

8-2017

Claiming Primordial Landscapes: Science and Imperialism in Turn-of-the-Century Science Fiction Novels

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CLAIMING PRIMORDIAL LANDSCAPES: SCIENCE AND IMPERIALISM IN
TURN-OF-THE-CENTURY SCIENCE FICTION NOVELS

By

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THESIS

Submitted to

Northern Michigan University

In partial fulfillment of the requirements

For the degree of

MASTER OF ARTS

Office of Graduate Education and Research

July 2017

SIGNATURE APPROVAL FORM

CLAIMING PRIMORDIAL LANDSCAPES: SCIENCE AND IMPERIALISM IN
TURN-OF-THE-CENTURY SCIENCE FICTION NOVELS

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ABSTRACT

CLAIMING PRIMORDIAL LANDSCAPES: SCIENCE AND IMPERIALISM IN TURN-OF-THE-CENTURY SCIENCE FICTION NOVELS

By

Kaitlin S. Andersen

This thesis argues that the relationship between nineteenth-century geology and paleontology play a role in imperial ambitions of countries and characters in science fiction novels. Two novels are analyzed— *Journey to the Centre of the Earth* by Jules Verne and *The Lost World* by Sir Arthur Conan Doyle—using the theories of Edward Said and Michel Foucault. I pay specific attention to the idea of knowledge serving as power in imperial exploration, and how the control of knowledge allows for the empowerment of imperialist characters in the texts.

By reading the novels as imperial narratives, I have found that the scientific expeditions at the heart of each novel rely on the legitimating effects of science as well as scientific methodology to successfully further the personal and social aims of the protagonists. Systems of thought such as natural theology justify not only the right of the characters to explore other nations, but also the right of the explorers to use the colonized country's resources for their own personal gain. The methodology of science— particularly the recording of data to support claims and the ability to replicate results— ensure the success of the protagonists in a way physical violence cannot.

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August 2017

DEDICATION

This thesis is dedicated to my family: lost and found, bound by blood and choice.

ACKNOWLEDGMENTS

The author wishes to thank her thesis director, Dr. Caroline Krzakowski, for her endless patience, support, and determination; Dr. Jaspal Singh and Dr. Russell Prather, for their advice and for reading the early drafts; the staff of the Olson Library, for their help in obtaining resources; Elise Tillema, for her friendship and endurance; her mother Kimberly Andersen, her aunt Gayla Bonner, and grandmothers Jeannette Andersen and Mary Witheridge, without whom none of this would have been possible; and to M, who orders all things well.

This thesis follows the format prescribed by the *MLA Style Manual* and the English Department.

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INTRODUCTION

In this thesis, I read Jules Verne's *Journey to the Centre of the Earth* (1864) and Sir Arthur Conan Doyle's *The Lost World* (1912) through a post-colonial lens in order to shed light on the intertwined nature of Victorian-era science and imperialism. In particular, I examine the importance of nineteenth-century scientific theory and methodology to the positive completion of the expeditions at the heart of each novel; without nineteenth-century science, the imperial ambitions of the protagonists of Verne and Doyle's works would be thwarted. The thesis is divided into two main sections: in the first, I focus on the Lidenbrock expedition of *Journey to the Centre of the Earth*, whereas the second section focuses on the Challenger expedition of *The Lost World*. Each chapter will investigate how the characters use the scientific method and theory to justify and support the imperial ambitions of the protagonists. In Victorian adventure novels such as those of Doyle and Verne, the term "success" encompasses the geographic and cultural ambitions of imperialism. In this project, although I speak of the expeditions in the two novels as "successful," and it is vital to outline the criteria of success in the context of imperialism. The definition of success in this context relates to the expedition eventually benefitting its empire of origin by expanding the European corpus of scientific knowledge. To be successful, the two expeditions in question must reach the uncharted territory they intend to explore, and there gather data on their surroundings and possible

theories to explain observed phenomena. This objective achieved, the group then must return to the German and English empires they originate from in order to present their findings. They must, in essence, bring back reliable proof for the scrutiny of others.

The novels *Journey to the Centre of the Earth* and *The Lost World* both focus on a scientific expedition outward bound from their Empire of origin, comprised of a mixture of scientists and more traditional nineteenth-century hero figures. The expeditions are dedicated to the process of discovery and the accumulation of evidence for imperial authorities: rather than seek material riches, the characters covet knowledge about the underexplored landscape created by the authors.

Journey to the Centre of the Earth follows the Lidenbrock expedition, comprised of Professor Otto Lidenbrock, his nephew Axel Lidenbrock, and their guide Hans Belke. Their journey takes them from the metropolitan heart of Germany to the rural world of colonial Iceland, and beneath it into a bizarre subterranean world filled with prehistoric life long thought dead. Verne's fantastic fictional world is based on scientific theories, as it adheres to Humphry Davy's theory of chemical oxidization in the center of the earth. Davy, the English geologist, theorized in his study of geology that such a world allows for human exploration, while a world with a molten core does not. Professor Lidenbrock is determined to confirm the account of Verne's invented explorer Arne Saknussemm, and win himself lasting renown by reporting on his findings.

Professor Challenger of *The Lost World* shares a similar ambition for public recognition within the scientific communities of Europe when beginning his second expedition to South America. Upon his return from his first expedition with news of prehistoric life on a remote plateau, Challenger is mocked in London's scientific

community and vows to return with proof that his fellow scientists will accept. He goes forth with his rival Professor Summerlee, the colonial hero Lord Roxton, and the young journalist who serves as the book's narrator, Ed Malone. Although the explorers have violent encounters with the animals and indigenous peoples of the plateau (some of whom they slaughter), the novel represents their success as the cataloguing of their experiences and the proof they bring back to London, the seat of their Empire.

In recent years, scholars of nineteenth-century fiction such as Peter Childs, Allan Debus, and Amy Wong, have begun to examine imperialism and the use and representation of science in Doyle and Verne's novels. While I share these scholars' focus on imperialism and science, my study also seeks to explain how imperialism and science influence one another. My project examines this relationship by discussing how the characters of Doyle and Verne's novels explore, record, and report their encounters with "savage" peoples and landscapes in order to facilitate their empire's exploitation of the land, either intellectually or geographically.

When assessing the influence of imperialism in modernist adventure novels, Peter Childs acknowledges the power of scientific knowledge in the arsenal of the Empire:

If the spirit and speculation of imperial hubris is most evident in the science fiction romances that began to appear in the second half of the nineteenth century, in which almost every conceivable space is penetrated by European explorers in the work of Jules Verne and H.G. Wells, the literary Empire is many ways best represented in popular fiction, where the *Boys Own* spirit fuses a Victorian manly ideal with post-Enlightenment scientific claims to discover and cover the world.

Alongside and after military suppression, knowledge is the principal weapon used by imperialism in its attempts to control and silence the colonized. (Childs 6)

In his analysis of Doyle's *The Lost World* Childs argues that knowledge is used against the colonized by the colonizers. However, he does not explore precisely how knowledge gained via the scientific method, is used by the English Empire to bring proof of prehistoric life back to London's scientific community. Rather, he examines the role of imperial violence in the Challenger expedition, and how the adventure into South America to find the titular lost world is a journey back through time to a more primitive state. In contrast to Child's, my reading concludes that the protagonists of *The Lost World* always remain modern English citizens even when in the jungles of Brazil, and the author shows how the characters adhering to a scientifically-driven state in the face of the "primitive". This allows for the portrayal of the Europeans as "civilized" and thus "superior" to the native peoples portrayed in the novel.

In contrast to Child's focus on the imperial activities of the characters of *The Lost World*, Allen Debus focuses on the scientific theories underpinning Jules Verne's works. Specifically, he examines the interconnectivity of geology, paleontology, and paleoanthropology in *Journey to the Centre of the Earth*, informing readers of how Verne's own studies of contemporary discoveries influenced the plot of the novel.

Wielding the 'fact' of Saknussem's prior journey as an absolute, Verne repeatedly makes reference to Davy's scientific ideas, peppering his name through passages of the novel to allay Axel's fears about being boiled alive. Who is right? Shall we believe Lidenbrock, who rests his case on Davy's good name, or should we instead trust Axel's intuition, founded on the premise of a central

fire, a notion much older than Davy's theory? As readers, we are left with an impression that on the grounds of both scientific theory and practical experience this incredible journey should indeed be possible. (Debus 406)

Debus reveals to readers that Verne's repeated reference to the geological theories of Davy, as well as the theories of the geologist George Lyell, the anatomist Georges Cuvier, and the paleontologist Boucher de Perthes serve a purpose beyond the education of his audience. Instead, these references to contemporary scientists, theories, and discoveries creates a narrative world that is believable, and realistic enough to allow the immersion of the reader.

In addition to analyzing Verne's use of geology in the novel, Debus also claims that Verne uses *Journey to the Centre of the Earth* as a space to confront his own resistance to the post-Darwinian of humanity's origins. In his book *The Descent of Man* (1871), Darwin refined some of the ideas concerning humanity's development that he touched upon in *The Origin of Species*:

The following proposition seems to me a high degree probable—namely, that any animal whatever, endowed with well-marked social instincts, the parental and filial affections here included, would inevitably require a moral sense or conscience, as soon as its intellectual powers had become as well or nearly as well developed, as in man. (471-72)

Darwin destroys the notion that humans alone are able to possess moral reasoning, thus eliminating the defining characteristic used by Victorian spiritualists and naturalists to elevate humanity over other animals.

Amy Wong also reads *The Lost World* through a post-colonial viewpoint: like Peter Childs, she assesses the ways in which the novel uses established generic tropes of imperial romances to enhance the narrative. Discussing the historical context informing the imperial nature of the Challenger expedition, Wong examines Doyle's use of journalistic reporting to frame his story for readers. Wong argues that the narrator Ed Malone is "Doyle's ideal, modern journalist: a figure that yokes together the imaginative radicalism of the writer of romance and the rigorous adherence to truth associated with the new professional journalist," (Wong 70). Ed Malone presents the facts of his journey with the Challenger expedition with maintaining enough humanity to allow for greater audience investment. Doyle was concerned that readers were too jaded by scientific discovery and reliant on the presentation of newspapers to properly interact with news, and in Malone demonstrated how journalism ought of be executed: "...within the narrative, Malone models a form of literary journalism that resolves the problem of a London audience whose lack of imaginative judgment prevents the proper perception of truth" (70). Like Axel Lidenbrock, Ed Mallone is the interpreter of the fantastic unknown for his imperial audience, allowing them to participate vicariously in the colonization process. While the narrator Ed Malone is not a scientist, he is still a professional with a code dedicated to finding and presenting the facts about international affairs to his audience. Wong argues that Doyle wrote Malone to be his ideal journalist, practicing his ideal form of journalism that married facts with human details. This preoccupation with collecting and presenting facts in an acceptable manner mirrors the scientists' use of the scientific method to analyze their surroundings and present their findings.

Whereas Peter Childs and Amy Wong focus on the imperial nature of Doyle's novel, they do so without examining the role that science plays in the imperial project. Allen Debus does not delve into the implications of the Lidenbrock expedition's imperialist aims, but analyzes how the author and the characters make use of contemporary scientific theories and discoveries in the novel. These scholars provide nuanced—but segregated—examinations of science and imperialism in the works of Verne and Doyle. This project extends the work of these scholars in the combination of imperial agenda and the representation of science. Scientific exploration and discovery has long been supported by imperial regimes looking to explore the world and expand their influence as in the case of the famous voyage of the HMS *Beagle* to the shores of South America:

South America was open for trade, and knowledge of the continent's waterways was essential for British merchants to compete with other Europeans...After he took over [Captain] FitzRoy spent a great deal of time trying to recover a small boat that had been stolen by some of the native Fuegians...FitzRoy took several of their children hostage. They were to be educated in England and returned as missionaries... (Switek 47)

While the imperial regimes of the past and present use science to reframe the world according to what resources can be exploited for the good of the Empire. Science, like military power, is vital to the colonization process, for science enables the colonizing force to reorient the landscape in their favor, which in turn facilitates the subjugation of native populations and the reallocation of resources. It is not merely technology that

allows for imperial success, but the intellectual processes that comprise the many disciplines of scientific research.

The pioneering works of post-colonial theorists such as Edward Said provide a method of reading late nineteenth-century adventure novels as cultural. Said argues that imperialism is more than mere geographical aggression for economic and strategic benefits; rather, it is ideologically motivated and supported. In *Culture and Imperialism* he describes the superior-inferior binary at work within imperial and colonial endeavors:

Neither imperialism nor colonialism is a simple act of accumulation and acquisition. Both are supported and perhaps even impelled by impressive ideological formations that include notions that certain territories and people *require* and beseech domination, as well as forms of knowledge affiliated with domination: the vocabulary of classic nineteenth-century imperial culture is plentiful with words and concepts like “inferior” or “subject races,” “subordinate peoples,” “dependency,” “expansion,” and “authority.” Out of the imperial experience, notions about culture were clarified, reinforced, criticized, or rejected. (Said 9)

In this passage Said makes it clear that imperial nations privileged their own cultures over the cultures of the nations they colonized, reaffirming their own superiority by contrasting themselves against the subjugated. The behavior and approach to science demonstrated by the characters in *Journey to the Centre of the Earth* and *The Lost World* is the embodiment, or, to borrow Said’s own term, an ideological formation of this concept of cultural superiority. Verne’s Professor Lidenbrock and Axel Lidenbrock do not venture beneath the surface of the Earth to uncover wealth or establish a kingdom, but

rather because they feel it is their right as enlightened Europeans to explore the interior before anyone else, for they are best equipped to do so due to their concept of their “cultural superiority”.

The adventure narratives of science fiction novels are populated by protagonists who use the lands they explore for their own ends, either as a physical or moral proving ground or as a battery of exploitable resources. The adventure at the heart of *Journey to the Centre of the Earth* is born from Professor Lidenbrock’s desire to cement his place in history as the man who discovered what is contained in the Earth’s heart. Rather than riches or military power, the professor seeks academic recognition and renown. That there are already Icelandic scholars, such as the natural science master of Reykjavik’s school Mr. Fridriksson, interested in the features of their land (and what might be beneath it) does not concern the protagonists of Verne’s novel. The Icelandic people are poor and stolid to the eyes of the visiting Germans, not at all educated enough to undertake the task of exploring and claiming what they consider to be the uncharted world.

The concept of European cultural superiority as defined by Said is mirrored in the plot of *The Lost World*, where the native peoples of Brazil are not represented as brave enough nor brilliant enough to discover the titular lost world atop a local plateau. The native Brazilians are described as childish and cowardly in the face of the dangers presented on the plateau, and in need of European help in order to survive. The task of discovery and categorization falls to Professor Challenger and his party of expert Englishmen. The rigid rationality of science is the culture carried by the novel’s protagonists into untamed lands; the entire journey of the Challenger expedition mirrors the narrative of scientific research. The group seeks to prove Challenger’s hypothesis

(that prehistoric animals are alive on the plateau), and they seek to gain evidence to support his claim and in time allow others to follow them and replicate their findings. This stage of the scientific process, replication, will allow other explorers to continue the work of exploring, mapping, and controlling the uncharted realm of the plateau and its surroundings.

Despite their apparent support for imperial exploration, *Journey to the Centre of the Earth* and *The Lost World* were not written as pieces of imperial propaganda. In his famous novels *20,000 Leagues Under the Sea* (1870) and *The Mysterious Island* (1875), Verne openly criticized the cruelties of the British imperial regime at work in India, condemning their subjugation of the native people and the violence used to put down the Sepoy Rebellion of 1857. However, neither Verne nor Doyle openly criticizes the act of imperial exploration and acquisition, and the right of the protagonists to engage in a literal and symbolic intrusion into the lands of others is never questioned. The authors accept the fact that Europeans have tremendous power over nations deemed inferior, and that their protagonists are not doing anything but what is expected of European men. The institutions of imperialism are so prevalent in the cultures of the authors that their works cannot be entirely alienated from them.

Rather than attempting to banish the idea of imperial ambition from nineteenth-century science fiction, one should incorporate it into one's interpretation of the material. In *Culture and Imperialism* Said argues that most audiences do not wish to acknowledge the intersection of culture and imperialism. There is concerted effort to separate the work of authors from the context of imperial endeavor, but it is impossible to do so. Although it is tempting to separate the imperial aspects of an author's writing into a different

compartment of the mind, Said claims that it is more beneficial to the understanding of an author to connect their works “with the imperial process of which they were manifestly and unconcealedly a part” (xiv). In this thesis I strive to make that connection between the fictitious worlds of Doyle and Verne and the imperial reality in which they lived.

In order to understand the role that science plays in the imperial adventures penned by Verne and Doyle, it is vital to discuss the scientific world that both of these authors interacted with. Both *Journey to the Centre of the Earth* and *The Lost World* deal not just with unexplored territories but also prehistoric animals and sentient humanoids, closely related to humanity yet still alien. These encounters with the impossible explore the wonder and tension invoked by the rapidly changing sciences of paleontology and geology, as well as the emergence of Darwin’s theory of evolution. Prior to these changes in the nineteenth century, the scientific mindset known as natural theology dominated European thought, being especially prominent in England. George Levine describes natural theology as “the scientific view that Darwinism displaced” (24), indicating that the position of faith in European culture was in some ways imperiled by the advances of science. He goes on to elaborate that “it accurately indicates that English science was intimately connected with its religion, and that its ‘themata’ were frequently religious assumptions—as, for instance, that the universe is unified, coherent, and rational. Religions and science alike were concerned to describe a cosmos all of whose phenomena made sense, manifested intelligence and design” (24). The idea of nature being the embodiment of the Christian god’s will held considerable sway over natural science in Europe, and it helped bolster the sense of human exceptionalism in nature prevalent at the time.

William Paley wrote a seminal text on this view of science, entitled *Natural Theology*, in 1802. In it, Paley claims that the existence of a divine creator can be proven through the systematic observation of nature. Paley's text uses an analogy of a stone and a watch found in a field to serve as a framing device for his argument: the stone, if found alone, does not immediately indicate a source, while the watch, does indicate a source. Paley explains:

This mechanism being observed—it requires indeed an examination of the instrument, and perhaps some previous knowledge of the subject, to perceive and understand it; but being once, as we have said, observed and understood—the interference we think is inevitable, that the watch must have had a maker—that there must have existed, at some time and at some place or other, an artificer or artificers who formed it for the purpose which we find it actually to answer, who completely comprehended its construction designed its use. (4)

The watch of the analogy, having many parts that work in tandem for a specific purpose, indicates the presence of a Deity actively working to shape the world. Natural theology operates on this concept of divine intervention, with the world following an intentional order.

During the writing of *Journey to the Centre of the Earth* in 1864, the sciences of the nineteenth century were challenging the hold that theology had on the Western worldview. The works of Georges Cuvier, Charles Lyell, and Charles Darwin were providing evidence that the world was not only far older than the Biblical age of six thousand years, but also that many species of animals had come and gone long before humankind's emergence on earth. The publication of Darwin's *Origin of Species* in 1859

and the articulation of evolutionary theory in England shook the Western concept of human superiority. Specifically, the concept of natural selection and the role of chance in evolution challenged the tenets of the natural theology movement, namely by removing the influence of the Divine from the creation and perpetuation of life.

Jules Verne's novel reflects the scientific and spiritual tension of the time; Axel and Professor Lidenbrock take careful note of the stratification of the rock in the tunnels they use to enter the underground, reflecting that they are moving backward in time as they descend into the Earth. They recognize, too, that the complexity of life decreases as they move downward or increases when they make a wrong turn that leads them back to the surface. Axel notices that "It was becoming obvious that we were climbing the ladder of animal life on which man occupies the highest rung" (Verne 121), which is a telling observation of the narrator's views on humanity's place in the world. His view of all life as a ladder, hierarchical and progressive in its nature, with humankind positions at its very top, is closely aligned with the worldview put forward by natural theology; namely, that the world is purposefully arranged in a progressive manner, with steady improvement over time.

This referral to life as a ladder also reveals the presence of a Medieval European concept of life in Verne's writing, known as the Great Chain of Being. According to Arthur Lovejoy, the Great Chain of Being has its origins in the writings of Plato and is refined by Aristotle and the Neoplatonists; it is a system of organization that accounted for all living things, from plant to human, and their ranking beneath God. Lovejoy describes the Chain as an enduring hierarchy:

The result was the conception of the plan and structure of the world, which, through the Middle Ages and down to the late eighteenth century, many philosophers, most men of science, and indeed, most educated men, were to accept without question—the conception of the universe as a “Great Chain of Being” composed of an immense, or— by the strict but seldom rigorously applied logic of the principle of continuity—of an infinite, number of links ranging in hierarchical order from the meagerest kind of existents, which barely escape nonexistence, through “every possible” grade up to *ens perfectissimum*—or, in a somewhat more orthodox version, to the highest possible kind of creature between which and the Absolute Being the disparity was assumed to be infinite—every one of them differing from that immediately above and that immediately below it by the “least possible” degree of difference. (Lovejoy 59)

This passage illustrates the interconnected and hierarchal nature of the Chain, where all things high and low come from the Absolute Being. Humanity’s place in this chain, established at the beginning of the eighteenth century, is in the middle, between the lowest orders and the divine perfection of a Judeo-Christian monotheistic divinity. According to this theory, although humankind is deeply flawed, it is still capable of reason, still in possession of a soul, and thus has prominence over the lesser entities of the chain.

In *Journey to the Centre of the Earth* and *The Lost World* there is no discussion of a Divine hand in the ordering of the world, and yet that order is still clearly upheld within the universes of the texts when the characters assert their right of conquest over the landscape. Humankind is superior in the ordering of life, the only species capable of

reason and thus the only species able to organize and control the world; this superiority affords humanity a position of stewardship over other organisms, making use of the nonhuman animals and landscape as they will. That humankind has this right is unquestioned, and all obstacles of the natural world are either appropriated to further the cause of humanity or eliminated.

The concept of the Great Chain and, later, natural theology influence the scientific processes utilized by the Challenger and Lidenbrock expeditions during their journeys. Though post-Enlightenment science is used to systematically observe, analyze, organize, and translate the extraordinary in both *Journey to the Centre of the Earth* and *The Lost World*, it is the remnant of the philosophy surrounding the Great Chain of Being that informs how the protagonists relate to their surroundings.

Chapter One: Scientific Methodology and Theory in *Journey to the Centre of the Earth*

This chapter will examine how the use of nineteenth-century geology and paleontology and the gathering of proof vindicates the imperial ambitions of the protagonists in Jules Verne's *Journey to the Centre of the Earth*. Verne's novel is an adventure narrative, filled with daring mountain expeditions and exploratory journeys into the unknown spaces of the Earth. It is a novel concerned with scholarship and scientific observation, peopled with scientists and teachers. The world Verne shows his readers is firmly rooted in the science of his time, and through the power of science the protagonists of the novel are able to succeed in their exploratory expedition of the Earth's interior. Without the legitimizing influence of science's systematic methodology, the protagonists cannot gather acceptable proof to bring back to their empire.

The Lidenbrock expedition—consisting of Professor Otto Lidenbrock, narrator Axel Lidenbrock, and Hans Belke—is a microcosm of the larger European imperial system at work, in 1864, at the time of the novel's publication. The three main characters are European explorers bent on reaching an uncharted area of the Earth, for their own personal glory and for the glory of Germany's scientific circles. They are an imperial force at work under the earth, and the success of their mission—the safe return to the surface with proof of their claims—would not be possible without the power of scientific

observation and documentation. Axel Lidenbrock is the narrator of *Journey to the Centre of the Earth*, a witness who embodies the plot for the audience in the form of his journal. Axel is a student of geology and mineralogy, and a reluctant adventurer. Describing himself as possessing a “rather undecided character” (Verne 7), Axel is content to stay in Germany and give order to his uncle's vast collection of mineral specimens. Axel is an untried academic, a young man who has not yet performed a great service deserving of recognition by his European society.

Axel's journal serves a twofold role in the novel, allowing the audience to experience the adventure vicariously through his perspective, while simultaneously compiling a verbal map of the expedition's journey for future explorers. The expedition as a narrative plot in *Journey to the Centre of the Earth* would be stymied if not for Axel's role as narrator and record-keeper. Though he is reluctant to leave the safety of home, Axel triggers the events of the plot by deciphering the ancient Icelandic manuscript written by the fictional alchemist Arne Saknussemm. His hidden worth is proven by this breakthrough, for he has discovered the truth of a document that has thwarted his older, more experienced uncle's attempts at translation. Axel's efforts reveal the note's contents, which direct readers to the entrance to the earth's center via the volcano Snæfell. Axel's uncle Otto Lidenbrock is galvanized by this discovery, and immediately begins planning an expedition to Iceland to determine the veracity of the document's claims. Axel follows with great reluctance, fearing death at every turn. He serves as the expedition's record keeper for the duration of the journey, recording the features of their physical surroundings, the distance traveled, the conditions found in the subterranean world, and wildlife seen.

Unlike Axel, Professor Otto Lidenbrock embodies both the power of knowledge and the force of greed in imperial adventures. The professor is the driving force behind the Lidenbrock expedition, serving as both navigator and captain of the enterprise. Obsessed with the promise of an uncharted underground world, determined to earn glory for himself and his chosen field, Professor Lidenbrock plunges into the adventure without care for the dangers posed or his nephew's obvious discomfort. He dismisses Axel's understandable fears of incineration by the heat of the planet's core with a contrasting theory of earth's interior from the English chemist and geologist Humphrey Davy. The theory, discarded by Humphrey himself in the 1820s, posited that the earth's interior is heated not by a molten core, but rather by the chemical reactions of potassium and sodium.

“You are mistaken there,” replied my uncle. “The earth was heated by the combustion of its surface and nothing else. Its surface was composed of a great number of metals such as potassium and sodium, which have the peculiar property of igniting at the mere contact with air and water. These metals caught fire when the atmospheric vapors fell in the form of rain on the soil; and little by little, when the waters penetrated into the fissures of the earth's crust, they started fresh fires together with explosions and eruptions. (Verne 40)

This concept of the Earth's center is far less hazardous to human adventurers than the theory of a central fire. Professor Lidenbrock's trust in this theory proves correct as the novel progresses, and the characters are able to interact with the interior of the world. Verne's use of an outdated scientific theory alongside more modern ones continues to push the group forward even when faced with massive setbacks in the underground

Professor Lidenbrock, although dedicated to geology, is not interested in discovery for its own sake. He is hungry for recognition in German scientific communities, and his desire for fame serves as his primary motivation for traveling into the depths of the Earth to confirm Saknussem's account. The motive for the Lidenbrock expedition is revealed in the early stages of the novel, while the characters are still in Germany. After Axel has deciphered the ancient manuscript written by Arne Saknussem and shows the secret to his uncle, Professor Lidenbrock immediately begins planning to go to Iceland to find the passage into the earth. Magnanimously, he offers to share the glory of the expedition with Axel, an offer he intends to extend to no one else.

“Above all,” my uncle went on, “I insist on absolute secrecy, you understand? I have plenty of envious rivals in the world of science who would be only too eager to undertake this journey, but they mustn't hear about it until we are back.”

“Do you really think,” I asked, “that there are many who would be bold enough to risk it?”

“Of course! Who would hesitate at the thought of winning such fame? If this document were made public, a whole army of geologists would rush to follow in Arne Saknussem's footsteps.” (Verne 35)

This passage serves to highlight Professor Lidenbrock's fears of having the distinction of being the first to confirm Saknussem's claims taken from him. The fear drives him to the point that he is willing to obscure the existence of the coded document from fellow geologists and historians. He is not a scientist selflessly devoted to his field, but rather a

man anxious to earn renown for himself. He intends to use the expedition to the Earth's center to bolster his own reputation and fix his name in history. The discovery of an entire ecosystem and prehistoric animals catapults the Lidenbrock party to immediate celebrity, which Professor Lidenbrock works to defend from critics.

The nineteenth century was a time of great scientific and spiritual upheaval, as scientists began to articulate theories of the earth's development that challenged the intelligent design of natural theology. Scientists such as Charles Darwin and Thomas Huxley were infamous for their theories of evolution, especially when it came to the development of humankind from "lesser" organisms. This conflict between the view of humanity as special or elevated above other animals and the concept of human evolution from a more primal organism are seen in *Journey to the Centre of the Earth*.

Jules Verne engages with the spiritual and scientific tensions prevalent in 1864 following the publication of Darwin's *Origin of Species* in 1859 by introducing the idea that humanity is not alone in its sentience. The revelation begins in an ossuary on the shores of the Lidenbrock Sea, where the Lidenbrocks stumble upon the fossilized (and recent) remains of hundreds of animals, from pterodactyls to mastodons. Most astonishing of all, however, is the discovery of not only a human skull, but of a preserved "Quaternary man." Professor Lidenbrock is so moved at their discovery that he improvises a lecture about the body that he hopes to present at the Johannaem in Germany, labeling the corpse as a contemporary of the mastodon and speculating how such a specimen arrived on the shores of the Lidenbrock Sea. Axel summarizes the question neatly at the end of the chapter: "Had these creatures slipped through a fissure in the earth to the shores of the Lidenbrock Sea when they were already dead? Or had they

lived here, in this subterranean world...being born and dying like the inhabitants of the upper world...Might not some human being, some native of the abyss, still be roaming these desolate shores?" (Verne 215). Axell's narration in this passage betrays a sense of disbelief when contemplating the idea of a new species of humans in the subterranean world, guiding the reaction of the nineteenth-century reader.

The idea of a species of humans native to the Earth's interior is impossible, and clearly raises feelings of discomfort in Axel. This tension between the idea of humanity's uniqueness and the idea of new humans reaches its peak in chapter thirty-nine, "Man Alive," when Axel and Professor Lidenbrock glimpse a humanoid man over twelve feet tall herding mastodons. Axel responds to the sight with disbelief, but acknowledges that "...however sceptical I tried to be, I had to accept the evidence of my eyes" (Verne 218). He once again puts his observational skills to use, recording a description of the stranger for posterity: "...less than a quarter of a mile away, leaning against the trunk of an enormous kauris, stood a human being, a Proteus of those subterranean regions...watching over that great herd of mastodons...This was not something like the fossil creature whose corpse we had found in the ossuary; it was a giant capable of mastering those monsters" (Verne 218). The sight of a living man rather than a skeleton eliminates any doubts the narrator and readers have about the plausibility of human life beneath the earth. The giant is not a jumble of bones that could be misassembled into another creature, but a flesh and blood creature that behaves much in the same way as modern humans.

Axel's description of the giant emphasizes both his similarity to the explorers but also his alien nature. The sight of the giant instills fear in Axel, and he leads his uncle

away from the scene before they can make contact with the shepherd, terminating any future investigation. Where Axel previously stated that he had to accept the input of his senses, he later rejects the sighting of the abyssal human: “Was it a man we saw? No, that is impossible! Our senses were deceived, our eyes did not see what we thought they saw” (Verne 219). The presence of this familiar—yet alien—organism threatens to undermine the place of humanity in the natural theological worldview that dominates Axel’s narration.

Allen Debus indicates this encounter between the protagonists and the giant when he discusses Jules Verne’s resistance to the theories of Charles Darwin concerning human evolution. In his article “Reframing the Science of Jules Verne’s *Journey to the Center of the Earth*,” Debus claims that this encounter with the impossible man constitutes a rare instance of horror in Verne’s writing: “For early post-Darwinian readers of the 1860s, this fantastic confrontation with their own (primeval) ancestors certainly must have represented a harrowing literary experience” (413). The Lidenbrocks spotting the man at his work represents a brief look at the ideas threatening the worldview of natural theology: namely, that humanity does not occupy an unchanging, superior position at the top of the Great Chain of Being, or “the ladder of life,” and that all of nature is not designed by the Divine, but by natural forces such as natural selection. These ideas, prevalent in Europe following the 1859 publication of Charles Darwin’s *Origin of Species*, threaten the privileged, commanding status of humanity in the order of the world. By having Axel reject the primeval shepherd’s existence, Jules Verne himself rejects the mundane origins and uncertain future of humanity.

The hierarchy represented by the “ladder of life” is replicated on smaller scale, within the social dynamics of the Lidenbrock party. There is an overt master/servant relationship between the Lidenbrocks and their guide Hans Bjelke. An Icelandic native without the extensive education of either of his employers, Hans fulfills the role of the hypercompetent servant found so frequently in Verne’s work. Hans shares this role with characters such as Conseil of *20,000 Leagues Under the Sea* and Jean Passepartout of *Around the World in 80 Days*. These characters balance out their scholarly masters, attending to the concrete details of everyday life as the great men dwell on the depths of the ocean or the interior of the earth; a benign classism within Verne’s works, that establishes the order of European society while gently mocking it by showing the helplessness of the upper classes without their servants. Hans is described as physically robust, taciturn, and highly knowledgeable about Iceland’s landscape, which sets up his uses as a guide to the Lidenbrock expedition during their time in Iceland and below the Earth’s surface. He does not speak often, preferring economical action to discussion, and his Danish must be translated for Axel by Professor Lidenbrock. He is a foil to Professor Lidenbrock, the wordless hunter to the professor’s verbose scholar, the muscle in service of the mind. In many ways, his physical prowess is almost as necessary to the venture as the collection of proof, for without him the expedition would have ended in failure and death. Hans rescues his fellow explorers from physical danger, following a storm on the Lidenbrock Sea, manages to salvage enough tools and raw material to enable the group to continue their mission.

The classist dynamic between the Lidenbrocks and Hans mirrors the larger imperial dynamic at work in Iceland. Verne, through Axel, makes only slight references

to the domination of Iceland by Denmark in *Journey to the Centre of the Earth*, and that Hans belongs to a colonized group within Iceland (the native Icelanders) is never addressed at all. The unchallenged status of Danish imperialism implies acceptance by the German narrator, who remarks often on the strange nature of the native Icelanders. There is an acceptance of the imperial order implicit in this passivity, far different from the outright criticism of the British Empire present in Verne's *20,000 Leagues Under the Sea*. Still, the Icelandic people are treated with a measure of dignity not afforded to other oppressed peoples in Verne's canon; they are ethnically and culturally similar enough to the colonizers that they are accepted as kindred minds.

The imperialist agenda of the Lidenbrock party is aided not only by the geological and evolutionary theories of the nineteenth century. The protagonists make use of the scientific method to assess their surroundings, and more importantly gather data for their peers in the scientific circles of Europe. Verne's characters are men of education, not outright military confrontation, and their skillsets revolve around the sciences of geology and mineralogy. Although Professor Lidenbrock insists on bringing weapons on the expedition to the center of the Earth, the Lidenbrock party does not succeed in their goal of exploration through force. Their understanding of the Earth—and their understanding of the limits of their knowledge—are the greatest tools they possess while exploring the unknown interior of the planet. In this novel, as in other Verne novels, the power that enables the protagonists to triumph over adversity is knowledge.

Verne's characters embody Michel Foucault's concept of *savoir*. In his explanation of *savoir*, Michel Foucault discusses the processes involved in medical science and ranks "observation, interrogation, decipherment, recording, and decision"

(182) among the most vital functions of the scientific discourse. These functions are essential in the sciences of geology and paleontology practiced by the Lidenbrock men during the course of their adventure. Of particular importance is the task of observing and recording, which falls to Axel. To observe and make note of one's observations is as powerful as renaming the landscape. In seeing and assessing his surroundings, Axel organizes them into a way that he (and by proxy, his audience) can make sense of and allows him control over an unfamiliar world. This holds true when they are walking down into the earth and passing through the earliest part of the fossil record:

Most of these marbles bore impressions of primitive organisms. Creation had obviously made considerable progress since the previous day. Instead of the rudimentary trilobites, I noticed remains of a more advanced order of creatures, including ganoid fishes and some of those saurian in which paleontologists have detected the earliest reptile forms. The Devonian seas were inhabited by a vast number of creatures of this species, and deposited them in thousands on the newly formed rocks. It was becoming obvious that we were climbing the ladder of animal life on which man occupies the highest rung. (Verne 121)

In this passage, Axel does more than provide his readers with an idea of where the party is in the depths of the Earth, but also reasserts the prominence of humanity in the history of the world. To plunge down toward the center of the planet, they will need to descend the ladder of life that Axel references. As they descend physically, they move backwards in the chronology of earth's history. Even here, in the untamed interior, humankind is still the superior species, described by Axel as occupying the top of the hierarchy of animal

life. This maintenance of human supremacy reassures the readers of the novel in the face of revolutionary changes in the human understanding of Earth's history.

These reassurances of human control become more important as the narrative advances into unfamiliar terrain, for as the adventure becomes more and more outlandish, as the party begins encountering phenomena that no one in Europe would have experience with. In these encounters with the alien landscape, Axell's observations become even more important to the reader's ability to understand the world. When encountering mushroom forests and subterranean seas, the ability to interpret the alien landscapes and animals in a way that the readers can sort into understandable schema is vital to the acceptance of the narration. This is most apparent when Axel describes a violent encounter between a plesiosaurus and an ichthyosaurus; he explains that at first the party is confused by the physical appearance of the animals, mistaking them for a porpoise, a whale, a lizard, and a turtle. The party eventually correctly determines that there are only two animals, though Axel continues to call them monsters in an attempt to convey their alien natures.

Only two monsters were disturbing the surface of the sea, and before my eyes I had two reptiles of primitive oceans. I made out the bloodshot eye of the ichthyosaurus, as big as a man's head... It has appropriately been called the saurian whale, for it has the whale's speed and size. This one measured not less than a hundred feet, and I could gauge its size when it raised its vertical tail-fins above the waves. Its jaws were enormous, and according to the naturalists they contain not less than 182 teeth.

The plesiosaurus, a serpent with a cylindrical body and a short tail, had four flappers spread out like oars. Its body was entirely covered with a carapace, and its neck, which was flexible as a swan's, rose thirty feet above the water. (Verne 187)

Axel compares the features of these prehistoric animals against the physical features of contemporary animals to create a frame of reference for the readers. Readers of Axel's account (and of the novel) are familiar with swans and whales and lizards; from these comparisons the author allows readers to envision the prehistoric animals, recreating the physicality and behaviors of animals millions of years dead and known only by their bones. The knowledge of the narrator, based in geology and paleontology, makes readers see the impossible.

Axel's verbal world-building is replicated several times within the text. When the party stands on the shores of the Lidenbrock Sea, Axel observes the atmosphere contained within the vast cavern they find themselves in, awe-struck by the illumination overhead and the shifting clouds. He posits a theory as to how any form of natural illumination could exist several miles below the surface.

Instead of a sky shining with stars, I could feel that above those clouds there was a granite vault which oppressed me with its weight, and that space, vast though it was, would not have been large enough for the orbit of the humblest of satellites. Then I remembered the theory of an English captain, who compared the earth to a huge hollow sphere, inside which the air remained luminous as a result of its pressure, while two stars, Pluto and Prosperina, moved about on their mysterious orbits. (Verne 164)

Verne, through Axel, builds a microcosm of the surface ecology for his readers through description and references to external theories. As Allen Debus notes, Verne plays with scientific facts both viable and discredited in order to create a new, entertaining world for his characters to interact with. The knowledge that the protagonists gain from their surroundings and their chosen sciences grant them not only the power to recreate the world through their own European interpretation of information, but also to alter the fundamental aspects of knowledge itself. By bringing back proof for their scientist peers and the watching public they are changing the way humans understand the planet and their place in Earth's history.

Knowledge, particularly the discursive practices of geology and paleontology, is the primary source of power in *Journey to the Centre of the Earth*, and this power is vital to the imperial ambitions of the novel. It is important to note that *Journey to the Centre of the Earth* is an imperial text, although the purpose of Jules Verne's work is primarily pedagogical in nature, seeking to educate the readers about new inventions or discoveries through the dialogue of the characters. Verne writes to educate his readers not about the histories of Germany, Denmark, or Iceland, but the history of the Earth as a whole. The novel overflows with an abundance of scientific information concerning the initial formation and subsequent shaping of the Earth, the evolution of human life, and the feasibility of life beneath the surface of the Earth. The Lidenbrocks converse at great length about these subjects, making frequent references to recent scientific discoveries made in Europe. While the novel is an educational journey for Verne's readers, the story is framed by European imperialist practices prevalent at the time of publication. In the nineteenth century France and its neighbors were engaged in an age of exploration and

colonization of other countries, either for political or financial gain, as seen in Britain's subjugation of India. In the mid-1800s, Jules Verne lived in a society that accepted imperial behaviors as not only normal, but expected of European nations. The presumed right of Europeans to explore and recreate the world in their image is implicit, and it can be observed in the story of *Journey to the Centre of the Earth*.

This assumption of the right of European conquest is not stated outright within the text of the novel, but it is clear that the Icelandic peoples are not worthy enough to make use of the information in the Saknussem document. The attitude begins subtly, once the Lidenbrocks have arrived in Iceland to begin their expedition in earnest. When left to his own devices in Reyjavik, Axel wanders the streets of the small village and makes observations of the landscape, buildings, and people. His thoughts of Iceland reflect the attitude of imperial superiority:

I had soon walked the whole length of these sad, dismal streets; here and there I caught a glimpse of faded turf, looking like an old woolen carpet worn threadbare by use, or else a sort of kitchen garden, whose sparse vegetables—potatoes, cabbages, and lettuces— would have figured appropriately on a Lilliputian table... Then, a few yards farther on, I came to the Governor's house, a hovel compared to the town hall of Hamburg, a palace in comparison with the cabins of the Icelandic population. (Verne 61)

Axel assesses the Icelandic landscape, architecture, and food with the mind of a university-educated European man, comparing its towns and agricultural areas against his metropolitan experience and finding the country small, drab, and uncouth by comparison. The rural areas, usually the focus of pastoral idealization in Victorian works, are here

viewed as the landscape of the Other; strange and unwelcoming to a civilized traveler. Axel strongly associates the land with exclusion, calling the Icelandic natives “poor exiles relegated to this land of ice and whom Nature should have made Eskimoes, seeing that she condemned them to live on the edge of the Arctic Circle” (Verne 62). Professor Lidenbrock holds a similar opinion to Axel’s, for he states that “What’s interesting in Iceland isn’t above ground but underneath” (60); this statement ignores the validity of Iceland’s culture, and is a mark of the professor’s single-minded obsession with the passage through the volcano Snæfell.

Axel’s dismissal of Iceland extends to its people. He mentions that his uncle has a letter of introduction to Iceland’s Governor Count Trampe, and mentions the Governor’s house in Iceland. When eating at the house of Mr. Fridriksson, Axel notes that the meal is “more Danish than Icelandic; but our host, who was more Icelandic than Danish, reminded me of the hospitable heroes of old,” (Verne 63); his allusions to the Danish control of Iceland are casual and unconcerned. When Hans Belke joins the expedition as a guide, he speaks to Professor Lidenbrock in Danish, not Icelandic; the speech of the Empire is used rather than the local language, and Professor Lidenbrock interprets Hans’ thoughts to the audience, effectively filtering the Icelandic man’s character into the role of a servant without needs or desires beyond serving his employers. Edward Said states that “...when it came to who owned the land, who had the right to settle and work on it...these issue were reflected, contested, and even for a time decided in narrative” (xiii), and in this narrative it is clear that Verne has determined that the German explorers have a greater right to Iceland’s natural secrets than its citizens. Verne, through Axel, views this state of affairs as a benign sort of relationship, and thus not in need of comment.

Elsewhere in Verne's canon, however, the imperialistic endeavors of Europeans are criticized within the text; the most famous of these criticisms come in *20,000 Leagues Under the Sea* and *The Mysterious Island*, where the character Captain Nemo pursues a private war against the British following the loss of his family following the Sepoy Rebellion of 1857. Captain Nemo's origin is hinted at originally in *20,000 Leagues Under the Sea*, when he provides aid to oppressed peoples in India and engages in a battle with a ship he identifies as aligned with a colonial power.

"I am the law, I am the tribunal. I am the oppressed, and there are my oppressors. Thanks to them, everything I loved was destroyed—everything I cherished and venerated—homeland, wife, children, my father and mother. There is everything I hate!" (*20,000 Leagues* 376)

The circumstances surrounding Captain Nemo's losses are elaborated on in *The Mysterious Island*, when the character confesses all to the castaways he had been watching over.

England's oppression may simply have become too much for the Hindu populace to bear. Prince Dakkar appealed to all these discontented people, won their support and filled their minds with an utter hatred for the foreigners... The great Sepoy Rebellion broke out in 1857, and Prince Dakkar was its guiding spirit... Never before had the United Kingdom been in such danger of losing its power of over India. The Sepoys had hoped to persuade other nations to side with the liberation movement, and if they had succeeded in this, it might have spelled the end of British control and influence on the Asiatic continent. ("Captain Nemo's Life Story" 390)

In *20,000 Leagues Under the Sea* Verne portrays the nonwhite, colonized Captain Nemo in a sympathetic light; though his foil Professor Arronax condemns his indiscriminate use of force against all ships associated with colonial powers, the narrative never denies that Nemo is in the right for wanting to avenge his family and country. However, this sympathy is not extended to the peoples of France's African colonies in *Robur the Conqueror*, nor does it extend to Icelandic natives in *Journey to the Centre of the Earth*. That Verne does not explore the work of the Icelandic peoples to become independent of Denmark suggests a lack of urgency in the eyes of other Europeans. There are, perhaps, types of subjugation that are beneficial to the subjugated.

Perhaps the most overt of the expedition's imperialistic behaviors comes once they have successfully left the surface of the Earth behind. As they travel down through the passages of the earth, the Lidenbrocks begin to assign names to the prominent landmarks that they encounter. The first instance occurs when Hans locates and taps an underground river to provide water for their failing expedition; to honor his achievement, the stream is then christened the "Hansbach" by Professor Lidenbrock. While this naming is done to commemorate their party's deliverance from death from thirst, it begins a pattern of naming and claiming that continues throughout the remainder of the novel. Cartography is described as a writing over of indigenous landscapes by Ashcroft, Griffiths, and Tiffin in *Post-Colonial Studies: The Key Concepts*, serving as a crucial step in the process of colonization:

Colonization itself is consequent on a voyage of 'discovery', a bringing into being of 'undiscovered' lands. The process of discovery is reinforced by the construction of maps, whose existence is a means of textualizing the spatial

reality of the other, naming or, in almost all cases, renaming spaces in a symbolic and literal act of mastery and control. (28)

The Lidenbrock expedition engages in cartography as a means of claiming the landscape while under the earth. Working on the assumption that they are the only humans to walk these passages in hundreds of years, Professor Lidenbrock gives names to grottos, islands, and bodies of water throughout the massive underground cavern. The names come from within the Lidenbrock family— Axel Island, Port Gräuben, the Lidenbrock Sea— and the professor becomes like a patriarch assembling his children. The act of naming is proprietary, recreating the underground world as something that belongs to the Lidenbrock family, which subsequent exploratory parties will acknowledge and perpetuate. In the process of naming, the right of imperial outsider is given precedent over the right of the native guide serving the exploration. Hans names nothing of his own volition, though he is responsible for getting the party to Snæfell and into the earth; his knowledge as a native Icelander is used only to support the geological knowledge of the German Professor Lidenbrock.

The attitude of imperial superiority leads the Lidenbrocks abroad to Iceland, serving as the motivation of the group, but without the methods and legitimating capabilities of science these imperial ambitions would never come to fruition. The protagonists use the methodologies of science as well as the concept of natural theology to not only gather data, but to also understand where humanity fits in the new world that their findings illuminate.

The value of scientific *savior* is proven before the Lidenbrocks even leave journey, for without the ability to observe and decipher the geologists would never have

found the directions into the dormant Snæfell. Professor Lidenbrock brings home an antique tome in Icelandic, and soon discovers an older document written in Runic script. The message baffles him, and Axel is surprised and amused at his uncle's furious reaction to the parchment: "Since Runic letters struck me as something invented by scholars to mystify the unfortunate world, I was not sorry to see that my uncle could not make head or tail of them. At least that is what I supposed from his fingers, which had begun to twitch terribly" (Verne 15). Professor Lidenbrock grapples with the message over several days, while Axel reluctantly helps him partially translate the text into the Roman alphabet. They find that the message is coded, and written by the fictional alchemist Arne Saknussemm; the Professor recognizes Saknussemm as an eminent scholar and explorer from the sixteenth century, and decides that his cipher must hide a tremendous discovery.

Despite Professor Lidenbrock's expertise, however, it is the untried Axel who eventually makes the breakthrough that allows him to decipher Saknussemm's secret. His discovery comes in a moment of solitary reflection, when he looks at the document with new eyes:

Light suddenly dawned upon me; these few clues were enough to give me a glimpse of the truth; I had found the key to the cipher. To understand the document, it was not even necessary to read it through the paper. It could be read out just as it was, just as it had been dictated to me. All the Professor's ingenious theories were correct. He had been right about the arrangement of the letters, and right about the language in which the document was written. (Verne 26)

In addition to successfully deciphering the message, Axel's discovery allows him to verify all of his uncle's theories about the code and its language. This corroboration legitimizes the experience of Professor Lidenbrock and establishes for the readers that the professor, beneath his short-tempered exterior, is a brilliant scholar. The audience can thus rely on his future analyses of the environment beneath the Earth.

Once the party has descended through the crater of Snæfell the collective *savoir* of the protagonists is essential to surviving and navigating an unknown environment. Hans' survival craft and mountaineering skills get them all into Snæfell, and later saves their lives and their equipment after a storm on the Lidenbrock Sea. Axel and Professor Lidenbrock take consistent measurements of temperature and pressure to gather data about the underworld, and use their knowledge of rocks and geologic time in order to navigate the passages beneath Iceland and locate the functional ecosystem beneath the surface. Their understanding of the volcanic nature of their surroundings later aids them in their escape from the world beneath on the back of a violent volcanic eruption in Italy.

As established in the introduction, an expedition can only be considered successful if the party returns to their empire with proof to support their claims. The Lidenbrock expedition is successful in this way, though they do not reach the true center of the Earth. Rather, they discover a new ecosystem and return home again, unscathed and ready for more action at a later date. However, to wander into the depths of the earth and come away alive is not enough for the skeptics of Europe's scientific communities, and more is needed to convince others of the truth of the Lidenbrock group's claims. The gathering of proof for these watchful fellow scientists is the main goal of Professor

Lidenbrock's venture; in science, the proving of a hypothesis and replicating the results are vital to the acceptance of research as fact.

Here Axel's journal becomes all-important to the success of the mission. As previously established in this thesis, Axel records the movements and measurements of the expedition and thus creates a document of events and a verbal map for later explorers. As the Lidenbrocks sought evidence to support Saknussemm's claims, fellow scientists and explorers will attempt to confirm their own findings. When the expedition returns to Germany, Axel notes the skepticism of their fellows:

...the news of his departure for the centre of the earth had spread all over the world. People had refused to believe it, and when they saw him again they did not believe it any the more. However, the presence of Hans and various pieces of information from Iceland gradually modified public opinion. (Verne 251)

This passage illustrates the initial skepticism that the Lidenbrock expedition is met with when their findings are first brought forth, but the presence of multiple witnesses and the support of Iceland's authorities lend credence to the story. In time Professor Lidenbrock is accepted and hailed as a hero by political and scientific authorities.

Hamburg gave a banquet in our honor. A public meeting was held at the Johannaem, at which the Professor told the story of his expeditions, leaving nothing out but the mystery of the compass. One the same day he deposited Saknussemm's document in the city archives, and expressed his deep regret that circumstances, stronger than his will, had prevented him from following in the Dane's footsteps to the very centre of the earth... (Verne 252)

Only after he has received the personal gains that he set out to secure does Professor Lidenbrock give the Sakkussem document into the hands of an archive—in Germany, rather than Iceland. His imperialistic endeavor has succeeded in providing him with lasting renown, at the expense of the native scholars of Iceland. His triumph is not total, however.

So much honor inevitably aroused envy. There were some who could not forgive him his fame; and as his theories, based on established facts, contradicted scientific doctrine on the question of the central fire, he was obliged to engage in oral and written controversy with scientists all over the world. (Verne 252)

Professor Lidenbrock's discoveries challenge the *status quo* of the world of geological science, and other geologists resist his attempts to modify the discursive formation of geological knowledge. Though there is friction within the scientific communities of the world, the general populace embraces Axel's published account of the adventure and it is "discussed, attacked, and defended with equal conviction on the part of believers and skeptics" (Verne 253).

The success of the Lidenbrock expedition is complete. The world beneath is in the minds of the public, and scholars from every scientific circle in Europe are debating the facts presented by the Lidenbrock expedition. The information is being incorporated into the already established bodies of knowledge comprising paleontology and geology, thus ensuring the power of the Lidenbrock scholars. Perhaps most important of all, the way into the subterranean world is now open for future explorers to access, allowing them to penetrate deeper into the unknown and lay claim to it.

Chapter Two: Scientific Methodology and Theory in *The Lost World*

This chapter analyzes how the protagonists of Sir Arthur Conan Doyle's novel *The Lost World* use nineteenth-century paleontological and geological theory and methodology in order to ensure the success of their imperial expedition. As established in the introduction, "success" in this project means that the result of the characters' expedition eventually benefits the English Empire in some way. *The Lost World* is a twentieth-century adventure novel, a modern text playing with the tropes of Victorian adventure stories. It is a text preoccupied with truth; the plot focuses on the gathering of proof worthy of presenting to the scientific world, in order to expand humankind's knowledge and bolster the reputations of the protagonists. Unlike the expedition at the heart of Jules Verne's *Journey to the Center of the Earth*, the Challenger expedition of *The Lost World* does not exist to give voice to Doyle's pedagogical bent. While the text alludes to the scientific ideas of the time, particularly in geology and paleontology, the story is not punctuated by long discussions of scientific fact and theory. The science is secondary to the adventure itself, used to create a realistic world that the audience can become immersed in.

Peter Childs observes that *The Lost World* is set towards the end of the "Age of Empire," and is conscious of this fact. The text nods at the characters and tropes of Victorian boy's own adventure stories, with the young male protagonists proving his

worth to society in a far-off, exotic place under imperial domain. The Challenger expedition—Edward Malone, Professors Challenger and Summerlee, and Lord John Roxton—behave as an extension of the English Empire while searching for the eponymous Lost World in South America. They go on the expedition for the purposes of verifying the scientific worth of the area, but also to bolster their own reputations by “discovering” a new land and new resources for England. While the Challenger expedition makes use of physical violence far more readily than the Lidenbrock expedition, thus participating fully in the violent colonial tradition of England’s Empire, the success of their mission depends on the compilation of an accurate account of the land and its organisms.

The young journalist Edward Malone, an outsider to the scientific world and a hopeful suitor, narrates *The Lost World*. Much like Axel Lidenbrock, Malone serves as both the framing device and audience proxy for the novel; he, a young man of average intelligence and athletic ability, provides a point of greater access for Sir Arthur Conan Doyle’s twentieth-century readers. The professors Challenger and Summerlee, both committed men of science, are too entrenched in the intellectual jargon of their particular fields to serve as narrators.

Malone’s profession as a journalist contributes to the eventual success of the Challenger expedition; the novel is framed as his correspondence back to his editor, and his letters provide a record of the expedition for posterity. Malone bears witness to the reality of Maple White Land and brings the information back in an organized form for others to replicate at a later date. Modern English society, focused on the power of scientific systems, will not accept the story of Professor Challenger without

corroboration and the possibility of further exploration. Malone's writings detail the means of reaching Maple White Land and can guide other explorers to the plateau.

ILLUSTRATE

Malone is an outsider in the scientific arena, and Professor George Edward Challenger serves as the audience's window into the world of paleontology, geology, and zoology. Challenger is the catalyst of the plot of the novel; arrogant and pugnacious, Challenger is obsessed with silencing those among London's scientific circles who accuse him of being a fraud. He spends the novel bent on gathering proof of the existence of living dinosaurs and other prehistoric animals, using photography, written accounts, and physical specimens. Also present on the Challenger expedition is Professor Summerlee, another scientist, who is determined to discredit Challenger's claims of prehistoric life in the modern era. He is the representative of the rest of the unbelieving world, the audience that must be convinced of the truth at all cost. Summerlee questions Challenger at every turn in journey to Maple White Land, countering his every claim with an alternative explanation. QUOTE

Summerlee is an important foil to Challenger, demanding replicability from the other man's story. In science, data are worthless unless the scientist gathering it can repeat the results under the same conditions; Summerlee believes that Challenger's assertions cannot be supported as no one else will ever see what he claimed to see. However, once Summerlee sees dinosaurs and pterodactyls with his own eyes he is ready to concede the veracity of Challenger's original story. QUOTE (post iguana)

The fourth and final member of the Challenger expedition is Lord John Roxton, a celebrated English explorer. He serves as a contrast to Professors Challenger and

Summerlee, as he is more prone to violent action rather than intellectual examination. Though intelligent, Roxton is characterized as a man of action first and foremost; his interest in going to see the plateau of Challenger's stories stems primarily from a desire for another adventure to test his skill rather than any desire to contribute to science.

Roxton represents a classical adventure hero, a staple of what Childs refers to as "boy's own adventure novels". An agent of the Empire, Roxton enters into areas deemed underexplored and maps them for his society. He achieves his aims (exploring and returning with news) with force when necessary; his home is filled with trophies from hunts, and in South America is his known as "the Flail of the Lord" for his actions against the local slave trade; it is implied that the indigenous peoples targeted by the slavers were helpless without Roxton's interference.

Malone, Challenger, Summerlee, and Roxton represent an extension of the British Empire while abroad, bringing the methods of European science with them into the jungles of Brazil. The methodology and theories of paleontology and geology allow the narrator Malone, as well as his scholarly companions, to interpret and record the alien landscape of Maple White Land in the novel for the benefit of the scientists and citizens of England.

In contrast to Verne's *Journey to the Centre of the Earth*, which seeks to balance educating its readers with telling a tale of adventure, Doyle's *The Lost World* is concerned with entertaining its audience and paying homage to the genre of Victorian adventure novels. While Professors Challenger and Summerlee do provide information concerning biology and paleontology during their conversations, the novel does not dwell overmuch on the scientific ramifications of the Challenger expedition's discoveries,

focusing instead on the conflict between the human characters and the Ape-men of the plateau. *The Lost World* is more overt in its imperialistic implications than *Journey to the Centre of the Earth*, engaging in the uncritical exploitation of a foreign nation's resources.

There is a careful balance between the power of force and the power of knowledge at play in *The Lost World*: though the expedition is led by the scientist Professor Challenger, often it is the veteran man of action Lord Roxton that has to step in to save the party from danger. Ed Malone embodies this uneasy balance between force and knowledge, serving as both a recorder of the scientific expedition's surroundings and movements and as a young warrior helping defend their interests from threatening forces. Malone goes to war by the end of the novel, proving himself in the eyes of his elders and in the eyes of English society; he has made a name for himself through his physical courage. However, while the application of violence does play a large role in the expedition—namely, when the protagonists engage in genocide against the ape-men native to Maple White Land in order to help their human allies—its success relies entirely on the power of knowledge.

Professor Challenger seeks to gather proof for his claims of prehistoric fauna surviving alongside modern human life, and without this proof he is barred from the power that accompanies revolutionary discovery. In his discussion of *savoir* Michel Foucault describes this type of knowledge as “the domain constituted by the different objects that will or will not acquire a scientific status... knowledge is also the field of coordination and subordination in which concepts appear, and are defined, applied and transformed” (182), and these objects are selected or discarded by active participants in

the discourse of the field. Those who contribute to a discipline ultimately control what is and is not accepted as a fact, thus controlling the nature of knowledge itself. Professor Challenger seeks to alter the modern understanding of zoology and evolution by proving, conclusively, that prehistoric animals only known to humanity in fossil form have survived into the modern era. What he seeks to study could potentially either revolutionize or destroy the fundamental facts held by these disciplines.

In order to gain power through altering the body of paleontological and geological science, however, Challenger needs proof to corroborate his claims. This is the aim of his second expedition into Brazil, which is launched to make up for the failure of the first. He is mocked and disgraced when he returns to England following his first adventure without any proof beyond a dead man's illustrations and a few blurry photographs of a pterodactyl; his proof is substandard, with no external witnesses and no tangible evidence. Malone's bacteriologist friend Tarp Henry, devoted to his own branch of science, tears holes in Challenger's account to illustrate how easy it would be to fake such a story: the artist Maple White did not exist, his sketchbook was faked by Challenger, and the photographs of the pterodactyl are doctored pictures of a bird. Doyle plays with this moment of doubt with Tarp's dialogue: "My dear chap, things don't happen like that in real life. People don't stumble upon enormous discoveries and then lose their evidence. Leave that to the novelists" (32). This line acknowledges the unlikely nature of Challenger's claims, and undermines his credentials in the eyes of his peers. It provides a sense of tension within the novel, creating a setting where the observations of Malone and his fellow explorers become the standard to which Challenger's claims are held.

Ed Malone's journal forms the backbone of the proof gathered to support Challenger's claims of prehistoric life in the twentieth century. His credentials as a journalist and his distance from the academic arenas of the London Zoological Institute reduce the risk for bias in his reporting, allowing for greater credibility in the eyes of the public. Throughout the course of the novel, Malone provides maps of the route taken to the plateau, and a rough sketch of the major physical features of Maple White Land: this rough cartography enables the group to move confidently through the land, and provides a road for future exploration. Malone's observations and recordings allow the audience to engage in the adventure along with the protagonists in a vicarious manner: his interpretations of alien landscapes and entities make events more relatable for the English citizens who encounter his work.

While Summerlee's verbal support of Challenger's claims concerning Maple White Land is a useful corroboration, the expedition must produce more tangible proof before an audience of their peers in order to be believed. Lord Roxton infiltrates the lair housing a flock of aggressive pterodactyls and secures a juvenile animal to bring back to England. At the very end of the novel, the four explorers once more stand before the Zoological Institute of London, presenting their findings before not only the scientists of England but also Sweden, France, and Germany. Skeptical scientists such as Dr. Illingworth reject the veracity of the group's collective testimony, and implore the Institute to proceed with caution.

In this moment of doubt Challenger unveils the juvenile pterodactyl to secure his final triumph. It stays on stage for only a moment, escaping the building when alarmed by the hysterical audience, but that moment is enough; Challenger's audience of

scientists, students, and laypersons is at last convinced of the truth of his story. Like the Lidenbrock expedition of *Journey to the Centre of the Earth*, the members of the Challenger party are rewarded for their successful proving of their hypothesis with public recognition and celebration. They are at last able to revolutionize the bodies of knowledge belonging to zoology, evolutionary biology, and paleontology with this living specimen to support their account of the expedition.

Although the protagonists of *The Lost World* end the novel as heroes and shapers of scientific discourse, they set out on the expedition to Brazil with personal gain in mind. Professor Challenger is infuriated by the skeptical reception his initial report on the prehistoric life on the Brazilian plateau, and is determined to support his claims by securing acceptable proof for his detractors. While the expedition is concerned with regaining the plateau and reliably documenting what they find there, it is based on the desire to rectify a personal offense rather than any desire to benefit the collective knowledge of scientific communities of England. Like Professor Lidenbrock before him, Professor Challenger is a selfish scholar and wishes for celebrity.

Challenger's quest for proof is performative in nature; in contrast to Otto Lidenbrock's paranoid silence regarding his mission, Challenger interrupts a Zoological Institute lecture on evolution being given by a fellow scientist in order to put forth his views on the continued survival of prehistoric animals. There, he not only derides the lecturer for dealing in secondhand information, but also openly challenges the commonly held beliefs about evolution and extinction.

One smallest new fact obtained in the laboratory, one brick built into the temple of science, far outweighs any second-hand exposition which passes an idle hour,

but can leave no useful result behind it...What is the particular point upon which I, as an original investigator, have challenged our lecturer's accuracy? It is upon the permanence of certain animal life upon the earth. I do not speak upon this subject as an amateur...but I speak as one whose scientific conscience compels him to adhere closely to the facts. (Doyle 37)

Challenger casts himself in the role of the wronged lover of truth in this instance, elevating his own motives over those of his opponent Mr. Waldron. Challenger, unlike Waldron, is no "parasite" parroting the facts found by others, but a true investigator who witnessed the existence of prehistoric animals with his own eyes. Here we are introduced to the idea that firsthand experience is more valuable than information gathered secondhand; by being willing to go forth in the field to bring back information, Challenger is more trustworthy than those scientists who remain safe in their studies. Challenger takes advantage of the uproar his speech causes at the Zoological Institute to announce his intention to mount a second expedition to Brazil and recruit willing witnesses. In this way, Challenger garners attention for his endeavor and sets out to soothe his ego.

Like Challenger, the narrator Malone is also using the expedition to South America for his own personal benefit; in his case, as a means of proving his worth as a lover. In the earliest pages, Malone learns that Gladys Hungerton, the indifferent recipient of his affections, wants a lover who is "a man who could do," stern and unafraid of death. She goes on to say that "It is never a man I should love, but always the glories he had won, for they would be reflected upon me. Think of Richard Burton!" (Doyle 3). Gladys also references the imperial explorer Henry Morton Stanley, and concludes that

he and Burton are the kind of men that will elevate their wives through association, and a woman married to such a man would be “honoured by all the world as the inspirer of noble deeds” (3). Her affection is contingent on the accolades her potential mate can earn, and on the glory to be gained from marriage to him; untried and unknown as he is, the humble Malone is an unfit partner for Gladys.

Thus Malone is driven to follow Challenger into the underexplored rainforests of the Amazon, not to contribute to the science of zoology but to become famous enough to earn his paramour’s love. Peter Childs likens Malone to a (self-aware) knight in a chivalric romance, and characterizes his journey to South America as “self-aggrandizement rather than exploration” (12). The invocation of Burton and Stanley is not accidental, but rather sets up the protagonists as successors to the imperial tradition of the past; though the Age of Empire has passed and the map has been filled in, these men have a chance for one last extraordinary adventure.

Peter Childs states that *The Lost World* is “self-consciously composed as a mélange of adventure tropes” (11), which the novel exploits in order to tell its story. While it nostalgically indulges in the excitement of older Victorian adventures, it also takes part in the tradition of infantilizing and vilifying indigenous peoples. At first, it seems as though Doyle is preparing to subvert this trend; when describing his first expedition to Malone, Challenger describes the native tribe he encounters, the Cucama people, as “an amiable but degraded race, with mental powers hardly superior to the average Londoner” (Doyle 21). Challenger’s disdain extends to all peoples, regardless of race or nation, and he denigrates the intelligence of not only the colonized group but also the colonizing class.

However, this humorous jab at the Empire's own people does not bear through on the Challenger expedition. When their group hires local men to help guide the group and transport their equipment, the superiority of the white Europeans is made apparent in Malone's descriptions of their crew: "The first is a gigantic negro named Zambo, who is a black Hercules, as willing as any horse and about as intelligent...It was at Para also that we engaged Gomez and Manuel, two half-breeds from up the river..." (Doyle 52). Zambo is infantilized from the start, and takes the archetypal role of the faithful servant of the white men. Gomez and Manuel, however, are suspicious entities to the narrator; their race is noted several times by Malone, and the curiosity the Gomez displays is characterized as a negative trait. In time, once the white explorers have gained access to the plateau later known as Maple White Land Gomez reveals himself a traitor when he destroys their only means back to the mainland. Lord Roxton, during his time fighting slavers in Brazil, Peru, and Colombia, killed the slaver brother of Gomez in combat; the desire to take revenge on his brother's killer is portrayed as another negative trait in Gomez, an unreasonable instinct to hold a grudge that is common to those with Latin blood. Very soon after his treachery is revealed, Gomez is killed by the party.

Even the landscape is given a sinister character in Doyle's descriptions. The Amazon forest surrounding the Challenger party is dense and forbidding, with trees so massive and stately that the protagonists are awe-struck into silence. Malone seems to be under the influence of a kind of religious reverie, stating that "The woods in either side of us were primeval...how shall I ever forget the solemn mystery of it?" (58). He compares the forest to an abbey and describes the riot of plant life surrounding them at great length. As any good journalist would, Malone creates the landscape for his audience through his

descriptions of the land, drawing contrasts between the tame gardens, parks, and farms of England and the close, cloying atmosphere of the “uncultivated” Amazon. He reveals an exotic landscape, untapped and underexplored, waiting for European eyes to find and sort it into order.

Ordering and categorizing is a fundamental part of the scientific expedition. Challenger and Summerlee collect specimens of insects and plants and arranged them into collections, and later identify and categorize the dinosaurs that the party encounters on Maple White Land. By naming these creatures, they not only verify Challenger’s earlier claims of seeing prehistoric animals in the age of man, but also begin to assert control over the animals themselves. When they encounter the *Megalosaurus*, they know it is a predator not so different from a lion or bear, and can be fought with conventional weapons.

The controlling power of names is seen again when the Challenger expedition begins to attach their own names to the geography of the “lost world”; it begins the moment they set foot on the plateau, when Lord Roxton, the seasoned imperialist, asks the group what name they ought to give the land they are about to explore. Challenger is the one to ultimately make the selection, and honors the young artist Maple White, who originally directed Challenger to the plateau: “‘It can only have one name,’ said he, ‘It is called after the pioneer who discovered it. It is Maple White Land’” (Doyle 88). While this is a magnanimous gesture from a man as egocentric as George challenger, it neatly disregards the fact that the local indigenous tribes are aware of the plateau and its strange fauna, and may have their own names for the place. Later in the novel, it is revealed that a tribe of humans has lived on the plateau among the prehistorical wildlife for

generations, but the Challenger party does not consider asking what the tribe, the Accala people, call the land.

To rename a landscape is to try and bring it under control on a literal and symbolic level; eliminating the original names of places creates a sense of displacement within a familiar setting. It recreates the land through the eyes of the colonizing force and permits the marginalization (or eradication) of the original inhabitants of the area. In this instance, the Brazilian plateau becomes an extension of the manicured estates and parks of England through the Eurocentric renaming of the physical features of the land. The renaming is proprietary in nature, allowing Challenger, Malone, and the others to lay claim to part of the area and attach a part of themselves to it for posterity; the mere fact that they are naming places and animals reveals that they intend for other explorers to follow in their stead and acknowledge their presence. They will have the distinction of being “first” in the eyes of their European peers. For Malone, the ability to attach a name to a lake in chapter eleven serves to mark a sort of rite of passage for him. Young and spry, he climbs to the top of a massive tree and scouts the area to help create a map for the party to use, thus risking his safety for the good of the party and earning his place among them. He is rewarded with the right of bestowing a name on the lake he saw while in the tree, which he names for his sweetheart Gladys.

Although Peter Childs’ analysis of *The Lost World* acknowledges the imperial ambitions of its characters, it does not assess how reliant these ambitions are on the of nineteenth-century science in the world Doyle developed. Doyle populates his lost world with prehistoric animals discovered in the previous century. His representations of the dinosaurs *Megalosaurus*, *Iguanodon*, and *Stegosaurus* invoke the sluggish evolutionary

dead-ends put forward in the Victorian era, though the presence of a species of sentient primates known as the ape-men highlights the acceptance of the post-Darwinian concept of evolution. Just as Jules Verne did in *Journey to the Centre of the Earth*, Doyle uses the simultaneous existence of prehistoric life and humanoid entities alongside humankind to explore the tension between the older model of scientific thought (natural theology) and the newer forms of thought (biology). In the system of natural theology, investigative science is subject to the Christian faith: in William Paley's book *Natural Theology*, the scientific method is considered a valid way to examine the natural world, but it is used to prove the existence of the Divine. The neat, progressive world envisioned in natural theology situates humankind at the pinnacle of the natural world. The concept of evolution, with its denial of Divine influence and acceptance of chance in the development of species, threatens to undermine the privileged place of humanity in nature. The tension between the old theory and the new is represented in the existence of the ape-men of Maple White Land, and the reactions they inspire in the Challenger party.

While Verne's protagonists flee and then deny the existence of a race of giant humans in the subterranean world, Doyle's protagonists respond to the threat posed by the ape-men with violence. The behavior of Professor Challenger is an excellent example of the influence of natural theology on the text. An avowed man of science who is dedicated to zoology and biology, Challenger nevertheless subscribes to a mode of thought that would not have been out of place when natural theology dominated England's worldview. Following the massacre of the ape-men of Maple White Land by the expedition members and the Accala tribe, Challenger makes the following speech:

“We have been privileged,” he cried, strutting about like a gamecock, “to be present at one of the typical decisive battles of history—the battles which have determined the fate of the world. What, my friends, is the conquest of one nation by another? It is meaningless...But those fights, when in the dawn of the ages the cave-dwellers held their own against the tiger folk, or the elephants first found that they had a master, those were the real conquests...By this strange turn of fate we have seen and helped to decide even such a contest. Now upon this plateau the future must ever be for man.” (Doyle 145)

In this piece of dialogue Challenger aligns the expedition members with the unknown heroic ancestors who bested other animals in “the dawn of ages,” asserting the place of humankind over other species. Humanity’s dominance is viewed as rightfully deserved, for humanity alone possesses the ability to reason; knowledge is the key to the success of humans. Here Challenger’s words have particular resonance with the young narrator Malone, who agrees with this sentiment of human superiority; their cause is righteous, for they have helped the technologically weaker Accala tribe reestablish their rightful place as masters of the environment.

It is worth noting that the Accala could not vanquish their enemies without the direct intervention of the four European explorers. Here Doyle privileges the culture of the European world over the culture of the colonized; the Europeans are represented as being more advanced socially and technologically, and are the only ones who can possibly help the Accala take up their mastery of the plateau. Their superiority is undoubted in the novel, used for benign purposes, and they are thus justified in their appropriation of information and resources from the plateau.

The methodology of science continues to serve the imperial project of the Challenger party once they have returned to England. Having already proven the might and intelligence of humanity in the conflict against the ape-men, the Challenger expedition sets out to prove their own worth in the eyes of the London Zoological Institute. At the very end of the novel, the four explorers once more stand before the Zoological Institute of London, presenting their findings before not only the scientists of England but also Sweden, France, and Germany. There, Summerlee takes the stage and provides an account of the group's adventures, taking time to praise Challenger and amend his own previous skepticism regarding the first South American expedition. The fact that Summerlee is the one to discuss their findings first is important to the success of the group's presentation, for he was once Challenger's greatest critic and thus contributes the greatest credibility to the proceedings. Summerlee's sudden agreement with Challenger is stunning: one reporter states that "One had to pinch oneself to be sure one was awake as one heard this sane and practical Professor in cold, measured tones describing the monstrous three-eyed fish-lizards and the huge water-snakes which inhabit the enchanted sheet of water" (163), which indicates the power of Professor Summerlee's credentials. This moment also indicates the power of the evidence collected by the party, for the noted sceptic Summerlee has returned to London a believer. This foreshadows the greater acceptance given to the party by the scientific circles and general public of England.

The testimony provided by the accounts of Malone and Summerlee is not enough to dispel all skepticism, however: Dr. Illingworth does not trust their claims, and asks that

the Zoological Institute consider the findings of the Challenger expedition “unproven” due to their group’s unreliability. Illingworth speaks reasonably of his skepticism, stating:

A year ago one man said certain things. Now four men said other and more startling ones. Was this to constitute a final proof where the matters in question were of the most revolutionary and incredible character? There had been recent examples of travelers arriving from the unknown with certain tales which had been too readily accepted. Was the London Zoological Institute to place itself in this position? He admitted that the members of the committee were of good character. But human nature was very complex. Even Professors might be misled by the desire for notoriety. (Doyle 164)

In this passage Challenger’s imperial greed—namely, his desire for recognition—nearly sabotages the expedition’s efforts to present the truth. Dr. Illingworth rightfully recognizes that the word of four men, even four upstanding men, is not enough to prove that prehistoric life and missing links exist simultaneously with humanity. He compares their account to the baseless stories of wanderers, and hints that the reputation of the Institute will be damaged by being too quick to accept these unorthodox claims without further proof. In his eyes, the expedition is a failure for it has not sufficiently supported the claims of Challenger, and thus not fulfilled its objective. It ultimately takes the reveal of a living prehistorical animal in order to convince the audience: by turning the public into witnesses, Challenger and his companions erase the falsifiable aspects of their story.

CONCLUSION

This project began with dinosaurs, and the science that informed their portrayals in nineteenth-and-twentieth-century literature. I was originally drawn to Jules Verne's *Journey to the Centre of the Earth* and Sir Arthur Conan Doyle's *The Lost World* because each novel featured dated depictions of dinosaurs, so different from the modern concept of the animals I have grown familiar with. My research began when I compared the prehistoric animals in the texts, their behavior and appearance, the language used to describe them and the reactions of the human characters to them. I found that all the animals were treated as brutish and stupid, inferior to humanity in every way.

This human exceptionalism was paired with often racist and classist attitudes towards the non-European characters of the novels; it seemed that only the European protagonists were considered intelligent and brave enough to explore unknown terrain and bring back the story. *Journey to the Centre of the Earth* and *The Lost World* are imperialist narratives, and I became fascinated by all the ways that the protagonists of the novels use science to further their imperial agenda. This is not a phenomena that is restricted to realm of fiction, for Western nations have used science as both means and justification for imperial conquest for centuries. This is apparent even today, when American and British scientists face fallout for appropriating the fossil resources of other nations such as Mongolia. The relationship between science and imperialism in nineteenth-and-twentieth-century literature is not yet fully explored; studies focus on the

use of technology such as steam engines in the imperial project, but do not focus on how the ideology of science itself enables colonization.

I have come to the conclusion that in science-fiction adventure stories of the nineteenth and twentieth centuries use science to not only create new worlds for readers, but allow the characters to rewrite “underexplored” nations to their advantage. The protagonists use scientific methodology to observe, record, and report new data to their Empire. In this way they transform the accepted body of knowledge held by Europeans and thus assume control of it, often at the expense of the native peoples of the areas they colonize. By using the scientific method and relevant scientific theories to interact with the “underexplored” landscape, the protagonists assume control and even ownership of it.

WORKS CITED

Ashcroft, Bill, Gareth Griffiths, and Helen Tiffin. *Post-Colonial Theory: The Key Concepts*. Routledge, 2000.

Childs, Peter. *Modernism and the Post-Colonial: Literature and Empire 1885-1930*. Continuum International Publishing Group, 2007.

Darwin, Charles. *Origin of Species by Means of Natural Selection, or the Preservation of Favored Races in the Struggle for Life AND The Descent of Man And Selection in Relation to Sex*. Edited by Bennet Cerf and Donald Kloppei, The Modern Library, 1936.

Debus, Allen. "Re-Framing the Science in Jules Verne's *Journey to the Centre of the Earth*." *Science Fiction Studies*, Vol. 33, No. 3, 2006, pp. 405-420.

Doyle, Arthur C. *The Lost World*. Dover Publications, Inc., 1912.

Foucault, Michel. *Archaeology of Knowledge*. Translated by A. M. Sheridan Smith, Pantheon Books, 1972.

Levine, George. *Darwin and the Novelists: Patterns of Science in Victorian Fiction*. The University of Chicago Press, 1988.

Lovejoy, Arthur O. *The Great Chain of Being: A Study of the History of an Idea*. Harvard University Press, 1957.

Paley, William. *Natural Theology: Selections*. Edited by Frederick Ferre, The Bobbs Merrill Company, Inc, 1963.

Verne, Jules. *20,000 Leagues Under the Sea: The Definitive, Unabridged Edition Based on the Original French Texts*. Translated by Walter J. Miller and Frederick P. Walter, Naval Institute Press, 1993.

---. "Captain Nemo's Life Story." *20,000 Leagues Under the Sea: The Definitive, Unabridged Edition Based on the Original French Texts*, edited by Walter J. Miller and Frederick P. Walter, Naval Institute Press, 1993, pp. 389-392.

---. *Journey to the Centre of the Earth*. Penguin Books, 1864.

Said, Edward. *Culture and Imperialism*. Alfred A. Knopf, Inc., 1993.

---. *Orientalism*. Pantheon Books, 1978.

Switek, Brian. *Written in Stone: Evolution, the Fossil Record, and Our Place in Nature*. Bellevue Literary Press, 2010.

Wong, Amy. "Arthur Conan Doyle's 'Great New Adventure Story': Journalism in *The Lost World*." *Studies in the Novel*, vol. 47, no. 1, 2015, pp. 60-79.