

## AN ABSTRACT OF THE THESIS OF

Colette E. Ohotnicky for the degree of Master of Arts in Environmental Arts and Humanities  
presented on June 3, 2020

Title: This Earth Emanating Enchantment: What Wonder and Joy Can Teach Us Within  
Traditional Western Environmentalism

Abstract approved: \_\_\_\_\_

Michael Paul Nelson

G.K. Chesterton once stated, “I am concerned with a certain way of looking at life, which was created in me by the fairytales, but has since been meekly ratified by the mere facts....The only words that ever satisfied me as describing Nature are the terms used in the fairy book, “charm,” “spell,” “enchantment”.” (Orthodoxy 89, 94) Enchantment, as we will discover, is a compelling description of nature, and the traditional Western worldview leads to enchantment through an attitude of wonder such as we find in the fairytales. Enchantment, as we will see, is a possible way to look at the world which reveals depths of meaning and wonder. It is, like a fairytale, both imaginative and filled with what Chesterton calls “the mere facts.” Enchantment shows us the truth and beauty of nature and brings with this vision such joy that once we have been enchanted we will seek to always see nature in this way, the way of enchantment.

Throughout this essay, we will examine the facts which “ratify,” as Chesterton calls it, an enchantment approach to nature. Enchantment is based in a Western worldview that understands humans as uniquely rational, a trait enabling them to interact with the transcendent world and with the physical natural world. This human interaction begins

with wonder, where falling in love with beauty and learning about the natural world can lead to an attitude of awe and an experience of joy; in other words, to a moment of enchantment. We will then see how enchantment can impact our ethics, our environmental action, the role of stories in our education, and our practice of science. The lens of enchantment is not the only way to look at the world, but I claim that it is a highly satisfactory one, both intellectually and emotionally.

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This Earth Emanating Enchantment: What Wonder and Joy Can Teach Us Within  
Traditional Western Environmentalism

by  
Colette E. Ohotnicky

A THESIS

submitted to

Oregon State University

in partial fulfillment of  
the requirements for the  
degree of

Master of Arts

Presented June 3, 2020  
Commencement June 2020

Master of Arts thesis of Colette E. Ohotnicky presented on June 3, 2020.

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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

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Colette E. Ohotnicky, Author

## ACKNOWLEDGEMENTS

I would like to thank Dr. Michael Paul Nelson, my major advisor and the reason I discovered the Environmental Arts and Humanities Program. Thank you for assisting and guiding me to pursue the thesis topic of my dreams.

I would also like to thank all the rest of my committee members: Dr. Julia Jones, Professor Jennifer Richter, and Dr. Christopher Dunn, for their encouragement and enthusiasm for my work.

I would lastly like to thank all my friends, especially Andrew Gass, for their love and support both when I was stressed and struggling and when I was rejoicing. Andrew, thanks for being my harshest critic: debating with me and forcing me to think through my arguments. Thanks also for being my biggest supporter: rejoicing over all the little and big milestones with me. This thesis would not be what it is without you.

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## DEDICATION

To my Dad.

You are my hero. You push me to strive for more than I think I can accomplish, and thanks to you I have become more like the daughter of God I am meant to be. Without you, I would not have fallen in love with God's creation and pursued environmental studies. I cannot thank you enough for all your love and support; your love for me and pride in me are the best gifts your little girl could ever want.



## Introduction

G.K. Chesterton once stated, “I am concerned with a certain way of looking at life, which was created in me by the fairytales, but has since been meekly ratified by the mere facts....The only words that ever satisfied me as describing Nature are the terms used in the fairy book, “charm,” “spell,” “enchantment”.” (*Orthodoxy* 89, 94) What ways do we describe nature? How do we look at life as a fairytale? These are the questions which led to this thesis. Enchantment, as we will discover, is a compelling description of nature, and the traditional Western worldview leads to enchantment through an attitude of wonder such as we find in the fairytales. Enchantment, as we will see, is a possible way to look at the world which reveals depths of meaning and wonder. It is, like a fairytale, both imaginative and filled with what Chesterton calls “the mere facts.” Enchantment shows us the truth and beauty of nature and brings with this vision such joy that once we have been enchanted we will seek to always see nature in this way, the way of enchantment.

Throughout this essay, we will examine the facts which “ratify,” as Chesterton calls it, an enchantment approach to nature. We will explore the Western ideas which form the background for discovering enchantment, will wander through the beautiful land of enchantment, and then will examine how this land can permeate back home into the natural world and our daily lives.

Enchantment is based in a Western worldview that understands humans as uniquely rational, a trait enabling them to interact with the transcendent world and with the physical natural world. This human interaction begins with wonder, where falling in love with beauty and learning about the natural world can lead to an attitude of awe and an

experience of joy; in other words, to a moment of enchantment. We will then see how enchantment can impact our ethics, our environmental action, the role of stories in our education, and our practice of science. The lens of enchantment is not the only way to look at the world, but I claim that it is a highly satisfactory one, both intellectually and emotionally.

I do not claim to be able to actually enchant you. I do not have that power. But perhaps you can, with me, explore how nature can be enchanting. If I can but dimly reflect and share with you the truth and beauty I have discovered – which others before me have discovered and conveyed as well – I will have accomplished more than my wildest dreams.

## **Part 1: The World in which We Journey to Enchantment**

A worldview is the conceptual framework by which a person understands the nature of the entire world and their own place within that world. It is the frame of the story of reality (Graham). Let us begin then, with an understanding of worldviews, specifically of the Western worldview. As citizens of a Western nation and participants in a Western culture, the Western worldview affects almost every part of our understanding of the world and our actions within the world whether we recognize this or not. The importance of a worldview to our values and actions makes examining this influential worldview a valuable undertaking. And this worldview will serve as the background for how we will understand the context of the land of enchantment. Through an exploration of the Western worldview and specifically of a couple approaches within the Western worldview, we can discover that these approaches contain understandings of the nature of humanity and of humanity's relationship to the natural world which are important to understanding how enchantment can enter into our environmentalism.

The Western view, stemming from Pre-Socratic Greek thought, defines humans as characteristically distinct and unique from all other living beings. Only humans have the capacity to rationally understand the world; thanks to their ability to reason and be self-conscious, the human mind can interact with the natural world. Humans also interact with the world physically, through their bodies. [See Michael Polanyi's book *Personal Knowledge*, which will be discussed later in this thesis.] Through these two abilities, humans can reach into both the physical realm and the spiritual or transcendent realm. We can even use the capacities of one realm to understand the other realm. This unique human

ability to bridge between the two worlds is discussed in the first essay of C.S. Lewis' *Abolition of Man*. Lewis calls this body-mind intersect the chest of men. "It may even be said that it is by [his chest] that man is man: for by his intellect he is mere spirit and by his appetite mere animal" (*The Abolition of Man* 25). We can employ spiritual strength to master physical phenomena. We can use our emotions to navigate living in the physical world. Most of all, we can understand transcendent concepts, which travel between the physical realm and the spiritual realm. Humans, by their nature, are able to connect the physical world and the transcendent world. This is where enchantment will enter the picture. Through our transcending ability, humans can interact with both nature and transcendent truth.

In order to move from the Western understanding of human nature to the relationship between humans and the natural world it will be useful, in the context of environmentalism, to narrow down to two common approaches within the Western worldview. The first one we will discuss is the modern or dominant Western approach, in other words, the school of modern Western thought which can be characterized as having dualistic, materialist, and mechanistic tendencies. This approach has directly led to what is called a "strong" anthropocentric outlook toward nature. Strong anthropocentrism claims that humans are the only beings to have moral considerability. In Western modernity, strong anthropocentrism, combined with other factors such as a materialist and mechanistic science, led to a mainly instrumental or technological attitude toward nature. Nature, other living beings, and natural systems are valued only so far as they serve human uses. Natural

areas should be protected and cared for so that we have resources to use later and to give to future generations.

The second approach within the Western worldview is the ancient and later Christian approach which tends to be more transcendent and humanistic. It has led to what is called a “weak” anthropocentric attitude toward nature. This approach attributes intrinsic value to nature and other living beings, deeming them morally considerable. Weak anthropocentrism claims that while all living beings have moral considerability, humans have the highest moral significance. Nature is something to protect and care for because it is valuable in and of itself, not for any possible use we might give to it. However, it is still true that humans have the highest moral significance in this system where multiple living beings have moral consideration.

We see, therefore that the question of keeping the Western worldview, such as Lynn White, Jr. poses in *The Historical Roots of the Ecologic Crisis*, is dependent on understanding the nature of the human person and of our relationship with the earth (White, Jr.). Our understanding of our humanity and of our relationship to nature is part of our worldview and thus affects every aspect of our lives. Lynn White Jr. argues that the idea of the dominance of man over nature (strong anthropocentrism) is the key problem in the ecological crisis, and that there will be no solution until we can rethink that damaging worldview (1206). In response, I argue that the ancient or Christian approach, which does not hold to strong anthropocentrism, can provide one of the better comprehensive and coherent arguments for the proper ethical attitude we should have toward the environment, and provide the framework for making good ethical decisions. I claim that the Western

worldview can do this well through enchantment. As we will see, enchantment helps us to engage with the natural world in an attitude of wonder and joy, leading to love and care for the environment.

## **Part 2: The Land of Enchantment**

Enchantment makes us better ethical actors by enjoyment of the good, and it can be shown to us through wonder. Therefore, let me begin by discussing wonder, through which we will progress toward understanding enchantment, and then explore, in Part 3, how enchantment could make us better ethical actors.

### Types of Wonder

#### **Surprise**

Scholars have suggested that there are three different kinds of wonder. These three kinds correspond to different common definitions of wonder. These different kinds are discussed specifically by Josef Pieper and Peter Kreeft. The first kind of wonder can be described as: “a feeling of great surprise and admiration caused by seeing or experiencing something that is strange and new” (“WONDER Definition”). I call this definition “surprise.” Surprise is the most corporeally experienced kind of wonder. As Peter Kreeft says: “This is wonder in the emotions...” (7). Surprise comes before and apart from any knowledge; there is little to no intellectual interaction involved, besides the person’s apprehension of the event/truth/view by which they are surprised. For an example, consider a moment when you round a bend during a mountain drive, and a gorgeous view appears in front of you. Surprise is also easily understood when looking at a child’s response to even simple events. A toddler who laughs every time your face reappears during a game of peek-a-boo is a perfect example; or when a soda and Mentos volcano

erupts in front of a seven-year-old. The situations and examples of encountering surprise abound in almost every possible context. But no matter where they appear, the event of surprise is the same: it is a kind of shock. In other words, surprise is a moment when we see the world in a fundamentally different way. The mountain suddenly seems massively bigger and more glorious; the stars suddenly make us want to laugh; a laughing face is suddenly seen where there was only a pair of hands. Before there is the mundane world, which Pieper calls the “workaday world,” about which we do not wonder or philosophize. As soon as we “perceive all that is unusual and exceptional, all that is wonderful, in the midst of the ordinary things of everyday life” (Pieper 113), in that same moment, we begin to philosophize about it. The shock, the surprise, is the beginning of a transcendent experience, such as philosophical inquiry, which leads to the second kind of wonder.

### **Questioning**

Cambridge Dictionary defines the second kind of wonder: “to ask yourself questions or express a wish to know about something” (“WONDER Definition”). This kind of wonder I call “questioning”. This kind of wonder is the wonder which seeks knowledge. Kreeft defines questioning such: “This second kind of wonder...is wonder in the intellect, guided by the will...”(7). In questioning, we realize that the surprise was only the beginning of the experience we have entered. Once we have encountered surprise, it leads to thinking about what has surprised us. Think of the child, for instance, who sees the volcano erupt, is amazed, and then asks how it works. Another great example here is scientists, who naturally in their line of work ask questions about natural phenomena, and



then observe the world or conduct experiments to answer their questions. In the context of philosophical questioning, as in we are engaged in here, this kind of wonder searches for truth and for an understanding of reality. Humans, especially in their capacity to know, seek to contextualize themselves and their knowledge within the world around them: in other words, within reality. As Pieper says: “in the tradition of Western philosophy, the capacity for spiritual knowledge has always been understood to mean the power of establishing relations with the whole of reality” (98). Therefore, questioning engages the what we can call intellectual aspect of the human, whereas the surprise more directly engages the emotions, in the experience of wonder.

### **Awe**

The third definition, which is the most complete kind of wonder, is the kind that comes from amazement at knowledge obtained. This kind of wonder we might call awe. Kreeft defines the third wonder this way: “Wonder is consummated in contemplative awe. This is wonder in the deepest heart. We marvel at the truths we have understood” (7–8). The main source of awe is from knowledge of the discovery made and knowledge acquired about the workings of reality. Later in his book, Kreeft describes the knowledge aspect of awe thusly:

The wonder and awe can also come from the discoveries of science, especially astronomy and astrophysics, as well as genetics and cell biology; from the astonishing and often literally unimaginable picture of the universe and the human body and brain that it reveals. Surely the most magnificent work of art of all is the universe itself: endlessly mysterious yet perfect in its order, even in its mathematical harmonies. (Kreeft 115)

Here, we are amazed at something we fully understand, and admire how spectacular it is. We can also experience awe in an apprehension that there is much more to learn. In the midst of the new discovery, the discoverer can also realize that there is more beyond their discovery that they do not know and have not discovered. Pieper notes that awe can also point to knowledge of a mystery: “wonder signifies that the world is profounder, more all-embracing and mysterious than the logic of everyday reason had taught us to believe” (115). Awe can come at the point where we gaze from the known into the unknown, the moment where we apprehend a truth and see how much more we could come to know. In summation, awe can be either amazement at understanding or apprehension of how much lies beyond understanding, and sometimes, both at the same time.

#### Wonder and the Transcendentals

Once we understand the kinds of wonder, we can explore how they affect and participate in a transcendent experience. To begin with, it is helpful to posit two worlds, or realms. One is the physical world. This is composed of physical matter, things we can touch and sense with our own physical bodies. It exists within our normal conception of time and space. The second world is the spiritual world, also called the transcendent world. This is composed of nonphysical things, including emotions and universals. The different kinds of wonder each have a unique interaction with three universals commonly known as the transcendentals: goodness, truth, and beauty. They are crucial in understanding the phenomenon of enchantment.

Wonder, overall, reveals the good through beauty and truth. The three kinds of wonder each compose a different step on the path to the good, all of which contribute to

the experience of enchantment, a more complete apprehension of the good, and a fuller enjoyment of the good.

### **Surprise and Beauty**

Surprise reveals the good to us primarily through beauty. This is because beauty interacts so intricately with our physical senses and surprise is a sensual experience. We can call this an aesthetic approach to knowledge. I should note that this is not intellectual knowledge, but sensual knowledge. When we discussed the definition of surprise, we said it was an emotional and corporeal experience. As such, it apprehends physical beauty, which leads to a recognition of beauty as a universal, thus moving from the physical world to the transcendent world, wherein the good is found.

When we experience nature, we engage our physical senses. We see the spectacular view with our eyes, we smell the trees and the flowers, we hear the wind and the bird song. As humans, rational creatures, when we engage our senses, we also encounter the connections between that individual apprehension and other aspects of the world and of our experience of the world. We see a flower, and can relate it to that species of flowers, to the idea of what makes a flower a flower, to the beauty of the flower in the landscape around it, to the unique aspects of beauty of which flowers always remind us, etc. When someone sees a skilled beautiful painting in a museum, they are filled with wonder. We wonder at a beautiful sunrise or a beautiful landscape. But beauty is not just in the physical world. When a scientist discovers a beautiful theory, he is filled with wonder. When a person apprehends beauty, they are not necessarily surprised. But if they are surprised, they

both apprehend something beautiful and respond to the beauty. Here, surprise is the internal or spiritual recognition of an external or physical beauty. Thus surprise can serve as the doorway to the transcendent world. We experience a shock in which we realize the transcendental beauty beyond the physical beauty. As the philosopher and poet John O'Donohue puts it, in his book *Beauty: The Invisible Embrace*, "...the beauties of the natural world...had their source in the eternal world from which they were fugitives" (29). Thus, the physical attribute of beauty with which surprise begins is the big signpost in the natural world, saying, "Doorway to transcendence here!!"

What does all of this have to do with the search for the good? When discussing the transcendentals, Peter Kreeft asserts that "[b]eauty is a dimension of human life that transcends animal consciousness as absolutely as do our knowledge by theoretical reason of abstract eternal truth and our awareness by practical reason or conscience of obligatory moral goodness" (104). Beauty is the most directly appealing transcendental. It is, in fact, the allure of the true and the good, something like a signpost toward the good and true. Kreeft says, "[B]eauty is what attracts us to believe in the truth and to choose the good. Beauty is what we fall in love with and therefore beauty is our soul's gravity" (105). Bodily love for beauty- as in a certain man's love for a certain woman's beauty- is the impetus toward the good and true-the good being the woman's inherent goodness. Thus, the man is thus impelled toward knowing the woman's goodness and toward acting in order to preserve and develop her good. This example is the same in the natural world. The sight of a gorgeous mountain view or of a mysteriously lovely forest is beautiful to us, and impels us to wander into it, explore it, and learn more about it. Since part of the

attraction of beauty is the desire for truth, the apprehension of transcendent beauty can lead us to desire and seek truth. Of the three, beauty is the easiest and simplest method of entering into the transcendental realm because it is so sensually and physically prominent, especially in the natural world, which is our focus in environmental science (Turley).

Authentic beauty, according to Aquinas, has proportion, integrity, and clarity (“Summa I, Q.39”). All of these qualities are shown in physical reality. We can see the individual instance of beauty in the reality of the world, and that beauty can inspire love for its place in the proportionate harmony of the world, its contribution to the whole cosmos, and its clear reflection to us of the transcendent world. Surprise opens us up to fall in love with the goodness and rightness of the beauty we see.

At this point, each plant, each animal, each ecological discovery, is a doorway to transcendence. They are unique reflections of the truth about the world, hints of the meaning of life, and points of connection for each of us. We can find something mysterious and beautiful about the other, something different from us, be drawn to an exploration of the mystery of nature and of the huge wide unknown cosmos because in nature we see an attractiveness and vastness so much bigger than us. If we understood everything, we would not be surprised by it, we would not want to learn about it. Wanting to learn about the world and its beauty leads to the next kind of wonder: questioning; that is, the search for intellectual knowledge of reality. Beauty and truth thus go hand in hand in this way. Surprise and questioning can follow one after the other. O’Donohue states this connection in another way: “The wisdom of the [Western] tradition reminds us that if we

choose to journey on the path of truth, it then becomes a sacred duty to walk hand in hand with beauty” (57).

### **Questioning, Truth, and Imagination**

We have seen how human sensual experience is connected to the transcendent, spiritual world. And how the next step is the search for truth. Aristotle, in his *Metaphysics*, defines truth as, “To say of what is that it is, and of what is not that it is not” (sec.iv. 7. 1011b25). Truth points out reality to us: what is, is, and what is not, is not. Truth allows those who desire the good to know how to act in order to preserve or develop the good. Questioning is the kind of wonder which reveals the good through truth. As Polanyi says, “The effort of knowing is thus guided by a sense of obligation towards the truth: by an effort to submit to reality” (63). And it follows from the experience of beauty in surprise. Physical beauty is attractive to our physical senses as intellectual beauty is attractive to our minds. And since the human is an indivisible combination of body and spirit (or mind), physical beauty is inseparable from intellectual beauty. After the moment of surprise, we realize the inseparable connection between mere physical apprehension of the environment and intellectual questioning of the reality beauty has suddenly shown to us. O’Donohue says, “In beauty’s presence there is no longer any separation between thought and senses, between heart and soul. Indeed, the experience of beauty confirms the intricate harmony and creative tension of senses and thought. Without the sense, we could never know beauty. Without thought, beauty would seem transient and illusory” (40). Thus, apprehending beauty is a uniquely human endeavor and the perfect doorway on the journey

to the transcendent world. Once exposed to the beauty of the transcendent world, we want to explore it further and deeper. We might even claim that the absolute beauty of this world compels further exploration. Once you get far enough to get a real glimpse of its beauty, you will be in a state of wonder which demands its own fulfillment. Thus when we apprehend beauty in the transcendent realm, it necessarily draws us inward to explore intellectually...because of beauty's connection to truth and to the search for truth.

There are many different ways to gain knowledge and to discover truth, so I will discuss only one possible path, imagination, which interacts naturally with enchantment, and thus is one of the more direct ways in which wonder leads to enchantment.

Imagination requires a more specific definition here. Imagination is not the modern derogatory definition which downplays extreme ideas as madness, or worse, uselessly impractical. In fact, as we will see, imagination has a very important practical purpose. Imagination, as we define it here, is the skill of sub-creation. Sub-creation is a term used by Tolkien in his essay *On Fairy Stories*, wherein he calls man's power of art an imitation of the creating power of the creator of the world (47, 70–73). Here, I would suggest that scientific imagination also fits here. For discovery of truth in science is not the creation of something entirely new, but the discovery of some new kind of order in the universe. Sub-creation, therefore, is not the creation of something new from nothing, but it is the creation of something new from things already there. With sub-creation the artist makes a picture of a person from paint and canvas, the storyteller writes a book, and the scientist designs a hypothesis and theory. In sub-creation, people use their imagination to (sub)-create art.

This is most specifically the case with storytellers and in mythology or fantasy. Here, the artist does not use physical imagination; think of a painter arranging paint- a physical substance- in order to show us a person or a picture. Rather, the artist is imagining entirely new and different worlds. He or she is arranging ideas such as beauty, power, evil, courage, etc., telling us something about truth and reality, perhaps to teach a moral lesson or uncover a hidden insight into how our own world works. Imagination, here, is the tool of the mind used to explore transcendent truth. One of the best quotes which captures this idea is from G.K. Chesterton's book *Everlasting Man*. He says:

Every true artist does feel, consciously or unconsciously, that he is touching transcendental truths, that his images are shadows of things seen through the veil. In other words, the natural mystic does know that there is something *there*, something behind the clouds or within the trees; but he believes that the pursuit of beauty is the way to find it, that imagination is a sort of incantation that can call it up. (Chesterton, *The Everlasting Man* 96)

In this quote, Chesterton is discussing mythology. These are stories, fairy-tales, half-remembered and imaginatively created. This is key to myths, epics, and all great stories: they are not completely made up, but highlight some deeper truth encapsulated in that story. The story, as the work of the writer's imagination, does not come up with an entirely new truth. It cannot because the writer cannot create from nothing. But he can take a truth and place it in an entirely new setting. Where an idea might be hidden and hard to find in the physical world, imagination picks it up and shows it to us. Kreeft argues this: "Nearly all great writers and musicians have said that the process of composing their greatest works was not *creation* but *discovery*. What they gave us in their poetry or their music or their stories did not originate with them. It was already there, eternally there. All these artists did was point to it, lift the curtain a few inches for a little while, the curtain that until then



had hidden these things from our eyes” (112). Imagination is the cord used to lift the curtain, it is the “incantation,” as Chesterton says, which makes the unseen beauty appear before our eyes.

Sub-creation through imagination is also the case within scientific discovery. Here, the scientist is faced with a certain set of facts or observations, but does not know how to arrange them, he does not know how they work together. Therefore, he uses his imagination to arrange those ideas into a new ‘story’, a hypothesis. Polanyi discusses the scientific act of using our observations of the physical world and then use of questioning to understand those observations such:

The standards of intellectual satisfaction which urge and guide our eyes to gather what there is to see, and which guide our thoughts also to shape our conception of things – the beliefs about the nature of things transmitted by our everyday descriptive language – all these form part of the premises of science, even though we must allow for the revision of these standards and beliefs within science”. (Polanyi 161).

These steps are the beginning, the “premises” of science.

How exactly, though, does imagination provide the revealing setting for truth? In science, it does so by designing patterns which help make sense of currently disjointed facts. In stories, it does so through evoking Secondary Belief. Let’s start by diving deeper into sub-creation. To begin with, we will call the Primary world the world of physical and spiritual things, things created in the world, not by humans. And the Secondary world is the world of stories, of art, of things sub-created by humans. Middle-Earth or Narnia, for instance, are Secondary worlds. The Secondary world is created from the Primary world. And the better the Secondary world highlights truth in the Primary world, the better the story (Tolkien 47–49).

When they highlight or expose reality and truth, these fantasy stories evoke what Tolkien calls Secondary Belief, which is the amount that we allow the stories to convince us of their existence and sensibility. The closer a story reflects reality, the more convincing that story will be. This is why stories, our myths, fairy-tales, are so enduring, popular, and endearing. They call out in us that response to the beauty which accompanies truth I described in the last section. Chesterton would say that our problem in the Primary world is that we are bored by repetitively and unimaginatively seeing the same things every day. The Secondary world shocks the everyday things out of the ordinary, and suddenly we see them again, in all their truth, wonder, and beauty. “This is...why the old fairy tales endure for ever. The old fairy tale makes the hero a normal human boy; it is his adventures that are startling; they startle him because he is normal....You can make a story out of a hero among dragons; but not out of a dragon among dragons. The fairy tale discusses what a sane man will do in a mad world” (Chesterton, *Orthodoxy* 26–27). The setting and form of the elements in the Primary world are changed in the Secondary world, and we see them again. Tolkien says, “Myth and fairy-story must, as all art, reflect and contain in solution elements of moral and religious truth (or error), but not in the known form of the primary ‘real’ world” (qtd. in Dickerson and Evans 25).

This last quote contains an important point. I said at the beginning of last paragraph that the closer a story reflects reality, the more convincing it will be. Imagination is a powerful tool. When that tool is used to convey and reflect truth, we will enter into Secondary Belief. But if it conveys error or inconsistency with an important principle of reality, it will not be believable, it will jar us. Now by error or inconsistency with reality I

do not mean there cannot be things such as dragons or magical events. Rather, these things must remain consistent within their world and to first principles of reason. As Tolkien puts it, fairy stories are better than modern abandonment of reason (Chesterton says an incredibly similar thing in Ch.4 of *Orthodoxy*) for “[f]airy-stories may invent monsters than fly in the air or dwell in the deep, but at least they do not try to escape from heaven or the sea” (Tolkien 63). Tolkien calls the Primary world-reflecting power of fairy stories recovery, as in the “regaining of a clear view,” and ““seeing this as we are (or were) meant to see them”” (57–58). Chesterton’s commentary on the same matter comes from the quote at the beginning of this thesis: “I am concerned with a certain way of looking at life, which was created in me by the fairy tales, but has since been meekly ratified by the mere facts” (*Orthodoxy* 89). If, however, the story does not reflect reality consistently, it will not be convincing, it will not draw us into that world, and it will not reflect a clearer view back into the Primary world.

A very similar phenomenon can occur within science. With his imagination, “...man has the power to establish real patterns in nature, the reality of which is manifested by the fact that their future implications extend indefinitely beyond the experience which they were originally known to control” (Polanyi 37). In other words, the scientist is like an artist. He takes already known concepts (in this case some scientific observations), and designs a pattern, like a picture, which draws out some new understanding of those concepts. Polanyi puts it this way,

A scientific theory which calls attention to its own beauty, and partly relies on it for claiming to represent empirical reality, is akin to a work of art which calls attention to its own beauty as a token of artistic reality. It is akin also to the mystical contemplation of nature....More generally, science, by

virtue of its passionate note, finds its place among the great systems of utterances which try to evoke and impose correct modes of feeling. (Polanyi 133)

In a way, a scientific theory is like a story evoking Secondary Belief. Perhaps the entire theory or story is not true in every little detail. But we do understand the truth contained within the theory better because it is shown within the setting of that theory.

The world of imagination is a good place to explore the transcendent world of truth. O'Donohue says, "...the imagination is the eye for the inner world. When the imagination awakens, the inner world illuminates. We begin to glimpse things that no-one speaks about, that the outer world seems to ignore" (145). Chesterton says the same thing, stating, "We must invoke the most wild and soaring sort of imagination – the imagination *that can see what is there*. The only way to suggest the point is by an example of something, indeed of almost anything, that has been considered beautiful or wonderful" (*The Everlasting Man* 8, *emphasis mine*). Here Chesterton actually claims the power of imagination as even greater: he explicitly claims that imagination shows us truth by pointing out the beauty and wonder. We have, just earlier, discovered how beauty is the doorway to entering the transcendent world. Thus imagination is the tool of the intellectual questioning, the search for beauty. This is true, as Polanyi says, for science as well as art: "The affirmation of a great scientific theory is in part an expression of delight. The theory has an inarticulate component acclaiming its beauty, and this is essential to the belief that the theory is true" (133).

Secondly, by reaching into and unveiling the real, spiritual world, we realize that what we have discovered and examined is true. Unlike a materialist view which sees only

the physical world, or a Kantian who is unsure whether what they see is reality or not, the connection between beauty and truth which happens through imagination tells us that we have actually reached reality, and it has moved us. Chesterton says, “Behind all these things [physical phenomena] is the fact that beauty and terror are very real things and relation to a real spiritual world; and to touch them at all, even in doubt or fancy, is to stir the deep things of the soul” (*The Everlasting Man* 99). Polanyi has also discussed this ability for scientific discovery to find the true workings of the world, of nature. When we are enchanted, we see all of this reality. We will no longer be able to delude ourselves into making nature into whatever we want it to be, a resource, a valueless wasteland, etc. Nature can become a land full of mystery, complexity, and, best of all, hints of the meaning of our humanity and of our lives.

### **Awe and Good**

We have finally reached the point of awe, the stage of deepest wonder. Once we have been surprised/shocked into the transcendent world through the beauty of the physical world, we begin to explore it through our imagination, our questioning wonder, our interest in seeing the truth. And all these things bring us to a single place: a glimpse of truth. In Kreeft’s definition of awe which I quoted in the earlier section, he says that “We marvel at the truths we have understood” (8). This wonder at truth discovered is the key of awe and its relation to good. Good, in this context, speaks of moral good: something right, fitted, desired.

Surprise is shocked and unsettles us. Questioning is also restless, a drive to search for truth. But awe is a resting in the knowledge and the good discovered. After traveling through the other kinds of wonder and learning about the transcendental world, we stop and revel in the discovery we have made. Imagine, for a moment, hiking up a long, narrow, steep path. You are reaching for the top of a mountain but have no idea what is on the other side. But suddenly, as soon as you reach the very top, a spectacular view appears on the other side. Reaching the peak is the discovery aspect of awe, the understanding and knowledge which questioning was searching. The view beyond is the second aspect of awe, the realization of greater unknowns and beauty beyond merely what was sought. We know in science that the search for knowledge is the search for truth; for the facts about the world. But this is not just true for scientific knowledge, for facts about the physical world. It is also true for facts about the transcendent world. Questioning looks for the truth about the nature of reality. Thus our imaginative beauty-hunting quest is not a journey into the land of false dreams, but into the heart of the real world. As Kreeft says, “These are not mere myths. Or, if they are myths, then they are myths that are real, myths that are not a flight from reality but a flight to reality” (13). And as we discussed in the definition of awe, the moment of awe comes when we realize some truth, when we make a discovery. And now, after traveling through all the kinds of wonder and realizing the entirely new world it leads into, we see how grand that discovery must be. True knowledge is not just discovering one single fact, it is reaching a whole new world. Here is our glimpse of truth. As Polanyi says when speaking of acquiring knowledge: “...profundity itself, as we will see, [is] but an intimation that we are making a new, more extensive contact with reality”

(137). The profundity of the discovery, the depth of the beauty we now see, is the source of awe.

The moment of awe is directly part of the experience of enchantment, therefore, we need to examine awe and its relation to the good more fully. When we experience awe, it is a happy and desirable experience; it is, for us, something good. We can see that through wonder, through surprise, questioning, and awe, we find the good by following beauty (the physical beauty of the world around us) and truth (the knowledge sought intellectually). Awe is satisfying. We have acquired some knowledge, achieved some goal. But more than that, it is a happy achievement, we like finding the good, understanding the truth, and entering into the beauty. We desire awe because it brings us to the good.

But awe does not stop there. A major part of the experience of awe is its transformative power. The good, once understood, is compelling to us. If we desire awe because of the good, we often then want to conform ourselves more fully to that good, so that our experience of awe is more complete. Awe is life-changing, or it should be. Dr. Stephen Turley says that the great Western mystic St. Augustine claimed: “what makes us human is an insatiable desire for truth, goodness, and beauty, and to encounter them in a life-transformable way” (Turley).

### Joy

There is one more element to add to the journey toward enchantment: joy. In the last section on awe and the good, we came very close to joy. I mentioned that we desire the good. Joy is what makes us desire the good which we apprehend in awe. For joy is an

emotion, and a powerful emotion. We have come full circle back to surprise, in a way.

During a moment of surprise, we experience emotionally a shock of beauty. But we do not yet fully enjoy it, for a real enjoyment of something involves, for us as humans, an aspect of understanding. We need both elements (emotion and intellect) because humans are composed of both body and soul/spirit. A complete experience is not complete for us until it engages all of our humanity. Therefore, joy serves as the emotion of awe, a rejoicing in the good. Chesterton describes this emotion such:

[T]he strongest emotion was that life was as precious as it was puzzling. It was an ecstasy because it was an adventure; it was an adventure because it was an opportunity. The goodness of the fairy tale was not affected by the fact that there might be more dragons than princesses; it was good to be in a fairy tale. (Chesterton, *Orthodoxy* 97–98)

Joy interacts so well with a transcendent experience such as awe because joy points toward eternity. Joy, as C.S. Lewis describes it, “reminds. It is never a possession, always a desire for something longer ago or further away or still ‘about to be’” (*Surprised by Joy* 78). And furthermore, “There was no doubt that Joy was a desire....But a desire is turned not to itself but to its object....Joy itself, considered simply as an event in my own mind turned out to be no value at all. All the value lay in that of which Joy was the desiring” (Lewis, *Surprised by Joy* 220). Our final end is not to live forever harmoniously on earth and dwell peacefully in an ecological system. No, we are called to some land, some world beyond and different from this. It looks somewhat like the land of transcendence which we glimpse, but it is not just a glimpse, it is immersion and life in that land. Joy’s role in enchantment is the emotion of the glimpse into that fully transcendent future: “In such stories when the sudden ‘turn’ comes, we get a piercing glimpse of joy, and heart’s desire,



that for a moment passes outside the frame, rends indeed the very web of story, and lets a gleam come through....The peculiar quality of the joy in successful Fantasy can thus be explained as a sudden glimpse of the underlying reality or truth” (Tolkien 70–71).

### This is Enchantment

This, therefore, is enchantment: when we experience a specific moment of awe combined with joy. So far, I have described a progression from one world to another, from the physical to the transcendent, and from surprise to awe. While this is a possible way to describe movement to enchantment, the actual phenomenon is by no means this linear. Enchantment is not the movement between worlds, it is the moment when those two worlds meet and merge. It is the sensual, shocked experience of the physical world simultaneously with the glimpse of the glorious land beyond the “curtain” which Chesterton described. You could think of it as enjoying the view of the mountain in front of you as well as seeing into and through the mountain to the other side, the other land. The mountain becomes transparent, and at the same time we really actually see the mountain for what it truly is.

What makes enchantment distinct from awe? Awe is a concept that belongs in the transcendent world. Enchantment, however, belongs squarely in both the physical world and the transcendent world. Enchantment is not a vague mystical experience in a high tower. It belongs in a specific moment of physical encounter with whatever has moved us, whether a scene of beauty, a scientific discovery, etc. The experience cannot be enchantment without both the embodied physicalness of the experience and the

transcendent spiritual experience. “[E]nchantment is always and necessarily both ‘material’ and ‘spiritual’; that is, precisely circumstantial – embodied and embedded – and simultaneously deeply mysterious, undelimitable and unmasterable” (Curry 3).

Enchantment is the physical world in the transcendent world. As Tolkien says in discussing the blurring of the two worlds, “Faërie contains many things besides elves and fays, and besides dwarfs, witches, trolls, giants, or dragons; it holds the seas, the sun, the moon, the sky; and the earth, and all things that are in it: tree and bird, water and stone, wine and bread, and ourselves, mortal men, when we are enchanted” (Tolkien 9). It is at the same time, the transcendent world in the physical world: “The really human thing is to see the stars above the roof, to preserve our apprehension of the universality of things in the midst of the habits of daily life, and to see “the world” above and beyond our immediate environment” (Pieper 105). Enchantment looks into the world of nature, not away from it.

In the end, enchantment, while showing us the full potential of our human nature and the reality of the world around us, most directly points to something far beyond this world, as rich and beautiful and meaningful as it is. Enchantment points to our final end, which is shown to us in the joy, the emotion felt in moments of enchantment. Joy, by its sudden, temporary, heart-wrenching and exhilarating nature, tells us that the moment of enchantment is not the highest end of our human experience: we long for it to continue, but we cannot stay forever in the land of enchantment. Yet joy is also hopeful: we look forward to more moments of enchantment, and we seek for them and their continuance. As Lewis says:

In so far as we really are at all...we have, so to speak, a root in the Absolute, which is the utter reality. And that is why we experience Joy: we yearn, rightly, for that unity which we can never reach except by ceasing to be the separate phenomenal beings called "we". Joy was not a deception. Its visitations were rather the moments of clearest consciousness we had. (Lewis, *Surprised by Joy* 221–22)

Thus the experience of enchantment is not the end; we look for enchantment again and again, seeking truth in all aspects of our lives, discovering reality in all the corners of nature, until one day, we hope, we can remain in the land of enchantment forever.

This is how enchantment is important for environmentalism, for a proper Western environmental worldview. It changes and defines our relationship with nature. For enchantment is a fully human act, one which engages the spiritual and physical aspects which compose the entire human. When enchanted, we are undeniably aware of our body and of our soul- and in the moment of joy and awe we engage both these aspects of ourselves. Instead of reducing ourselves to merely spirit or merely animals, we are elevated to fulfill our own humanity; we understand ourselves and our own nature. And since any proper ethic must begin with a self-awareness and knowledge of the ethical actor's role in ethical actions, with this proper anthropology we can discover the necessarily anthropocentric and rationally stewarding nature of human interactions with nature. Enchantment teaches us about the world around us. When we look at nature as not just an animal environment, but as the doorway to transcendence (surprise and beauty), as the reflection of truth and reality (questioning and truth), and as the place which engages the fullness of our humanity (awe and the good), then our relationship with it will be entirely different.

### **Part 3: Bringing the Land of Enchantment Back Home**

#### Environmental Action

How does enchantment make us into better ethical actors? This section will focus on environmental implications for ourselves. We will examine, briefly, what it looks like to weave the land of enchantment into our lives. To do so, we will examine stewardship as a way of interacting with the environment, and ethics, referring to natural law, as the guideline for evaluating the efficacy of our stewardship within the context of the Western tradition concerning human nature and teleology.

To begin, we need to discuss stewardship, and if stewardship is the proper action framework for enchantment. At the end of Part 2, I claimed that enchantment is not a single experience, but recurring and unsatisfying; unsatisfying not in the sense that the experience itself was not good and filled with joy, but in the sense that afterward we desire to experience it again and again. That desire is the beginning of our action, for inspires us to do something which will (hopefully) lead to experiencing enchantment again. What kind of actions will these be, then, when inspired by enchantment? First, if we think back to the end of Part 2, these actions have an ultimate end or purpose. To put it crudely, their purpose is to experience enchantment always. What actions, therefore, will lead to more experiences and greater enchantment, to an eternal experience of enchantment? There are several factors, or categories of actions, which will contribute to this. The first focuses on the human factor, the second on the natural world factor, and the third is the transcendence factor.

The human factor is the aspect of stewardship that changes or focuses on humans in order to bring us to greater enchantment. This factor is crucial, for it makes the most impact on our ability to discover enchantment. In the first place, the human factor includes our love and appreciation for the natural world. This love comes directly from enchantment, for we love beauty. Beauty appeals to us, to our sense of harmony, rightness, and sometimes even comfort. The more we encounter the beauty of the earth, the closer we get to that beauty- the more we can love it. This might not intuitively seem to be the first step of stewardship, but it is in fact absolutely necessary for a proper sense of enchanted stewardship. We can see the necessity from looking at the literary illustration of Tolkien's elves. The Elves were the first human-like beings in Middle-Earth, and their being was uniquely connected to the earth itself. Their own beauty as a reflection of the beauty of the earth, their knowledge of the world and skill in craft as due to their questioning wonder of the beauty of the workings of the earth, their way of life which remained in touch with the rhythms of the earth, all followed from their love and affinity for the earth. These things brought them closer to the natural world, and in general we all desire to be close to that which we love.

Our love leads to a willingness, indeed a duty, on the human part to care for the earth. As Dickerson and Evans say in their book *Ents, Elves, and Eriador* when talking about a Tolkienesque definition of stewardship, "Both are necessary...: heartfelt devotion to a particular place and the people who live there; sacrificial willingness to do what is necessary to protect and preserve it" (89). When we love something or someone, we want what is best for them. And the more selfless the love, the more we are willing to do in

order to effect what is best, rather than just wish for it. Our love has turned into action. We can think back to the elves I just mentioned. Their love for the earth led them to learn more about the earth, to live in harmony with its beauty, and to sub-create beauty themselves. The love it, so they care for it (Dickerson and Evans 35, 111). It is the same for us on this earth. I'm sure that within your personal experience you can think of famous naturalists or native peoples, who live closely in harmony with the land around them. They fall in love with it, and at the same time become intimate and knowledgeable about it. They then become the caretakers and defenders of their land. This is the natural human progression of stewardship. Dickerson and Evans put it beautifully: "It might be simpler, and truer, to say that we do best when our motivation is a *selfless love of the world and all it contains*: wind and sea; tree and grass; mountain, valley, plain, and all that they contain" (229). And by preserving our land of enchantment, we enable ourselves and others to experience that enchantment.

But we do not just defend and care for the land we love. We try to make it more beautiful, more like what we have imagined. This is where we get to the nature factor of stewardship. Here, instead of changing something about ourselves, we are changing something about nature. In the human factor, we saw that when we understand the earth as a wonderful and wonder-filled place, we can recognize its inherent beauty all the better. In the nature factor, the basic principle is that the more beautiful the earth is perceived to be, the more it will enchant us. Not that there is much we can do to enhance beauty that is already there, but where the earth is suffering and needs care to make it more beautiful and productive (fruitful, growing), then stewardship calls upon us to provide that care. This

where much of the environmental action as popularly considered falls. Humans are an integral part of many landscapes, and their impact on those areas is large. Some environmental activists think that all human environmental impact is negative, but this is not necessarily true. One of the ethical implications of the Western understanding of human beings is that they are capable of both great good and great evil. Our imagination and our environmental education can lead us to think of horrible results or spectacular results from human interactions with the environment. And again, these fantastical worlds can help us envision that impact and those results. Consider how the elves worked in harmony with their lands, nourishing them to be even more flourishing and beautiful than any other areas. In contrast, war and evil wrought desolation upon the land. However, restoration is possible. When, at the end of the Lord of the Rings, the Shire is damaged, the hobbits return and restore the land to its former richness and beauty. It does not turn into a wilderness, but into productive, sustainable, lovely farmland (see Dickerson and Evans, chap.9). Our options for assisting and enhancing the beauty of the earth are manifold and highly varied. But they all have a similar goal: the greater enchantability of the natural world.

This leads us, lastly, to the transcendence factor of stewardship. If our goal for stewardship was merely to be happier because we get these pleasant experiences more and more often, that tends toward being merely hedonistic and dominantly anthropocentric. It leads our experiences to be pointed at ourselves. We will not really care for the earth and its health, but instead for our own well-being. We would not love the world's beauty for its own sake, but only as much as that beauty gives us pleasure - which is really just love of

ourselves. But true stewardship means that one is not taking care of the earth for ourselves. When we recognize enchantment, we acknowledge an understanding of a transcendent world, of something beyond this physical world, something which is beyond and greater than us. For you see, as humans, we have a special kind of responsibility, because of our ability to apprehend and to share in transcendence. Embracing the worldview of enchantment and interacting with “myth provides an imaginative foundation for a transcendent environmental ethic rooted in a form of...stewardship that recognizes, even celebrates, the goodness of the physical world” (Dickerson and Evans 66). Once we have the foundation, our response to our enchantment is stewardship, a recognition of the duty we owe to that which is greater, and “the acknowledgement that what [we have] was given to [us]” (Dickerson and Evans 47). After the recognition, we must decide what is the best thing to do with that gift.

Deciding the good thing to do falls under the realm of ethics. Ethics involves an objective understanding of good and evil. As Dickerson and Evans say, “[O]ur stewardship responsibilities have inevitable consequences in terms of an objective environmental ethic in which some practices can be seen as objectively good or evil....there are right and wrong ways to fulfill our duties as stewards of the earth” (49). How do we determine what is the good thing to do? In order to determine what is good and what is evil, we can look first to law. Thomas Aquinas, the Christian philosopher, identifies four different kinds of law: eternal, natural, divine, and human. We need only discuss natural law in this context. Natural law is the dictates of reason by which we are inclined toward the good. Man follows natural law, for example, when he instinctively knows that murder is wrong



because it is contrary to the good of a person and to mankind as a whole (Aquinas, “Summa I-II, Q.91-92”). Discovering natural law can come from understanding the reality of the natural world, the environmental philosopher Holmes Rolston claims:

What is ethically puzzling and exciting is that an *ought* is not so much derived from an *is* as discovered simultaneously with it. As we progress from descriptions of fauna and flora, of cycles and pyramids, ... unity and harmony with oppositions in counterpoint and synthesis, organisms evolved within and satisfactorily fitting their communities, and *we arrive at length at beauty and goodness*, we find that it is difficult to say where the natural facts leave off and where the natural values appear. (Rolston III 95–96, *emphasis mine*)

In the first place, Rolston claims that we can discover the *ought* of the ethics from the *is* of reality. He says earlier, “The way the world is informs the way it ought to be...Our model of reality implies a model of conduct” (95). It does this because by learning the reality of the workings of the world, let us say through questioning wonder, we come to glimpse its “beauty and goodness” as I just quoted from Rolston. We recognize the good in the natural world and value it as such.

From there, the question is which good we should act to achieve. There is an order, a hierarchy of goods, all directed toward the highest good. The Good, as a universal transcendental (as mentioned in Part 2) is the highest good, toward which all particular goods found in nature and matter and other transcendentals point. In the hierarchy, both humans and nature are subject to, lower than good itself. This fits with the idea of transcendence I discussed above. Furthermore, humans and human good comes above the good of nature. See the discussion of anthropocentrism in Part 1 for this argument.

(Remember that this does not mean nature is not good or does not have intrinsic value, just that its value is below the value of human beings.) Therefore, as a very general rule, we

can evaluate good stewardship actions by figuring out whether the actions are for the good of humans and nature, and judging competing actions by determining the higher goods.

I would like to note that this analysis of different goods does not argue for domination and wanton use of nature “because the good of humans is over the good of nature”. First of all, as I just discussed above with stewardship, part of human good is to care for nature. But more than that, if we look again at this hierarchy, the highest thing in the hierarchy is not humans. They are also subject to the transcendent good, which can, according to different beliefs, ultimately be God or some other supreme Being. Humans must analyze good actions in the light of what they owe that highest being, and one of the things they owe is good stewardship of the land. Thus the hierarchy where humans are not the highest good is absolutely necessary for a proper attitude of stewardship.

In the end, natural law complements stewardship very well by giving a hierarchical ordering of goods, which in turn allow us to determine the best course of environmental action. Furthermore, stewardship can follow organically from an attitude of enchantment because it assists in perpetuating experiences of enchantment.

### Environmental Education

The experience of enchantment is, as we see and know, one that we love and wish to have. But how do we convey it, how do we teach an enchantment worldview? One of the most powerful methods of environmental education applies the same kind of imagination discussed in Part 2. Earlier I described how good, believable stories evoke and highlight truth or reality. Thus Secondary worlds, the worlds of stories, are the perfect medium for shocking us into the world of transcendentals. They are like spotlights, or a

play, instead of a dry series of rules and treatises on reason. Both Tolkien and Chesterton realized this. Tolkien notes, “It was in fairy-stories that I first divined the potency of the words, and the wonder of the things, such as stone, and wood, and iron; tree and grass; house and fire; bread and wine” (60). And Chesterton describes how these stories remain in the ordinary and the true:

The things I believed most then, the things I believe most now, are the things called fairy tales. They seem to me to be the entirely reasonable things. They are not fantasies: compared with them other things are fantastic... Fairyland is nothing but the sunny country of common sense. (Chesterton, *Orthodoxy* 87)

In highlighting truth within a land of fantasy, epics, classics, myths, fairy-stories, origin stories, fantasy stories, and other similar stories become methods of education, and I dare to say, they can be specifically methods of environmental education. The basis for stories in education is well-known and supported, just consider great books programs and the tradition of classical, liberal arts education. Furthermore, there is support for stories as a foundation for teaching worldviews and conveying new ideas. We could discuss briefly the example of myths and origin stories here. Myths exist within all cultures. These myths teach the children in that culture the important elements of their world and their worldview. Myths serve for adults in the culture as the core preservation of and store of meaning in their way of life. Those in the environmental field also certainly understand the power of stories. In a book dedicated to exploring the environmental vision of J.R.R. Tolkien, *Ents, Elves, and Eriador*, the authors state at the beginning of their endeavor: “Before any [environmental] reforms can be initiated and implemented, the imagination of our culture must be reached, and this is best done through art and literature- especially

through myth” (Dickerson and Evans 4). My argument is that stories, especially myths and fairy stories, can powerfully initiate reforms and environmental visions through enchantment. Stories appeal to us by enchanting us, and in appealing to us they impact our worldview; from there it is not a big step to say that the enchantment of stories impacts our worldview.

The truth about the nature of reality which is encased in a story is what makes any story truly compelling, enduring, and resonating. The mythical power of stories comes not from their engaging language, though that does draw the image well and conjure up our imagination more or less fully. Nor does the power come from the interesting plot of the stories, though that does interact for better or worse with our own personal experiences. Instead, the power comes from something behind the language, the plot, and the characters. The truth encased in the story is what attracts us in that story. The story is like the setting for a valuable jewel. Sometimes it just pretends to hold a jewel, but it’s actually a rock. These are bad stories, with no real value. Sometimes, the story holds a valuable jewel, but the setting of the jewel is badly done and so it’s hard to see how beautiful the stone really is. And at other times, the storyteller is a master craftsman, setting the stone in a surrounding of such harmony and elegance that each enhances the other’s beauty. In seeing such a story, we are drawn irresistibly by its beauty, which points to the beauty of the truth it holds. The setting first draws us in, in the first step of enchantment, then as it draws our eyes to the jewel at the center, we get lost in wonder at the multifaceted glory of the stone, each facet of which shines all the brighter once it is pointed out to us. There are superb storytellers who craft the truth and its setting incomparably, and my inspiration for the very

idea of enchantment, Tolkien, is one of those. I will use his writing as an example here. Bradley Birzer, in his book *J.R.R. Tolkien's Sanctifying Myth* says that, “[Tolkien’s] mythologizing of the world...increased our ability to see the beauty and sacramentality of creation. It also allowed ideas and loves to transcend time and space” (23). Not only do we see great truths so powerfully in his stories, these truths are preserved in our hearts. The knowledge we acquire from reading his stories are not forgotten once we finish reading the stories, but remain with us after, possibly (hopefully) forever. The knowledge and the stories transcend time. The truths are also not constrained to remain in the world of the stories, either. They apply to us in our own world and to the characters in other imaginative worlds, thus transcending space as well. Dickerson and Evans say about Tolkien’s writing: “In Middle-Earth, it is legend that helps Theoden better understand the “marvel of the trees” and the ways of the earth outside the confines of Rohan. So too in our world, the works of J.R.R. Tolkien [and we might say the works of all great mythologers] help us better understand the reality of nature in the wider world outside our own small domain” (257). The writers then remind us of the words of Tolkien himself which I have quoted before (Tolkien 60), where he claims that fairy-stories first exposed him to the wonder of the mundane elements of his own world. Thus by serving as such incomparable conveyors of truth through their general appeal, palatability of discovering deep truths, and beauty of the world in which that truth is shown, stories serve as the best methods of education.

The question remains, however, how do stories (as methods of enchantment) convey specifically environmental education? Let us return to the quote above about Tolkien’s mythologizing. The quote states: “[Tolkien’s] mythologizing of the

world...increased our ability to see the beauty and sacramentality of creation. It also allowed ideas and loves to transcend time and space” (Birzer 23). What is mythologized? The world is, specifically nature. All the fairy tales involve natural elements. And when we write stories with nature in them, especially good stories, then nature is given an enchanted tint. People will start to see enchanted nature through the lens of the stories. But this reason can be further narrowed. The Birzer quote states that myth increases our ability to see specifically “creation,” or in other words the natural world. Nature in particular is enchanted and enchantable because it is so spectacularly outside of us and uniquely created. Stories are sub-created, and no student is greater than his master, thus our words and the worlds they sub-create cannot be more beautiful than the natural world they imitate. Nature herself is the finest and most direct doorway to enchantment, as I discussed near the end of Part 2, both because the immense beauty of nature so quickly shocks us into wonder and enchantment and because it is found in our own world. We do not need to take the step of translating the nature in stories to our world and then finding it enchanted in our world. Nature is all around us, and the stories tap into those surroundings in order to more powerfully enchant us. We are enchanted by the familiarly beautiful, less so by the outlandishly beautiful. As Dickerson and Evans say:

[A]s soon as he crosses the threshold [of Tom’s and Goldberry’s house], Frodo understands the joy “hidden in the songs we heard” – a joy that is a celebration of the miracles of the natural world, the ordinary created world that is extraordinary in its purpose and beauty. Again, this is a contrast of commingled worlds: the ordinary and the extraordinary, the mythic and the natural. Should we be surprised? As we noted earlier, Tolkien associated myth and fantasy with the power to show us the luminous, spiritual, sacred, and transcendent in nature and in the everyday environments of our quotidian world. (Dickerson and Evans 161)

Myths, fantasies, and the best stories educate us not by luring us into another world and trapping our senses there. In fact, it is quite the opposite. These stories show us another world in order to provide a spotlight, a gorgeous setting, for the truth we are meant to discover in our own world. They educate us about the natural world through beauty, through “beauty that is an enchantment” (Tolkien 3).

### Science

The last method I will discuss of bringing enchantment into our lives is through science. Some recent science methodology seems to be moving away from the post-Enlightenment, modern method. This modern method was highly mechanistic, viewing every organism and system as a machine. It was also extremely materialist, only endorsing the veracity of physical, experimental data. Psychological phenomena, for instance, was only allowed if it was offered in a materialist explanation. Furthermore, this method did not allow much, if any, space for the personal distinctiveness of each scientist. In fact, any possible variables from differing interpretations or observational techniques, etc. were minimized. We have begun to move away from these ideas recently. Enchantment can assist in bringing the person and a robust worldview back into the practice of science. Firstly, enchantment does this because science is, like enchantment, a robustly human activity. And secondly, the act of scientific discovery can involve the all the same wonder and joy of enchantment.

To begin with, science can interact intimately with imagination, as I mentioned in the questioning and imagination section. Science often utilizes a rational imagination. This

means that what imagination discovers is some kind of rationality in nature. Namely, we acknowledge the possibility of bridging this gap between the subjective human mind and the truth of the world that mind is perceiving. We bridge the gap through discovering and then committing to a rationally discovered theory, in other words, to theoretical knowledge. According to Polanyi, “We accept it [a theory which we acclaim as rational in itself] in the hope of making contact with reality; so that, being really true, our theory may yet show forth its truth” (5) into the future, with further observations and discoveries. The rational process often begins with sensual information (or empirical studies, etc.), imagining how that information works together, what patterns it makes. However, that is not the end. The final step is to then trust, to make a leap, that the discovery our imagination has made is reflected in reality.

There are three components to making discoveries within the method of science. The first is rationality. The second is creative imagination. And the third is an intellectual passion. We begin with reason. For example, a scientist might use his empirical abilities to make observations about a certain ecological system. He might notice population numbers of different species, the flowering times of different plants, and the weather throughout the year, for instance. His reason understands these facts. From there, he involves his creative imagination. This step is the proposition or discovery of new patterns among the facts. As Polanyi puts it, “[D]iscovery is creative, in the sense that it is not to be achieved by the diligent performance of any previously known and specifiable procedure” (143). To continue our example, the scientist might come up with a hypothesis that flowering times are dependent on the amount of rainfall, and that different animal species time their



reproduction to allow for maximum plant (food) availability. The scientist then uses his or her rational capacity and imagination in conjunction to test and discover whether this hypothesis is correct, and to adjust it if it is not correct. Lastly, the passionate quality of science enters this process in a couple different ways. First, it serves to inspire the scientist to be interested in his studies in the first place. We will discuss this role of passion later in this section. Second, there is a type of intellectual passion which binds the person of the science to commit to his discovery. We can call this, as Polanyi does, personal knowledge. “[P]ersonal knowledge in science is not made but discovered, and as such it claims to establish contact with reality beyond the clues on which it relies. It commits us, passionately and far beyond our comprehension, to a vision of reality....For we live in it as in the garment of our own skin...” (Polanyi 64). Intellectual passion hearkens back to the sub-creation of an artist. The artist cares about his work and, unless he is a trickster, he wishes to evoke a belief in his work and in the truth that work portrays. “The appreciation of scientific value merges here into the capacity for discovering it; even as the artist’s sensibility merges into his creative powers. Such is the *heuristic* function of scientific passion” (Polanyi 143). The scientist has this same passion for the discoveries that he makes, and his passion is part of the incitement to make new discoveries about reality.

The question at this point is how enchantment interacts with this practice of science, specifically, with the three components: rationality, creative imagination, and intellectual passion. In the first place, scientific practice is often a combination of rationality and emotion. When it is, science, like enchantment, involves the entirety of the human person. Second, science tends to be restless and wondering; it goes through the

three kinds of wonder which lead to enchantment. Here it is also directed toward the truth. And last, science is usually enjoyed by those who devote themselves to studying it. The passionate wonder of the scientist responding to beauty is a possible method of enjoying the natural world.

Enchantment, as I said above, is deeply embedded in physical experience. It is the interaction of the physical world and the transcendent one. Science is commonly characterized as highly physical (evidence its materialistic tendencies). Science begins in the physical world, works with physical objects and phenomena. But it is also a highly rational practice. It is the mind of the scientist which proposes theories and makes new discoveries. Furthermore, science is purposely directed toward discovering truth. Scientists want to know what is real, to understand reality. This desire can bring them to an interaction with the transcendent world. If we consider the act of science further, we see also that the acceptance of scientific theories, of claims about the world around us, usually include an acceptance of intangible, non-physical claims. As Polanyi said, we “commit” ourselves to “a vision of reality”. “It is not merely a scientific idealization but the formalization of an aesthetic ideal, closely akin to that deeper and never rigidly definable sensibility by which the domains of art and art-criticism are governed” (Polanyi 48). This passionate commitment a scientist can have to a theory does not belong solely in the physical world; it is a leap toward an understanding of transcendent truth. Therefore both our physical senses and our non-physical emotions usually enter into the practice of science.

As a partly emotional experience, science can often begin with wonder, the same place where enchantment begins. It is easy to say that science begins in questioning wonder, but it can also begin in surprise. In this possible beginning of science, the scientist begins his study in response to beauty. This is, in a very clear way, the beauty which leads to an understanding of the truth. Polanyi makes this claim as well: “[O]ur claim [is] that the intellectual beauty of a theory is a token of its contact with reality” (145). The natural world draws us deeper and deeper into it, and after enough time spent within it, we will begin to understand it better. We can even fall in love with nature. This is the kind of passion which I mentioned earlier. The beauty of the natural world is one of the doorways which can draw a scientist into study of that world. Even if the passion is highly intellectual, the scientist cares about the studies he chooses to pursue. From there, science includes wonder through questioning and a love for finding the answer, which can lead to awe at finding the answer. The scientist, I would claim, is continually amazed by the fascinating intricacies of the world into which he dives. And finally, the scientist’s awe also involves joy at discovering his answer, because the scientist cares so deeply about the world he has fallen in love with and about this answer he has sought with such passion. The fact that the discovery requires so much intellectual passion makes it easy to respond with exuberant joy. And scientists often do respond with joy. As Polanyi says about scientific theories, “We cannot truly account for our acceptance of such theories without endorsing our acknowledgement of a beauty that exhilarates and a profundity that entrances us” (15).

In the end, science is a perfect possible medium for enchantment because it is restless and constantly searching for more. Science is relentlessly looking at and into the natural world. As long as the scientist allows himself to look at his studies with eyes of wonder, he will quickly discover that this whole beautiful world is truly a land of enchantment, with wonder and joy meeting him at every turn, every glance, every breath imbuing the enchanted world around him.

## Conclusion

Enchantment is a spell, that powerful spell which can lift the veil between the physical world and the transcendent world. A spell is often considered a bad thing, as something binding, limiting, or covering. But there are different kinds of spells, some of which loosen and enlighten instead of bind and hide. Enchantment is a loosening and enlightening spell. It affects how we see the world because it shows us the wonder in the world. The beauty, truth, and goodness of the world are drawn into the light through an attitude of wonder and joy. Kreeft's book about discovering the transcendent world is called *Doors in the Walls of the World*. Enchantment is a spell which can open those doors, the doors we have put up between the physical and transcendent worlds. And as we have seen, opening the doors can affect many different aspects of our life, from education to environmental action to the practice of science.

As I began this thesis with a quote from Chesterton, I will end with another insight from him: "The ordinary man has always been sane because the ordinary man has always been a mystic. He has permitted the twilight. He has always had one foot in earth and the other in fairyland" (*Orthodoxy* 48). Humans exist in both worlds: let us begin to fully live in both worlds. Let us wander through those fields which call to our emotions, which excite our imaginations, and, most especially, which fill us with unspeakable joy. The more we follow these adventures, the more we will find, unexpectedly, ways to break down the wall between the worlds. Eventually, as we continue to break down the wall; that wall will fall down completely and we will realize the fulness of the transcendence for which we were made.

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