibility of tightening their own subordination or seek liberation in terms disconnected from nature and abandon it to its fate as a resource” (Salleh, 1997, p. 13). In other words, Salleh sees the current framing of ecofeminism as stuck between standing up for nature but sacrificing autonomy and agency or leaving nature to be seen through a capitalistic perspective of resources. Salleh then says that the way out of this predicament is to reframe and recontextualize the problem. She offers up land-based cultures as a basis for this paradigm shift

(Salleh, 1997). She suggests a move from capitalism to subsistence and sharing and ends this thought with the claim that the emancipation of women from that rational sensibility that is the social, political, and economic status quo and the reclamation of women by men will “release earth energies”(Salleh, 1997, p. 14) meaning that the power of nature will become fully realized by humans. Salleh points out the need for reframing the status quo for both the liberation of women and for the celebration of the earth. This contributes to environmental materialism by showing the capitalistic perspective of women and nature as resources.

### **Definitions**

Before diving into the theory of environmental materialism, I begin with looking at the definitions of relationships, agency, ethics, nature, and spirituality. These five concepts are crucial to the understanding of environmental materialism and thus I engage with each of them through both an ecofeminist and feminist materialism perspective in order to come into a definition of each concept that is both grounded in scholarship and reflective of environmental materialism.

Environmental materialism uses the idea of *luxocracy*, created by womanist Layla Maparyan, to explain the spiritual nature of matter. Luxocracy means “rule by light,” “light” referring to the Inner Light, Higher Self, the Soul, of the God Within); all from which Maparyan creates the referential phrase “Innate Divinity” (2012, p. 3). She asserts that as more people recognize this Inner light in themselves and others, the recognition will become universal, thus changing the structures of governance (Maparyan, 2012). Luxocracy is egalitarian and rests on a foundation of spirituality (Mapayran, 2012). It goes against formal hierarchal structures of governance as well as

being benevolent and nonviolent (Maparyan, 2012). Maparyan argues that a “government informed by spiritual considerations would be significantly better” (2012, p. 5). In defining spirituality, Maparyan separates it from religion, as religion is structured and organized while spirituality comes from belief in what Maparyan calls “the source” (2012, p. 6). The societal goal of Luxocracy is to “foster, facilitate, nurture, protect, and coordinate the expression of every person’s Innate Divinity, simultaneously” (Maparyan, 2012, p. 6). Innate Divinity of each person is the basis for human equality, which I extend to environmental materialism by arguing that the innate divinity of all matter is the basis for universal vitalism (Maparyan, 2012).

Colebrook contends that “life is spirit.” She says that it is not something or somebody that is life but rather the potential for difference and creation based on relationships (2008). The idea merges materialism with spirituality and supports my claim that matter is not about the existence of an object or subject but rather the internal and external relationships of the matter. Matter has potential to enter into relationships and achieve actualization of their fullest potential (Colebrook, 2008). Thus, matter is never an independent being but rather a series of interdependent relationships.

Vibrant matter, or the idea that matter has an internal energy that creates relationships between matter, works with the theory of vitalism. Vibrant matter, as outlined by Jane Bennett differs from vitalism by denying the idea of an outside spiritual being bringing life and agency to matter (Bennett, 2010, p. 3). I agree with this contention, but I go further by asserting that a spiritual being as one understands it is responsible for the existence of matter to begin with (i.e. the Source within Luxocracy).

Environmental materialism looks at the relationships between actions much like a formula. The standard formula for the area of a rectangle is the output: “area” is equal to the inputs of “length of the rectangle” multiplied by the “width of the rectangle.” We are not just looking at the area but also at the relationship between length and width. If area were replaced by action or output, length and width would be replaced by input. An example of environmental materialism in action would be to look at a developer designing a neighborhood on land that has trees and large rocks already on it. The developer could cut down all the trees and remove all the rocks and then build, but environmental materialism would ask if this was truly necessary to achieve the goal. First, the goal must be defined, and then the inputs to the goal need to be outlined. If the goal is to build a neighborhood, then the relationship among the trees, rocks, and neighborhood must be assessed. If the house can be built without disrupting the broader ecosystem, I would recommend building around the trees whenever possible and then using the large rocks as landscaping aesthetics. This preserves the value and purpose of the trees and rocks rather than death and removal; though another perspective would suggest that the value and purpose of the trees and rocks is to be used as resources for the building of the community. While value is intrinsic, purpose is left up to the perspective, opinions, and needs of others. A tree may value its leaf as a means to absorb water and nutrients, but a leaf cutter ant values the leaf for a different purpose, which is to let the leaf decay so that fungus grows on the leaf. This fungus is the ant’s food source.

Environmental materialism uses quantum physics to show how matter starts as relational existence with atoms and quantum particles. In this section, I assert that

atoms had to have come from somewhere and that “somewhere” is a spiritual being. Therefore, I enter into conversation with spirituality and womanism as a way to understand the theory of environmental materialism.<sup>1</sup> Interestingly, the existence of atoms as scientific fact did not occur until the 20th century with the works of Albert Einstein and Jean Perin (McEvoy & Zarate, 1997). Quantum physics began with Max Planck’s discovery the Planck constant of “h” in a formula to determine the amount of quanta energy of an object based off the ideas of thermodynamics. The formula was that energy equaled the Planck constant of ‘h’ times “f” which mean the frequency of vibration, hence explaining why a hot cup of coffee won’t give you a sunburn like the sun would. The sun has a much higher frequency of vibration of heat particles than the cup of coffee. (McEvoy & Zarate, 1997). The formula explains how heat creates energy. J. J. Thomson and Lord Kelvin found that an atom was composed of electrons embedded in a sphere of positive charge (McEvoy & Zarate, 1997). Ernest Rutherford then discovered the nucleus of an atom (McEvoy & Zarate, 1997). Many physicists studied how the atom worked and influenced other atoms through the study of waves (McEvoy & Zarate, 1997). Eventually, Einstein created the formula  $E(\text{energy})$  is equal to the mass “m” of an object multiplied by the speed of light squared “c<sup>2</sup>” (McEvoy & Zarate, 1997, p. 114). This suggests that anything that has mass has energy, which environmental materialism would say that means anything with mass has agency. This encompasses everything from humans, to rocks, to light particles and the air around us. All of these things have mass. More importantly, they all have relationships from atomic

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<sup>1</sup> I assert that spirituality is individual and that it is not in the scope of this paper nor within the ethical boundaries I adhere to to argue that one person’s spirituality is better or worse than another. I amend this statement slightly to assert that actions committed in the names of spirituality such as mass murder and racism among other horrible things are morally and ethically wrong. It is one thing to have spirituality and another to assert spirituality over someone or something else.

to heat based. It becomes interesting that heat and thermodynamics are a huge basis for quantum physics and Luxocracy, or the rule by light, becomes the spiritual basis for environmental materialism. Light is always accompanied by heat.

A major tenet of environmental materialism is that nature has inherent agency. Building on Teea Kortemaki's four dimensions of broad ecological justice, I define agency as the possession of capabilities based on the entity's internal abilities and the relationships the entity has built with surrounding entities; I then link agency to capabilities following the work of Kortemaki. The four dimensions are distribution, recognition, participation, and discourse of extended capabilities (Kortemaki, 2016). Specifically, Kortemaki writes that the dimensions of recognition and participation focus on acknowledging non-human entities as proper recipients of justice and giving these entities the ability to participate in their own fate (Kortemaki, 2016). Recognition refers to the cultural recognition of an entity such as recognizing a tribe of Native Americans as worthy of justice. Participation is political, such as the right to vote for women by the expansion of the recognition of who is a citizen. These applied dimensions of broad ecological justice imply that broad ecological justice requires the acknowledgment of agency of all matter because each dimension requires the existence of agency to begin with. I reach this conclusion by looking at the dimensions of justice suggested by broad ecological justice and applying them to nature.

If ecological justice refers to nature, then we must apply the three dimensions of justice as well as the fourth dimension that Kortemaki adds, which looks at the extended capabilities of non-human entities (Kortemaki, 2016). For nature to have capabilities I believe nature must have agency. To clarify, take a rock for example;

alone, the rock has potential capabilities, but in relationship with wind, animals, natural forces of erosion, etc., the rock has many capabilities for release of energy and the exertion of agency. By itself the rock cannot move; it cannot do anything but exist. But when entered into relationships with other forces, the rock suddenly has the ability to move, erode, and sustainably exist. I view agency as relational and consequential. Consequential agency refers to the idea that all actions have consequences whether they be positive, negative, or a combination of both.

Ethics is a morally guided set of principles of how we interact with others. Essentially ethics are the rules of relationships. The field of ethics is the study of the principles of the conduct of humans in relation to justice, and what to do and what not to do (Ojomo, 2011). I expand this discussion of ethics to assert that because all matter has value and significance, it is always in relationship with other matter and thus falls within the scope of ethics. This intrinsic value, or innate divinity as proposed by Luxocracy, gives meaning to all things and requires that all things be treated with respect and care.

Environmental materialism looks at ethics as a guide of actions, but instead of prescribing a strict set of ethical rules it asks that you look more into the relationships between actions. Environmental materialism values the spectrum of ethical beliefs that people enter into their relationship with nature. The ethics of environmental materialism follows along with the beliefs of womanism and Luxocracy (Maparyan, 2012).

Deep ecology, developed by Arnes Naess, also contributes to environmental materialism by creating space for ethical decision making in regards to agency. Deep ecology is a relational approach to the ethical treatment of the environment (Naess,

1995). It looks at why humans behave the way they do towards the environment and suggests different methods of engagements (Naess, 1995). This ethical mindset is analyzed and expanded by environmental materialism as the theory seeks out to define its ethical boundaries.

By acknowledging the good and bad about each belief system, we are able to enter into a conversation that is respectful but also pushes humanity forward towards an ethic of care and combines these beliefs into a hopefully better example of treatment of all matter. Rosemary Ruether believes in a divine energy for life “that calls us into life-giving community across many strands of tradition, culture, and history, and also empowers us to stand shoulder to shoulder against the systems of economic, military, and ecological violence that are threatening the very fabric of planetary life” (2005, p. 125). Like Luxocracy, this divine energy and the defining of the threats to a sustainable global community contribute to the ethical platform of environmental materialism.

Lastly, going back to our conversation about ethics, environmental materialism is built on the idea that ethics as a concept is a human social construct based on consequences. As a human writing this paper and attempting to define ethics, I cannot take away my humanity and thus my subjectivity from trying to create a set of guidelines for interacting with all things non-human. I cannot ask my dog or my cats about their ethics, I cannot ask the grass or the oxygen about their ethical codes. We only know ethics based on what humans have decided. A common example of this is the idea that dogs feel guilt when they do something wrong. Animal behaviorists have shown that the guilty face we perceive after a dog ripped the trash bag open is not guilt but actually fear based on their perception of the humans' actions. While the dog understands that the



humans are upset with them, they don't know why and thus they are afraid of what will happen rather than feeling guilty (Bradshaw, 2011). We cannot assume that dogs have the same standard of ethics that we humans have or the same ways of perceiving the world. We cannot assume that non-human animals even have a sense of what humans call ethics.

The Merriam Webster dictionary offers nine definitions of nature, and it isn't until definition six, "the external world in its entirety," that the dictionary get around to describing the phenomenon that this section attempts to define (Merriam Webster, n.d.). The status quo also defines nature as non-human in a hierarchical sense that places humans in a position of power and dominance, which justifies human-led destruction of all things non-human (Donovan, 2014). Donovan describes this relationship as humans being the subject and nature as the object. Donovan instead suggests a subject-subject participatory epistemological relationship where nature is regarded as having value and agency (2014). The status quo is highly problematic to environmental materialism. I strive for a feminist and ethical definition of nature that is in reference to the world rather than in reference to humans. Humans are animals and animals are part of nature which means humans are nature.

I define nature as all things found organically existing in the universe. By this, I mean entities that come into existence through the power of the world or the Source as described by Maparyan, rather than existing because they were processed by the entities of the world; meaning the beings of the world that are not the Source. Nature is the thing that sustains the world (Crawford, 2019). Nature emerges from matter in a way that is so far unexplained by science, which leads into spiritual conversations (Donovan,

2014). The presence of life does not define nature because rocks and sticks and the earth itself are nature. Nature is all things that exist without modification. This is not to say that modification can make something unnatural such as the chemical modifications caused by medications for the betterment of health; instead, I mean the creation of objects by changing the form of the composing objects. A tree is nature, while a table made from a tree is not nature because it is no longer connected to the natural world. Another example is a beehive. The hive is created by the bees as an ever-growing shelter made by the honey the bees produce themselves. Going back to the developer building the neighborhood, we will assume they are building around the trees and using the rocks as landscaping which means they are respecting the existence of the natural world or nature. A house typically is built using wood, metals, and other things found in nature as well as many human-made things such as sheet rock. The house is comprised of human processed nature and even though parts of it are organically found in the universe, but a house is not organically found and thus is not nature.

### **Premises**

Now that I have defined the important terms needed to better understand the theory of environmental materialism, I am going to explore the basic premises that underlie this theory. The first premise is that the human/nature dichotomy is the status quo. This status quo is referring to how people view their relationship to nature. They view nature as other and less-than. This justifies actions such as deforestation, pollution, and other acts of environmental degradation, usually in the name of profits.

Secondly, environmental materialism is inherently anti-capitalistic. Capitalism has resulted in a myriad of environmental problems (Ruether, 2005). Corporate globalization

as a result of capitalism has not only promoted the idea of human's role as dominating over nature but also as white western countries' role in dominating countries and continents inhabited by a majority of people of color (Ruether, 2005). Ojomo (2011) discusses the effects of globalization and technology on the African environment and posits different possibilities for balancing the role of technology in society. While Ojomo does not openly declare environmental ethics in contrast to capitalism, capitalism is a theme throughout his work that is described as anthropocentric and individualistic (Ojomo, 2011).

Profit over life is not an ethical tenet environmental materialism can live with or condone. This theory builds on the premise that capitalism is one of the root causes of the destruction of this world; therefore, any actions through this theory must not only ignore capitalist leanings, but actively be anti-capitalist. Ignoring capitalist leanings does not mean ignoring the fact the capitalism exists, but rather ignoring the temptations of capitalism such as exorbitant profit. Ignoring capitalism means putting life over profit or, in the case of environmental materialism, putting all matter over the hoarding of profit. This means the developer designs their neighborhood and pays the extra cost to design around the trees without complaint. Instead of this being a hindrance or a hassle, this action is seen as the "normal" way of doing business. The developers value the things around them and work with them rather than exert dominance over them. By this, I mean they consider the perspective of all entities involved rather than putting their perspective above others because they have the power to do so. This requires empathy for others as part of an ethic of care in relationships. We may not know the perspective

of the matter we are in relationship with, so I suggest employing empathy, researching the matter involved, and making inferences based on the information we do have.

This leads to the third premise, which is that there are relationships between all forms of matter. Physicists and other scientists have broken down matter into atomic structures. Each atom and its parts, the protons and electrons, engage in relationships and build complex structures that end up forming all things that exist in the world as understood by science at this time. At our elemental levels of existence, there are relationships being formed and constantly evolving and changing as we interact with all the things around us. Relationships are never binary but tripartite arrangements, as suggested by Karen Barad (2008). Relationships between matter A and matter B is not a binary of A and B but also includes C, which is the culmination of relationships, external and internal, that influence the actions and potentials of matter A and matter B. Tripartite in this case covers all relationships within the universe. It covers the relationships between all matter involved in the greater relationship as well as the arrangement of the greater relationship. Imagine a forest, each element of the forest has relationships with other elements of the forest but ultimately together all of the matter in the forest creates the forest as a whole. Thus, environmental materialism is not promoting a binary relationship between human and non-human, but rather rejecting Cartesian logic and suggesting multidimensional ontologies.

### **Goals**

Environmental materialism seeks to create a new perspective of nature that looks at human/non-human relationships rather than the status quo of human/nature relationships. Once this reframing has occurred, the theory then seeks to create a

model for social justice. This project starts at showing why matter matters and ends with what that means for actively engaging with the world around us and how to engage with the world in a way that builds healthy and respectful relationships with all matter. For example, the developer makes it a part of their business practice to perform environmental studies on the land they plan on developing and to build in such a way that preserves the ecosystem as best as possible. Perhaps the land has ponds with beavers, and so the developer builds a walking path to the pond and adds benches so that members of the community can enjoy the pond and the ecosystem is preserved.

### **Conclusion**

Environmental materialism is a complicated theory as it intersects with many different concepts like nature, agency, ethics, and spirituality, as well as ecofeminism and materialism. This chapter is by no means a comprehensive discussion on the theory but rather an entry point to be expanded on in future work and in conversations with many scholars across all sorts of disciplines. Environmental materialism is a way of becoming one with the world by recognizing all matter as equally important and worthy of value and agency. This theory creates a foundation from which to build a social justice platform for accessible and sustainable changes to how society views and interacts with nature. This paper puts this new theory in conversation with *Calvin and Hobbes* to show how philosophical ideas can be made accessible through the margining of art and text. The reconceptualization of the human/nature binary to the human/ non-human relationship is the keystone of this theory and challenges the status quo in order to show that all matter is worthy of recognition, participation, and justice

## CHAPTER III

### DATA ANALYSIS

This chapter examines the comic series *Calvin and Hobbes* in a structured way in order to better understand the series, and also looks at how the series enters conversation with the theory of environmental materialism. This project looks at 28 strips of *Calvin and Hobbes* that were selected (see Appendix B, Figures 1-28) and analyzed based off specific criteria outlined in the methodology and analyzed based on a questionnaire filled out for each strip (see Appendix A). I examined the data by analyzing each question and looking at patterns that develop, what those patterns mean, and the questions they raise. I then put these themes and patterns in conversation with my theory of environmental materialism. My methodology is recursive; I learned as I went and took these new ideas and applied them to the data. This leads to a fuller exploration of the strips that is guided by the data and the process above that of my own self interests. At the end of the process, I asked the same questions of each strip and developed several themes to explored later in this chapter.

I chose to work with the series *Calvin and Hobbes* because of the themes I see and their relationships to ecofeminism. *Calvin and Hobbes* allows readers to rethink the human/nonhuman relationships from a macro perspective through the plots of each strip; the exploration of themes during this chapter, the micro perspective, will help readers see how environmental materialism is illustrated by *Calvin and Hobbes*. The exploration of this relationship will connect into the final chapter, which discusses how comics can be used as a platform for social justice.

Therefore, after looking at the plots and themes of each strip I found several important characteristics to be further examined. Several major themes that came out in the analysis were those of relationships, agency, ethics, nature, and spirituality. Other themes involved looking at reality and TV. In this section, I analyze the themes in conjunction with environmental materialism.

Before going into the analysis of *Calvin and Hobbes* in conversation with environmental materialism, I will briefly summarize the main premises of the theory that guided my analysis. The first premise is that the human/nature dichotomy is considered the status quo. Environmental materialism contests the status quo and asserts that a reframing is necessary to become the human/nonhuman relationship. The second premise is that environmental materialism is inherently anti-capitalist. This is an ethical stand that will be examined later in this chapter. Lastly, environmental materialism asserts that there are relationships between all forms of matter. This chapter will look at how *Calvin and Hobbes* exhibits all of these premises, which will show how complex theory can be made accessible through comic series.

### **Relationships**

Relationships are the cornerstone of environmental materialism. It is important to understand how matter relates to other matter and to itself. To go from why matter matters to changing the perspective from human versus nature to human/non-human relationships requires a series of relationships grounded in the concept of vibrant matter as elaborated by Bennett in 2010. Vibrant matter shows how relationships between matter create a vibrancy that allows us to see all matter as having relationships which then lets us see the agency and capabilities of matter; this provides the background for

the assertion that matter *matters* (Bennett, 2010). In one strip, Calvin and Hobbes are walking through the woods talking about love; Hobbes points out the beauty of their surroundings and joy of sharing it with a friend. This strip portrays one of the fundamental benefits of relationships, which is getting to share experiences with others. In contrast to the joy of relationships, Calvin points out that relationships are hard when he pelts his neighbor Suzie with a snowball and she turns around and chases him. Hobbes then comments that true happiness is found in animals (see Appendix B, Figure. 16). In this case, Hobbes is not asserting that true happiness is found in animals but more of asserting his feline superiority as Calvin's best friend. Nonetheless, he does make a point that humans constantly build relationships with non-human animals such as pets. These different types of relationships show how vibrant matter can truly be. The fact that Hobbes is transcorporeal reflects his vibrancy as matter. This vibrancy is further revealed by the actions he takes, such as talking.

These strips expound on the ideas from environmental materialism in regard to agency and vibrant matter. Bennett talks about assemblages and how objects appeared as things to explain the vital materialism held within all matter (2010). Objects in the assemblage appear as things meaning that they are "vivid entities not entirely reducible to the context in which (human) subjects set them, never entirely exhausted by their semiotics" (Bennett, 2010, p. 5). *Calvin and Hobbes* as a strip is an assemblage of ideas, characters, art, text, and other components. They all work together in relation to each other to create the strip and the experience of the strip at a macro level. At the micro level each component of the assemblage has relationships with the other components such as the relationship between Calvin and Hobbes and between stuffed



Hobbes and real Hobbes. Each relationship comes with tensions as well as joy as shown by the strips. The understanding of these relationships or assemblages applies to environmental materialism in that for matter to matter we must acknowledge the plethora of relationships within and outside of each object. Once this foundation is established, we can explore the actions of matter in how they portray binaries and hold onto agency. These concepts create an everlasting feedback loop that continues to foster relationships and environmental materialism.

Transcorporeality helps us to transcend the binary logic I hope to reconceptualize through environmental materialism. Hobbes is portrayed as real throughout the whole strip even though the reader faces the tension of whether Hobbes is truly real or merely stuffed and made real by Calvin's imagination. The perception of reality is a key point of the strip. The reality of Hobbes is governed by a general rule that Hobbes is perceived as real only by Calvin, so to the other characters in the strip Hobbes is a stuffed tiger. The readers of the strip see both the stuffed and real version of Hobbes, which exemplifies the idea of transcorporeality put forth by Alaimo who focuses on how human corporeality becomes inseparable from "nature" or the "environment" (2008, p. 238). I expand transcorporeality to Hobbes as he is both given human attributes but also clearly retains his feline characteristics of being a tiger.

### **Agency**

Throughout the series the ontology of Hobbes becomes intertwined with the theme of agency, which is implicitly portrayed throughout the strips that I analyzed. Hobbes as real and stuffed creates questions of agency and capabilities. Several of the strips show Hobbes engaging in activities that either mean that he has agency or that

Calvin has a very vivid imagination. The series shows Hobbes in various ways of being and enacting various human and feline behaviors.

The ontology of Hobbes is of great importance to this project because he shows how matter can be vibrant and meaningful in relationships with other matter. The data show that Hobbes is real when it is just Calvin around, but when someone else is around like his mom or Susie, Hobbes is shown as stuffed. In these cases, the audience is redirected to be an outside observer of a situation rather than observing reality from Calvin's point of view. This change in audience perspective is very interesting and builds upon other observations in the data collection. This change is sometimes indicated by a lack of border on the panel or colorful and/ or bolded borders to provide emphasis to a specific panel. I have concluded that the strips are drawn from the perspective of Calvin primarily, and in his mind Hobbes is real. Hobbes' ontology relates directly to his agency.

Calvin goes for a walk outside in his snow pants and winter gear and drags his sled to the top of the hill in anticipation of snow. In his frustration, he yells "Well? Lets have some snow!!" and suddenly white pellets start falling as if Calvin controlled the weather. In Calvin's excitement he declares his ability to make it snow. Then, Watterson shows us Hobbes as real and pouring the stuffing from a pillow onto Calvin (see Appendix B., Figure 1). This leads the readers to question the ontology and the agency of Hobbes.

The character of Hobbes allows for an extraordinary insight into the agency of matter. Kortemaki discusses how realized capabilities turn into actual states of doing and being she urges readers to recognize the capabilities of nature and how these

capabilities form relationships that enable flourishing (2016). As I discussed previously, agency is either potential or realized based on relational capabilities. Understanding agency builds on environmental materialism by further expanding on why matter *matters* because all matter has some form of relational agency based on intrinsic and relational capabilities. The agency of Hobbes becomes especially imperative to this discussion, which is best explained by the following strip.

One question asked of each strip was if the strip was showing Hobbes to be doing something that in our reality would have to have been done by Calvin under the assumption that our reality sees Hobbes as a stuffed animal and Calvin as having a vivid imagination. In previous strips, the rule of thumb is that Hobbes is real only when in the presence of Calvin. In the strip labeled Figure 1, he is technically in the presence of Calvin but Calvin has no idea he is there. This gives us some proof of Hobbes' agency as he is doing something in reaction to Calvin but unknown to Calvin. This raises the question of the capabilities of Hobbes outside of his relationship to Calvin. The reader is left wondering if Hobbes is able to switch between stuffed and real without Calvin knowing. We begin questioning the true capabilities of Hobbes and the extent of his agency in regard to his relationship with Calvin. Not only is the agency of Hobbes important but so is the very reality of Hobbes's existence as a live tiger in Calvin's version of reality.

The concept of agency of matter regarding Hobbes is something I have speculated on in the literature review. Hobbes is capable of human agency from Calvin's perspective, which in the strips makes it become possible that Calvin is attributing his own actions to Hobbes through his vivid imagination. For example, we

see Hobbes doing things like dumping pillow stuffing to imply snow in the perspective of the comic, but from another perspective, Calvin is really the one emptying the pillow to imagine it is snowing. The agency is that Hobbes is existent to Calvin and further explained to the reader in some strips that question the basic rules that govern Hobbes existence as real or stuffed.

The agency of Hobbes is really dependent on how much the reader relies on the imagination of Calvin to inspire the events of the strip. Another compelling strip is one where Calvin has a really bad day (see Appendix B, Figure 14). He oversleeps past his alarm, it's raining, school is boring, lunch is gross, he gets bullied, and then has to walk home in the rain. When he reaches the door, however, he is pounced on by Hobbes who gives him a giant hug. He is seen walking inside his home carrying stuffed Hobbes past his mom who is picking up his wet clothes off the ground and asked if he had a good day to which he responds it was "getting better." (see Appendix B. Figure 14). Yet again, Hobbes becomes real outside of Calvin's knowledge and pounces on Calvin to Calvin's surprise. The basic rule of the strip is upheld in the final panel where in the presence of Calvin's mom, Hobbes is stuffed. The clue to Hobbes's independent agency is that Hobbes is also dripping wet in the final panel. The strip takes us through a day in the life of Calvin; we do not see Hobbes until the event in which Hobbes pounces from inside the house towards Calvin coming home from school (where Hobbes was never shown). This indicates that Hobbes must have independent agency as the only way he could be dripping wet was for the series of events to accurately follow the portrayal of events in the strips.

Another element of the feedback loop is the theme of binaries. *Calvin and Hobbes* incorporate many binaries into their conversations and actions. The binaries include human/nature, real/not real, and good/bad. As we explore *Calvin and Hobbes* we see that the series allows for the perspective of human/ non-human through the lenses of agency. Environmental materialism seeks to reconceptualize the human/ nature binary into that of the human/non-human relationships. The strips in this section will showcase how the comic series reinforces this reconceptualization and adds contextualization to the goals of this theory.

### **Ethics**

Perspective and the ontology of Hobbes have been discussed so far in relation to Hobbes but should also be discussed in conversation with other objects such as that of the theme of TV and reality. TV is present in Calvin's mind in several strips. In one strip Calvin and Hobbes are going through a walk in the woods attached to their back yard and they get lost (see Appendix B, Figure 6). Calvin is excited at the idea of becoming modern Robinson Crusoes who live off the land by their wit. He further says that "we'll be free from all the constraints of civilization." (see Appendix B, Figure 6). In this strip, Calvin sees the non-human world as an escape from human civilization, which is defined by TV in the strip. Calvin's version of civilization is further defined in the strip where Calvin compares the world to TV. He notes that the world has less intense colors and the people are uglier and that several minutes go by without car chases and explosions. The strip ends with him watching his favorite deodorant commercial on TV (see Appendix B, Figure 23). As he begins his day observing the non-human world,

Calvin again escapes reality by diving in to the fantasy that TV offers and being pulled into the world of consumerism.

Consumerism and pop culture become an escape from the non-human world, as shown by Calvin enjoying a perfect day outside and then muttering that there's nothing on TV but repeats (see Appendix B, Figure. 5). The strip looks directly at the relationship between humans and the non-human world and how TV in the human world becomes a break from reality. TV is a major pattern throughout the strips. TV is seen as fantasy where outside is considered reality. Calvin several times becomes overwhelmed by reality or frustrated with it in the case of strips with bugs and poison ivy and retreats inside to the escape of TV. A strange paradox is created where TV is escape from reality, but nature is also escape from reality. This shows that multiple forces are in competition with each other as escapes from the reality of human daily life. This is important to environmental materialism as consumerism and capitalism are shown as being in direct opposition to the well-being of the environment.

Several of the strips I looked at encompassed the idea of the TV representing fantasy offered up by pop culture and advertisements, while going outside was a break from this fantasy and an entry into reality. This concept contrasts with the general notion that Calvin enjoys being outdoors and playing with Hobbes even as Calvin is loath to give up his TV time when his mother wants him to go play outside. This shows the power of fantasy and TV as it seeks to break us from the reality of what is going on in the world.

The reality of the world and the physical setting where the storyline takes place is important. It is interesting how the scenery ends up being built upon strip by strip to

where you can visualize a larger landscape than what the individual strip entails. The strips have shown that there are bushes by the house, and a large tree with a tree swing and a tree house. Further out is a creek with a log bridge that goes into a forest area with large boulders and mature trees. One interesting thing is that in some of the Sunday strips I looked at, Watterson uses different colors for the landscape than the naturally expected colors. For example, the sky is yellow and trees are red (see Appendix B, Figure 13). This means that *Calvin and Hobbes* is an experience in reality and perception. The reader is able to perceive a world greater than that which is shown. The world of *Calvin and Hobbes* is parallel to the way in which Calvin perceives the world in relationship to himself.

The binary of real and not real are shown by the following strip that not only looks at the binary of reality but also the ontology of Hobbes. One day it snows, and Calvin and Hobbes go outside exceedingly excited and seeking out animal tracks. They find some rabbit tracks and then Calvin notices tiger tracks are chasing the rabbits, to which Hobbes confesses that the birds and rabbits needed some exercise (see Appendix B, Figure 25). In this strip, we experience the binary of real and not real with Hobbes' transcorporeality which directly questions the idea of human/nature binary by showing that the interactions and relationships being built in this strip more accurately revolve around the human/non-human relationships concepts as put forward by environmental materialism.

Another binary of importance is one of good versus bad. This is apparent in several strips. Some strips show negative encounters with nature such as when they go camping and Calvin is being bit by bugs and stepping into poison ivy. This indicates that

relationships don't fall into a binary of good and bad but that they are complex and evolving. Over the series we know that Calvin and Hobbes have an affinity for going outside and could label going outside as typically a good experience. In the case of the bugs and poison ivy, this typically good activity had negative aspects that blurs the line between simply good or bad but rather a complex relationship where good and bad are mixed. We have seen that Calvin loves going outside with Hobbes and engaging in activities like sledding. We also have seen strips where nature is an alternative to TV (see Appendix B, Figure 5). One strip involved Calvin and Hobbes talking about love and relationships and Hobbes redirects Calvin's anger into looking at the beauty of the natural world (see Appendix B, Figure 8). Hobbes then talks about how great it is to enjoy this beauty with someone else which brings in the theme of relationships as well as biophilia (see Appendix B, Figure 8). I am glad and fascinated by the fact that some of the strips show the downsides of the relationship with nature such as bug bites and poison ivy. Calvin's constant conversations about binaries such as good and bad play well into the discussion of relationships. Relationships are clearly not linear in existence but rather complicated assemblages of existence in time and space.

### **Nature**

Beyond Hobbes's existence, we see Calvin directly getting involved with all things not human. The entire plot of the strip relies on the relationships built between Calvin and the other components of the strip. His interaction is mostly related to the tracks that are made by non-human animals but are in themselves imprints of nature rather than nature in and of itself, so if we were to categorize the relationships within the



strip, the human/nature binary would not encapsulate the ongoing of *Calvin and Hobbes*, but rather the strip exemplifies the idea of human/non-human relationships.

The next theme concerned the new perspective on the human/nature relationship. The backyard where Calvin and Hobbes play is nature that has been left undeveloped by humans, which is why I consider it non-human. It is important that I look at strips that involve the outdoors and nature as well as incorporate active involvement of Calvin and Hobbes with the outdoors and nature. This criterion to the plot is important, as I am using the series to enter into conversation with the theory of environmental materialism as based on relationships between humans and non-humans as epitomized by Calvin and Hobbes' relationship, and further exemplified by their activities in the non-human world. I therefore look at certain binaries as a theme.

This contrast between the environment and TV comes from the tension between fantasy and reality that is explored through Calvin's relationship with the TV. Not only is it important that Calvin and Hobbes be out in nature for the analysis, but it is also important to look at how they are engaging with their surroundings. Calvin and Hobbes are engaging with nature as a place of contemplation and leisure such as taking walks and sledding. Calvin, in contrast, sees TV as preferable to going outside. His mom encourages him to go outside rather than sit inside watching TV or getting into mischief.

### **Spirituality**

Spirituality is a theme of environmental materialism. It was exemplified with one strip that just had Calvin staring at the stars at first yelling that he is significant and then following up with "screams the speck of dust" (see Appendix B, Figure 21). I found this strip to be a profound indicator of how Calvin sees himself in relation to the universe.

Even though this strip was an exception to my criteria, it still provides useful insight into other areas of my analysis. Calvin sees himself as a small part of the larger world which is part of environmental materialism. In order to build relationships and examine relationships and binaries, it is imperative to understand that we are but a speck of dust in the entirety of the universe we seek to explore and exist within. Ecofeminism comes from such a viewpoint. The concept of compassion is necessary to be able to extend the rights of humans to that of the non-human world. Ecofeminist Deane Curtin, an ecofeminist, states that “when compassion flourishes, feelings and reasons blend and result in a moral practice” (2014, p. 45). This moral practice is environmental materialism and the reconceptualization of the human/nature binary into viewing the binary as a relationship between humans and the non-human world. In order to begin the analysis on *Calvin and Hobbes*, one must enter the conversation with open mindedness and compassion.

## **Conclusion**

Throughout this chapter, I have returned over and over to the idea of relationships. I entered into this chapter after developing the base theory of environmental materialism. The goal was not to make theory out of *Calvin and Hobbes*, but to show that a comic strip such as *Calvin and Hobbes* can be used as a medium to explore complex ideas in ways that are accessible to the non-academic world. I have shown how *Calvin and Hobbes* represents relationships through their constant activities and conversations. Agency has been explored through the ontology of Hobbes and reality has been questioned by the transcorporeality of Hobbes. Reality was further examined through looking at Calvin’s relationship with the TV, which also circled back to

binary logic and relationships. All of these things came together to show how theory can be made accessible through art. The final chapter will expand on this and show how comic strips can be used for social justice purposes that are accessible to the larger population rather than the academic population.

## CHAPTER IV

### CONCLUSION

This final chapter concludes the exploration into why matter has agency and how this creates the need and right for all matter to have access to social justice.

Environmental materialism is a theory that looks at matter through the lenses of agency, transcorporeality, ethics, and spirituality. I then merged this theory based off of relationships between matter with the comic strip *Calvin and Hobbes* by Bill Watterson. Through this journey, I have established that comics are a medium for sharing deep theoretical thoughts in a way that is accessible to the masses. It is my goal that this final chapter will take the last step of this journey and show how comic strips such as *Calvin and Hobbes* can be used for social justice. I do this through a historical example of education as activism and comics used as education as shown by Ida B. Wells-Barnett and both the movie and the comic *Black Panther*.

In previous chapters I created the theory of environmental materialism, which studies relationships between all matter. These relationships form agency which then forms the basis for consideration of social justice. I then apply this theory to *Calvin and Hobbes* by analyzing 28 strips and showing how these strips encompass themes important to environmental materialism such as agency, ethics, spirituality, and capitalism. Lastly, in this chapter I introduce Ida B. Wells-Barnett, who wrote historical accounts of lynching in the United States and did so using accessible language and

even comic strips to expound upon her point. She shows how education is a form of activism, which is then further exemplified by *Black Panther*. I discuss how *Black Panther*, another comic, is used for social justice to parallel my argument that not only does *Calvin and Hobbes* espouse the ideas of environmental materialism but also can be used as an accessible medium for social justice.

I show that matter has agency through its vibrancy, which is impacted by human biophilia to create environmental materialism which expounds through its main principles the idea of human/nonhuman relationships being integral to environmental solutions as it acknowledges the agency of human, nonhuman, and the relationships formed between each of them. Environmental materialism is not a “new” way of doing things but is instead a new perspective for looking at relationships within the world.

I incorporate the focus on relationships between matter in my analysis of *Calvin and Hobbes*. An examination of Hobbes in regard to agency is the cornerstone of this project. The transcorporeality of Hobbes is not possible without the outside force of Calvin’s imagination. It is the hope of this project that assessing *Calvin and Hobbes* through the lenses of vibrant matter, materialism, transcorporeality, and ecofeminism will lead to a grounded overarching theory that creates a foundation for accessible social justice.

Vitalism, vibrant matter, materiality, and transcorporeality all create a theoretical foundation by which to analyze *Calvin and Hobbes*. Working with these theories and concepts, I created a unique toolbox from which to examine *Calvin and Hobbes* that creates an environmental materialist theory that merges ecofeminism and materialism into an aggregate force of social justice potential for the body of which is part of nature.

Environmental materialism is a complicated theory as it intersects with many different concepts like nature, agency, ethics, and spirituality as well as ecofeminism and materialism. This chapter is by no means a comprehensive discussion on the theory, but rather an entry point to be expanded on in future work and in conversations with many scholars across all sorts of disciplines. Environmental materialism is a way of becoming one with the world by recognizing all matter as equally important and worthy of value and agency. This theory creates a foundation from which to build a social justice platform for accessible and sustainable changes to how society views and interacts with nature. This paper puts this new theory in conversation with *Calvin and Hobbes* to show how philosophical ideas can be made accessible through the margining of art and text. The reconceptualization of the human/nature binary to the human/nonhuman relationship is the keystone of this theory and challenges the status quo in order to show that all matter is worthy of recognition, participation, and justice.

Throughout this chapter, I return over and over to the idea of relationships. I entered into this chapter after developing the base theory of environmental materialism. The goal was not to make theory out of *Calvin and Hobbes*, but to show that a comic strip such as *Calvin and Hobbes* can be used as a medium to explore complex ideas in ways that are accessible to the non-academic world. I have shown how *Calvin and Hobbes* represents relationships through their constant activities and conversations. Agency has been explored through the ontology of Hobbes and reality has been questioned by the transcorporeality of Hobbes. Reality was further examined through looking at Calvin's relationship with the TV, which also circled back to binary logic and relationships. All of these things came together to show how theory can be made

accessible through art. The final chapter expands on this and shows how comic strips can be used for social justice purposes that are accessible to the larger population rather than the academic population.

### **Social Justice**

In this section, I discuss social justice through the work of Ida B. Wells-Barnett and the comic strip and movie *Black Panther*. This work comes from a conference paper I presented at the Southeastern Women Studies Association conference in Oxford, Mississippi, in 2019. It was this paper that helped me formulate how environmental materialism explained through *Calvin and Hobbes* is a form of social justice and while innovative it is not unique as this work has been done for decades by other activists.

Through exploring the racial histories of the United States, I will show the continued use and success of education as activism for liberation. This section seeks to create a genealogy of these phenomenon through the work of Ida B. Wells-Barnett, as well as looking at the comic strip and movie *Black Panther*. This paper looks at current collaborations and comics and analyzes them through a historical perspective regarding race and activism. Furthermore, I contend that education does not have to be conferred through words alone. Art and images are a useful and necessary medium for relaying information in an accessible format and provides a new tool for social justice activism. I contend that the use of comic books as a medium for education is an innovative tool for activists. This section will start with the pamphlets of Ida B. Wells-Barnett on the history of lynching and the use of radical journalism creating legal changes at the federal, state, and local levels. I argue that the use of pamphlets, such as those produced by Wells-

Barnett, allows for widespread distribution of information which offers precedent for the use of comic strips as education.

The New South, post-civil war, is where convict leasing, share cropping, apprenticeships, and other financial products were created to answer the loss of slavery; this led to a “free black” who still answered to racism under more violent methods because white supremacy was becoming more and more threatening (Feimster, 2011). The climate of the time was one of fear and violence, lynchings and riots. Rebecca Felton, a lynching activist of sorts, went through many stages of policy thoughts as she regarded lynching first as the protection of womanhood but then finally as something to be used only in the worst of situations (Feimster, 2011). During this time, sexual violence was used to exert power and issue death sentences on people of color. Ida B. Wells-Barnett aptly stated, “If Southern white men are not careful, they will over-reach themselves and public sentiment will have a reaction; a conclusion will then be reached which will be very damaging to the moral reputation of their women” (1993, p. 7). This meant that black men as rapists and white women as victims was a myth that needed to be debunked for the advancement of civil rights. However, white people would not do such a thing as acknowledge consensual sexual relations between white women and black men because that would lead to the humanization of black people, which would lead to the acknowledgment that slavery wasn’t the smart use of property but rather the cruel torture of human beings like themselves. Many humans died at the hand of lynch mobs, and organizations against lynching and for civil rights began to move into the forefront of American consciousness.



As history progresses it becomes impossible to discuss the socioeconomic and political climate of the era without diving into the role of activism and resistance. History is a dynamic and constantly evolving phenomenon as more and more sides of reality are uncovered and more voices are unearthed from obscurity. Writing as activism is most evident with Ida B. Wells-Barnett's lynching pamphlets. Education is discussed through examples of Charles in New Orleans and Native American Boarding schools. The National Association for Colored Women and many other organizations were and are building points for community and coalition building. Protests are another form of activism, for example the first march on Washington, DC. Furthermore, history is full of individual acts of resistance as characterized by stories of passing, escape, and other methods. All of these methods and acts of resistance give many insights into the overlapping and distinct struggles of African American and Indigenous women as they bravely resist the systematic equality brought on by racism, classism, patriarchal threats, sexism, and heterosexism.

To paint a picture of the environment of the "mainstream" branch of society, I first must explain the ideas of respectability politics. Respectability politics is the concept that there is a certain way to act while protesting in order to uplift the race. The National Association for Colored Women (NACW) and the National Association for the Advancement of Colored People are two of many organizations at the forefront of respectability politics. The NACW became "a space integral to fashioning race women into intellectuals" (Cooper, 2017, p. 16). The NACW was founded in 1896 and acted as a site of training for Black women public intellectuals (Cooper, 2017). Respectability was merged with education as a two-pronged approach to fighting inequality in the country.

Activists like W.E.B. Dubois and Martin Luther King Jr. ascribed to respectability politics, but activists like Mary Terrell and Ida B. Wells-Barnett did not.

Wells-Barnett's writings on lynchings and her nearly militant approach to writing for the objective truth rather than playing into politics led to her exile from Memphis (Wells-Barnett, 1993). Wells-Barnett writes about a man named Charles in New Orleans who was the catalyst for a multi-day riot for essentially existing. When police raided his apartment to find clues as to who he was, they found pamphlets and books showing an intense dedication to his education and to his commitment to the betterment of the race (Wells-Barnett, 1993). Education was used as a tool of colonialization as well as racial uplift for both African Americans and Indigenous peoples. The U.S. government relocated Native Americans onto reservation as an act of violent warfare for land and resources. The government decided to open boarding schools to educate the children and assimilate them into American society which effectively slowly diluted the Native American populations. This plan backfired, however. "Instead of creating a better atmosphere for assimilation, they produced a new population of educated Native American women who turned their newfound skills into tools for political and cultural activism" (Almeida, 1997, p. 767). Education provided tools of the masters to the enslaved and helped the enslaved fight back.

Racism, classism, gender, and sexuality through the context of slavery and colonialism lead to many insights into the struggles of women of color in the US with education being one of them. The defining of hierarchies based on race had justifications through economics and religion. Classism existed in the subjugation of people of color to poverty through several systems such as convict leasing. Carceral

labor management used “the scene of sexual violence [as a] product, a tool manufactured to facilitate modern production” (Haley, 2016, p. 92). Sexuality is not relegated just to homosexual persons but the rape and coercion that propagated the fear of slavery and produced more and more people subject to slavery because of the color of their skin and their parental lineages. Lastly, gender is the basis for the patriarchal societies’ power. The powers of the womb were stripped away as a threat to male dominance. For Native Americans, childbearing meant empowerment. It was the “passport to the maturity and inclusion in a woman-culture” (Gunn Allen, 1994, p. 251). Scholars find that colonizers targeted women as the basis for nation-making. All of these categories intersected to create a dynamic atmosphere in the United States that is still in effect in modern day.

The history of the 18th, 19th, and 20th centuries all lead to the history of the 21st century that has been in the making these past two decades. Without the past, we have no future, and the present is disconnected. This is the back story, the history, from which my thesis emanates. Environmental materialism asks questions about the relationships between a slave and an owner, between the economics of each, and many other questions that could provide outlets for social justice.

From here we jump briefly to the 1960s and then to 2018 with a history of *Black Panther*, the comic strip and movie. In 1966, *Black Panther* by Stan Lee appeared in *Fantastic Four #52* (Mitchell, 2018). A few months later, the Black Panther Party came into being. Despite the close chronology of events, the two events are not related at all. Stan Lee even tried to distance his comic from the Black Panther Party by attempting to rename the series but none of the new names held up (Mitchell, 2018). However, Ryan

Coogler and Joe Robert Cole, the creators of the movie *Black Panther*, paid homage to the Black Panther Party in their movie. Specific examples include basing the California part of the movie in Oakland, which was also the home of the Black Panther Party (Robinson & Ceumann, 2018). The message of education is also brought forth in the movie and with the Black Panther Party as in the movie, T'Challa opens a community outreach center in Oakland to teach children about Wakanda and their technology and science. The Black Panther Party created the Black Panther Newsletter and hosted breakfast for children before school (Robinson & Ceumann, 2018).

Ida B. Wells-Barnett saw education as the path towards a better future and displayed that belief in all of her writings and work. She was somewhat militant in her beliefs, which went against the respectability politics of the time. Education as activism is shared by Wells-Barnett and *Black Panther* as well as standing up for beliefs despite popular opinion. *Black Panther* is an example of Afro-Futurism while Ida B. Wells-Barnett is part of the past but both in conversation which each other create a historical chronology of events from the horrors of slavery and lynching to the future of liberation as envisioned by Wakanda.

Environmental materialism does not directly tackle the issues of slavery and racism though it is very much anti-racist. Environmental materialism builds on the work of Ida B. Wells-Barnett and other activists to show how comic strips can be a medium for education and thus social justice. Just as *Black Panther* was the example I used for race-based activism and education, *Calvin and Hobbes* is the strip I used for environmental materialism.

## Reflection

In the beginning I wrote that this was a feminist thesis with a need for reflection. As I went through the methodology of this project, I found that new questions arose to be investigated, which resulted in the complete chapter on data analysis. I found that there are always more sources than time and that a project like this requires strict adherence to the basic goal of the project so to not go down the wormhole of over researching. New research questions constantly emerged like “How can this theory of environmental materialism be used to combat the placement of pig farms”? I learned that research does not have an ending but is rather a series of beginnings of staircases that lead to the multiple truths that are contained in this universe.

This research was limited by time and skill. I did not have the time to do a larger analysis of *Calvin and Hobbes*, not did I possess the fine arts background to fully understand what I was looking at even with the help of various scholars on comic books. My research could easily have delved into greater philosophical depths by acknowledging that *Calvin and Hobbes* were named for the religious figures of Calvin and Hobbes and their arguments over predestination. I would have liked to delve deeper into historical philosophy and ontology as well as provide more examples of social justice. Ultimately, my goal would be to turn this theory of environmental materialism into its own comic strip. There is room to build upon each section of this thesis by other scholars and deepen them and put forth new innovative ideas. An example would be plant scientists exploring the senses of plants and how seeing, touching, smelling, etc., creates meaningful relationships with the surround environment.

Environmental materialism is a theory that takes us through the journey of ecofeminism and materialism and lands into the quagmire that is matter. Matter is a quagmire because instead of the universal respect and access to social justice that environmental materialism espouses, we live in a world where nature, women, people of color, and many more are degraded and treated as less than. All matter has agency and deserves social justice. I used *Calvin and Hobbes* as a way to illustrate this theory and to show how comic strips can be used for accessible education. This new perspective on matter creates a world where all people and things are deserving of social justice. This world is a feminist world.

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## APPENDIX A

### Questionnaire

## Outline of Methodology

Strip\_\_\_\_\_

Date\_\_\_\_\_

### Four Steps

1. Observe the whole (Macro)
  - a. Plot: sequence of events
  - b. Theme: Main overall idea.
    - i. Is strip intentionally making a point?
2. Inventory and Categorize
  - a. Indoors or outdoors
  - b. Describe the scenery.
  - c. Is Calvin personifying an alter ego?
  - d. Is Hobbes stuffed or real?
  - e. Is Hobbes "human" or "feline"?

f. Is Calvin imagining Hobbes to be doing something that Calvin is actually doing?

g. How are they engaging with nature? i.e. leisure? Or Work?

3. Structure Analysis (Internal Relationships)

a. Page and Panel Layout

i. Do the panels have borders

b. Mood and Emotion

i. Facial Expressions

ii. Intensity of dialogue

c. Maturity of dialogue

i. Childish

ii. Adult issues

iii. Philosophical

d. Gender Roles

e. Capitalism

Any other data that could be useful?

- Broad overarching themes
- Specific patterns
- How does the strip/panel convey the pattern?
- What meaning/significance might the pattern have in relation to some aspect of EM?

## APPENDIX B

### Comic Strips

Watterson, B. (2005). *The complete Calvin and Hobbes*. Andrew McMeel Publishing.



Figure 1. Volume 1, page 183.





Figure 2. Volume 1, page 97.



Figure 3. Volume 1, page 55c.



Figure 4. Volume 1, page 374.

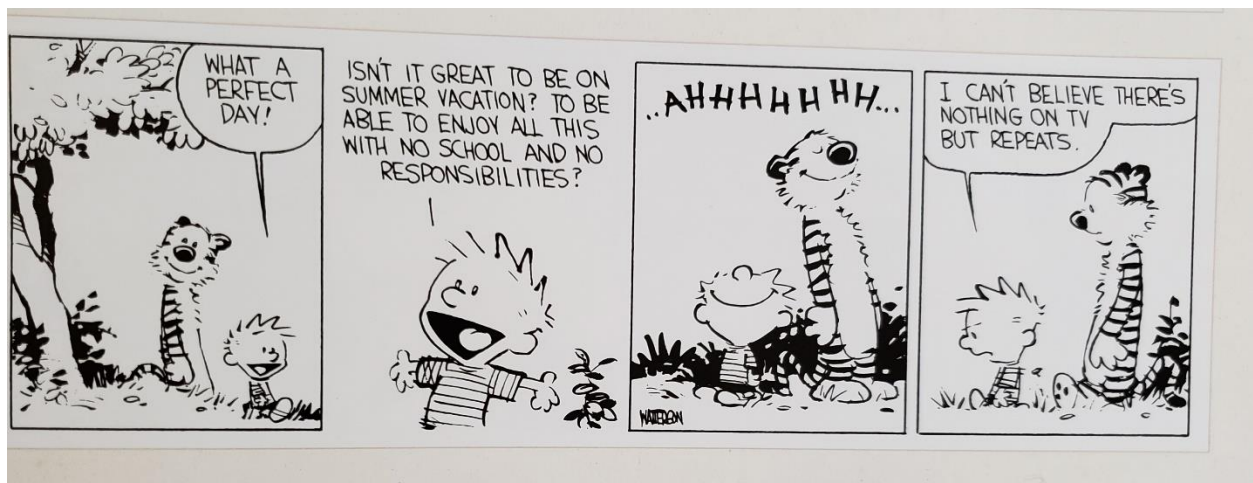


Figure 5. Volume 1, page 307b.





Figure 6. Volume 1, page 323.







Figure 8. Volume 2, page 13.



Figure 9. Volume 1, page 26c.



Figure 10. Volume 1, page 437c.

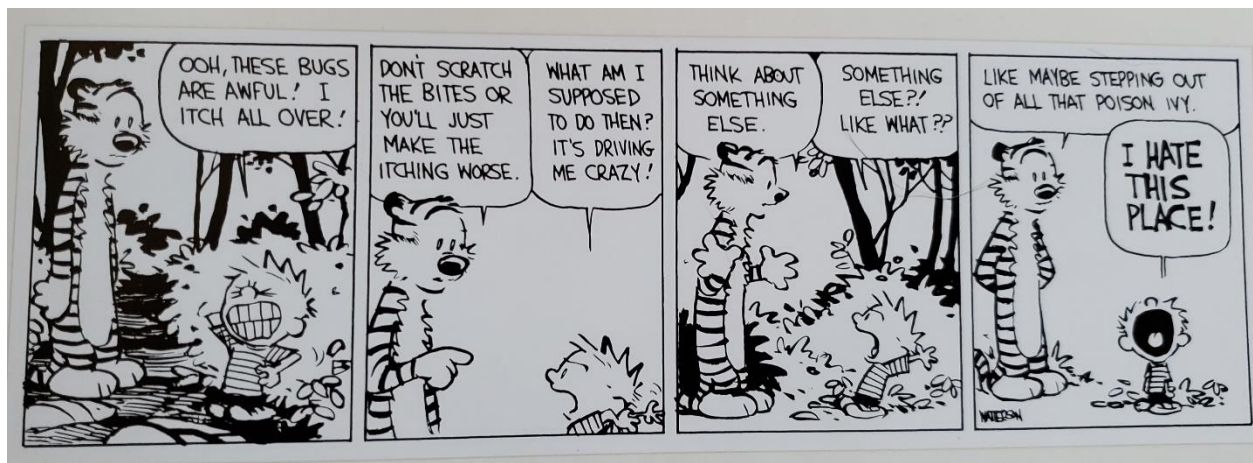


Figure 11. Volume 2, page 151a.





Figure 12. Volume 2, page 52.



Figure 13. Volume 2, page 384.





Figure 14. Volume 2, page 286.



Figure 15. Volume 2, page 237.



Figure 16. Volume 2, page 412.



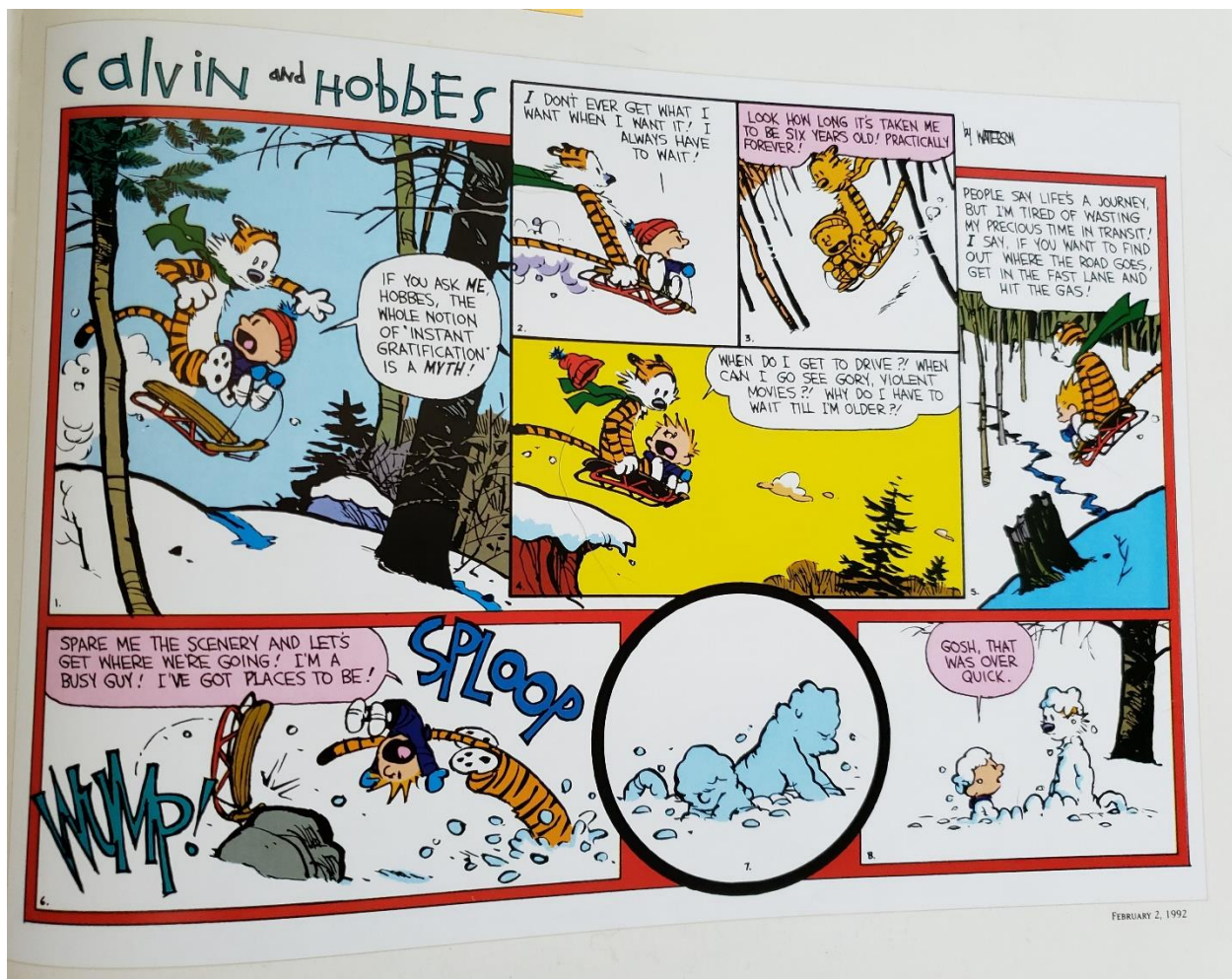


Figure 17. Volume 2, page 443.



Figure 18. Volume 2, page 198.

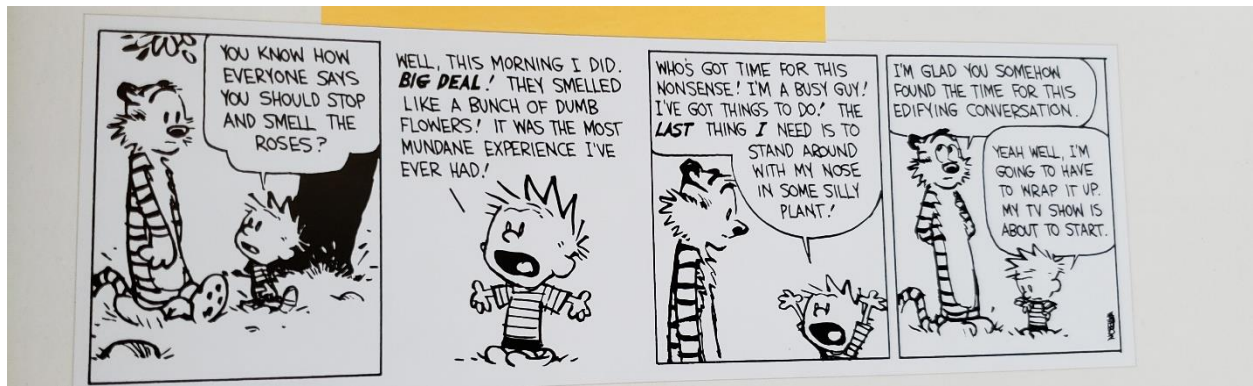


Figure 19. Volume 2, page 441a.

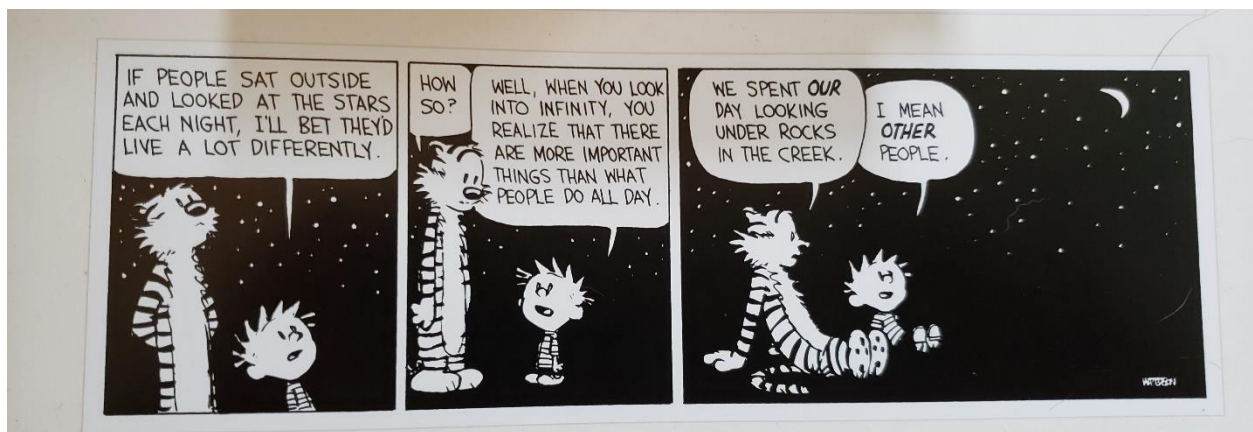


Figure 20. Volume 3, page 35b.



Figure 21. Volume 3, page 247.





Figure 22. Volume 3, page 123.

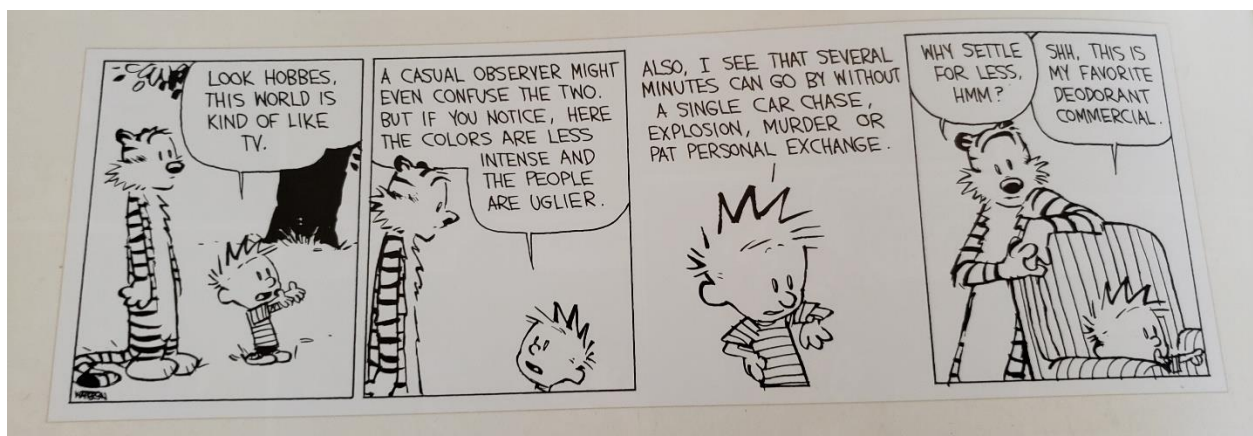


Figure 23. Volume 3, page 186b.



Figure 24 Volume 3, page 74a.



Figure 25. Volume 3, page 284.



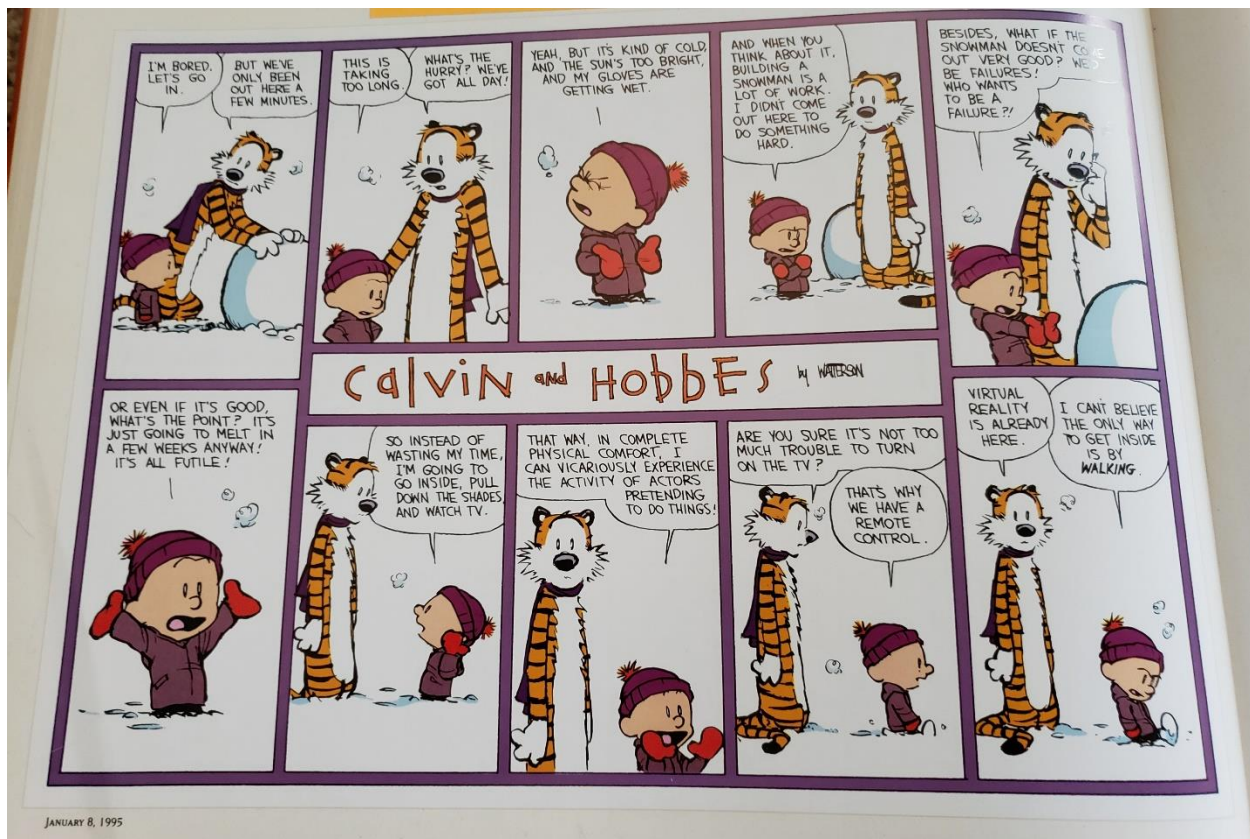


Figure 26. Volume 3, page 324.





Figure 27. Volume 3, page 481.

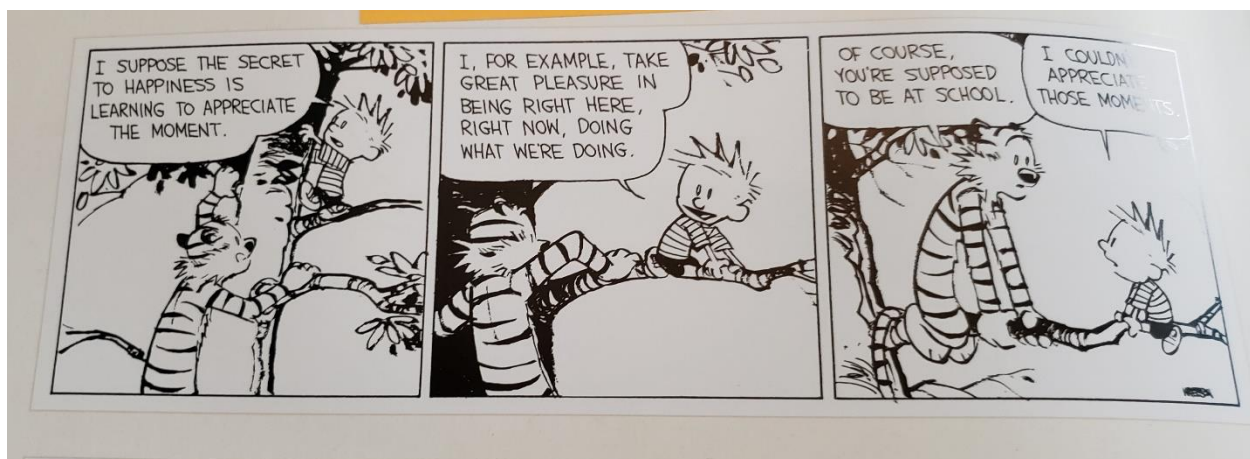


Figure 28. Volume 3, page 374.