

An Analysis of Character Evolution within Subterranean Science Fiction and Fantasy

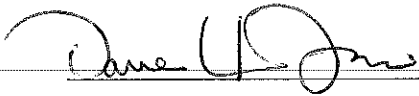
By Ian T. Richard

Submitted to the College of Arts and Sciences of Auburn University at Montgomery in partial fulfillment of the requirements for the degree of Master of Liberal Arts

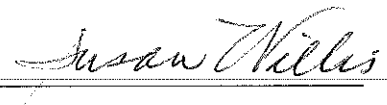
Montgomery, Alabama

2 December 2015

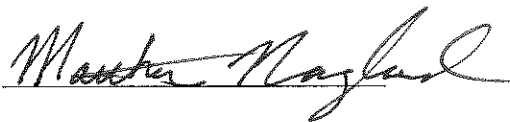
Approved by



Dr. Darren Harris-Fain
Thesis Director



Dr. Susan Willis
Second Reader



Dr. Matthew Ragland
Associate Provost

An Analysis of Character Evolution within Subterranean Science Fiction and Fantasy

Ian T. Richard

Submitted to the College of Arts and Sciences of Auburn University at Montgomery in partial fulfillment of the requirements for the degree of Master of Liberal Arts

Dr. Darren Harris-Fain, Faculty Advisor
Dr. Susan Willis, Faculty Advisor

December 2, 2015

COPYRIGHT

© 2015

Ian T. Richard

All Rights Reserved

Table of Contents

Chapter 1: Descent	3
Chapter 2: <i>Journey to the Center of the Earth</i>	26
Chapter 3: <i>The Hobbit</i>	51
Chapter 4: <i>Star Wars</i>	86
Chapter 5: H. G. Wells	124
Chapter 6: Ascent	159

An Analysis of Character Evolution within Subterranean Science Fiction and Fantasy

Chapter 1 - Descent

Plot, characters, setting, theme, and style represent primary literary and cinematic components. Of these components, setting forms the crux within works of a specific nature—subterranean science fiction and fantasy, a subgenre directly influenced by the natural wonders found below the surface:

NATURE displays her wonders not only in the starry heavens or in the boundless variety of animal and vegetable life on the surface of our earth. In the dark regions underground she likewise shows us much that is remarkable or beautiful, or carries on gigantic operations, which are sometimes beneficent and sometimes disastrous to mankind.

There lie concealed the mysterious laboratories of fire, which reveal to us their existence in earthquakes and volcanic explosions. There, in successive strata, repose the remains of extinct animals and plants. There many a wonderful cavern may be seen, with its fantastic stalactites, its rushing waters, and its noble halls. There have been deposited the rich stores of mineral wealth—the metals, the coals, the salt, the sulphur, etc.—without whose aid man would never have been more than a savage. (Hartwig v)

Subterranea bridges a symbolic abyss where the above-mentioned “savage” lies on one side and an evolved character lies upon the other. The above passage introduces and illustrates the inherent and recognizable figurative nature of Subterranea, the primary reason for its use within science fiction and fantasy. Characters seemingly enter a world of physical and literal constructs,

features, and laws. Once inside, characters navigate a figurative world of immense evolutionary potential and complexity.

The origins of science fiction and fantasy are amorphous and indiscrete; modern subterranean science fiction and fantasy create a more discernable genesis marker. This thesis attempts to capture the spectrum of character evolution within subterranean science fiction and fantasy through five primary works. The selected works include Jules Verne's *Journey to the Center of the Earth* (1864), J. R. R. Tolkien's *The Hobbit* (1937), George Lucas's *Star Wars* series: *A New Hope* (1977), *The Empire Strikes Back* (1980), *Return of the Jedi* (1983), *The Phantom Menace* (1999), *Attack of the Clones* (2002), and *Revenge of the Sith* (2005), and H. G. Wells's *A Story of the Days to Come* (1897) and *The Time Machine* (1895). The combined *Star Wars* films constitute one work within this thesis. Each of these visionary artists uniquely contributes to the evolution of subterranean science fiction and fantasy; the dark confines of Subterranea house arguably each artist's de facto creative work.

Science fiction and fantasy differ from other literary genres in several aspects. A primary distinction, as illustrated by the selected works, includes the artists' ability to rapidly evolve characters within exotic processes and constructs inaccessible to other genres. Within literal and figurative darkness, characters search to potentially evolve. Where prehistoric humans once lived through necessity, modern literary characters now reenter seeking better versions of themselves hidden somewhere below in the depths.

Each work represents a multitude of evolutionary subterranean concepts and features. As mentioned, elemental physical features such as caves, fire, and deposits transform into figurative concepts once characters enter Subterranea. Despite the abstract nature of these figurative transformations, the combined works illustrate adherence to and use of distinct motifs.

Consequently a unified subterranean science fiction and fantasy template or identity forms via the select works. The presence of these motifs—or their conspicuous absence—within the works showcases definitive subterranean constructs, processes, paradigms, themes, artifacts, and needs. In addition to these overarching, ubiquitous motifs within the cumulative works, each individual work represents specific contributions to subterranean science fiction and fantasy. Overall, the select works represent a systematic approach to the evolutionary contributions within subterranean science fiction and fantasy.

Analysis of Subterranea highlights several key mileposts, “flashpoints,” or acute occurrences representing radical new concepts along the “subterranean timeline,” a linear singularity whereupon numerous flashpoints spatially illustrate literary and subterranean evolution. Consequently, the transformation of Subterranea from a literal and elemental geospatial niche into an abstract and complex identity transpires. Dominant cultural perceptions typically define and cast Subterranea through elemental constructs and themes such as those superficially found within Verne’s *Journey to the Center of the Earth*. This perception of Subterranea does not yet encapsulate the advanced evolutionary concepts located within the selected works, as illustrated by introduction of any one of numerous elemental features early upon the timeline that ultimately evolve through the works’ various permutations into an complex concept. A particularly effective means of evolving elemental subterranean features resides within academic disciplines and their associated paradigms. Themes or concepts related to geology, history, psychology, sociology, biology, geography, and engineering form the foundational core of this analysis. Each discipline literally and figuratively governs subterranean processes and constructs through their inherent precepts and theories. The use of academic laws and hypotheses creates recognizable processes and constructs within each work. Consequently,

the showcasing of the long-standing association between subterranean works and the academic concepts and principles used within them represents a primary goal of this thesis. This link between academic disciplines and subterranean science fiction and fantasy highlights the mutual creative process within each:

All worthwhile scholarship involves an element of fantasy. The leap from a heap of raw data to a theory is an act of imagination; that some venturesome theories may be rudely falsified by subsequent data need not diminish the achievement of their producers. Some SFs [Scholarly Fantasies] are produced by fools, some by honest misinterpreters, some by calculating charlatans, some by geniuses, and some by people who are fully conscious they are fantasizing. (Stableford 842)

The artists responsible for creating the selected works definitively fall within the latter category. The fusion of academic data and abstract creativity effectively transports this analysis to the beginning of subterranean science fiction and fantasy analysis:

I return to the ... ages of the world long before the appearance of man, when the unfinished world was as yet unfitted for his support.... The heat of the globe continually increases and neutralizes that of the sun.... Plants disappear; granite rocks soften; intense heat converts solid bodies in thick fluids; the waters again cover the face of the earth; they boil, they rise in whirling eddies of steam; white and ghastly mists wrap round the shifting forms of the earth, which by imperceptible degrees dissolves into a gaseous mass, glowing fiery red and white, as large and as shining as the sun.... I mingle and am lost in the ... vast globular volumes of vaporous mists, which roll upon their flaming orbits through infinite space. (Verne 167-68)

This trip through time terminates at the flashpoint of Subterranea where two key features—water and fire—manifest within the emptiness of space to fuse with Subterranea, science, and fantasy.

If the limited confines of subterranean Earth possess an antithetical or antipodal point, the infinite and amorphous reaches of space emerge as the leading contender. Yet a subterranean milepost demarcating subterranean genesis materializes within deep space, a geospatial niche introducing multiple subterranean themes through the disciplines of theoretical physics and astronomy.

Approximately 4.5 billion years ago, specific astrophysical conditions created the Sun and Earth. These cosmic conditions mirror forthcoming subterranean conditions evolving literary characters within science fiction and fantasy. Isolated from outside, influential bodies and, under extreme conditions, new entities evolve. The Sun forms within the spatial isolation of an interstellar void conducive to stellar formation. Spatial isolation between interplanetary bodies creates environmental conditions conducive to the Earth's formation. Illustrated later, character evolution demands isolation from surface concepts and entities. Consequently, isolation materializes as the original trait upon the subterranean timeline. Within the isolation, extreme pressure or stress manifests. The result, massive gravitational collapse within a molecular cloud nebula, further postures the isolated region for the Sun's upcoming creation. Extreme pressure within an isolated solar nebula allows accretion of a terrestrial body—Earth. Detailed later, intense subterranean stressors enable character transformation. Pressure joins isolation as a primary trait upon the subterranean timeline.

Thermonuclear fusion triggers the evolutionary process of transmutation forming the Sun. Fire ignites upon the subterranean timeline as the third primary subterranean characteristic. Distinguishing it from the earlier established traits, fire solely represents Subterranea, a symbolic

role maintained until its complete eradication, illustrated in Wells's *The Time Machine*. Trace amounts of gold, a significant and figurative element within the works, lie hidden within the stellar furnace. Illustrated throughout the works—particularly Tolkien's *The Hobbit*—gold or gold concepts permeate every storyline. This apex element, the figurative reason for character introduction into Subterranea, manifests as the fourth characteristic upon the subterranean timeline.

Despite similarities, the Sun and Earth distinguish themselves through a basic construct concept; Earth houses potential for human evolution, habitation, and exploration. These distinct stages of human development simultaneously converge upon, and radiate from, Subterranea. Earth's core region harbors extreme temperatures, pressures, and processes. Within this esoteric, pseudo-stellar region lies an epicenter of "subterranean truth." Truth, searched for by characters within the selected works, represents evolutionary concepts required for transformation. The volcanic-based phenomena originating from Earth's core penetrate upward through stratified layers en route to the crust, a literal and figurative barrier demarcating Subterranea from the "surface." These penetrative processes create unique, elemental subterranean features such as lava tubes, caverns, and volcanic pipes that honeycomb Subterranea. Formal geology later coins these processes as Vulcanism/Plutonism, a 19th-century theory detailing gradual, fire-based formative concepts. Vulcanism slows and temperatures drop on the surface; oxygen levels increase. Vapors and gasses escaping from Subterranea through pressurized geothermal vents create an atmosphere. Water materializes as the fifth primary characteristic upon the subterranean timeline.

Rain and flooding create exotic features such as subterranean karsts, lakes, and rivers. Water, essentially a byproduct of reduced fire-based volcanism upon Earth, assumes a secondary

role to fire within Subterranea. Water evolves to manifest as the crux of an 18th-century geologic theory—Neptunism, a paradigm representing catastrophic, water-based concepts. Fire and water, primal mediums materializing billions of years ago, will clash within Subterranea and subterranean science fiction and fantasy until an ultimate and decisive outcome transpires, illustrated by Wells's *The Time Machine*.

Life forms as sunlight and/or solar radiation envelops water within primordial pools. Evolutionary concepts fuse with conflicting fire (energy) and water (medium). After hundreds of millions of years, Homo sapiens appear upon the subterranean timeline and penetrate Subterranea for supply of basic needs. Ultimately, humans leave Subterranea only to symbolically reenter through the genre of science fiction and fantasy to further evolve through the omnipresent and conflicting mediums of fire and water. Initial human presence within Subterranea sheds light upon processes and concepts relevant to subterranean science fiction and fantasy analysis.

Prehistoric humans enter Subterranea seeking the fulfillment of basic needs. This penetration and descent into Subterranea reconfirms that “underground settings are far from being an exclusively sf [science fiction] theme, having a universal resonance for Homo sapiens” (Langford and Bleiler). Subterranea represents the first permanent and protective structure for humans. Consequently, the maternal “Mother Earth” identity extends back to prehistoric subterranean-human relationships. Eons upon eons of unrecorded history obscure the time and location of the first subterranean habitation. However, the academic disciplines of paleoanthropology and archaeology unearth distinct mileposts along the subterranean timeline. One of the earliest evidences of human habitation exists within Nelson Bay Cave in South Africa, a site illustrating subterranean human presence approximately 125,000 years ago. Despite

Nelson Bay Cave's impressive quantitative "time stamp," the qualitative evidence upon the Indonesian island of Flores illustrates the presence of core character evolution concepts within subterranean science fiction and fantasy.

Archaeological excavations in 2003 at Liang Bua cave unearthed artifacts, constructs, and processes representative of the established traits along the subterranean timeline. Consequently, Liang Bua cave represents a literal manifestation of abstract subterranean motifs. Liang Bua cave further distinguishes itself as it introduces the labyrinth and maze, unique linear features found within the selected works. Finally, the excavation fuses Vulcanism/Plutonism, Neptunism, and humans within a fantasy-laden environment.

Liang Bua cave contained the remains of an extinct species with genus *Homo*. The remains averaged about 3.5 feet in height, stature ironically identical to Tolkien's hobbits as detailed in the *Lord of the Rings* prologue. Consequently, paleoanthropologists initially suggested *Homo hobbitus* or Hobbit Man as nomenclature for the new species. The suggested title illustrates not only the influence of Tolkien's 1937 subterranean classic *The Hobbit* within dominant cultural discourse, but the association between academic disciplines and subterranean science fiction and fantasy. One downfall of "casting *Homo floresiensis* as 'hobbits' [is] the essential difference between an empirical species, designated a member of the genus *Homo* like ourselves, and the images of literary fiction" (Forth 16). Ironically, this academic concern highlights symbolism, a desired goal within subterranean science fiction and fantasy.

Additional creatures from *The Hobbit* seemingly manifest within Liang Bua cave, as giant lizard remains project a fossilized account of the epic evolutionary struggle between Tolkien's protagonist Bilbo Baggins and antagonist Smaug. The documentation and references to diminutive and giant species within Liang Bau cave introduce the concept of insular bio-systems

within subterranean science fiction and fantasy works: “One of the commonest fantastic devices in literature and legend is the alteration of scale. Mythology and folklore abound with giants and miniature humans, and different perspectives dependent upon changes of scale are central” (Stableford and Langford 518). Within *The Hobbit*, scale manifests through variegated and unique life forms. Lucas’s *Star Wars* expands Subterranea to universal proportions. Within Wells’s *A Story of the Days to Come* and *The Time Machine*, scale assumes “giant” form through an abstract paradigm bent on ultimate and complete annihilation.

Within Liang Bua cave, archaeologists find charcoal, evidence of subterranean fire providing “hobbits” with basic light, warmth, protection, and cooking. Rudimentary fire evolves into a medium symbolic of complex character evolution or self-actualization. The located remains of a stone hearth apparently contained the fires; this feature evolves into the complex forges, lairs, laboratories, reactors, and boiler rooms within the works. The hearth and fire remains lie next to a barren river bed—water. Cumulatively, the remains within Liang Bua cave suggest a highly evolutionary environment once existed within its confines.

Labyrinth and maze features materialize at the western and southwestern sections of Liang Bua cave. These features link Liang Bua with other expansive cave and tunnel systems. The linear passageways penetrate through the entire mountain formation. Prehistoric humans traversed these linear subterranean routes to reemerge upon the surface elsewhere with a new perspective—evolution. The routes beneath Mt. Sneffels, the Lonely Mountain, Dagobah, and London showcase various permutations and outcomes of the labyrinth and maze features within Liang Bua cave.

The process of excavation itself introduces various science fiction and fantasy concepts. The removal of and penetration through vertical strata representing prior centuries, millennia, or

eons constitute a form of time travel or “looking back,” a device used by Verne, Tolkien, and Wells. The effective use of time travel represents a “great literary convenience ... able to move a narrative viewpoint backwards or forwards in time, [illustrating] writers have always been prepared to use whatever narrative devices come to hand for this purpose” (Edwards, Stableford, and Langford 1227). Other than figuratively moving backwards and forwards through time, excavations capture pivotal contemporaneous concepts.

“Hobbit man” excavations created unrivalled interest within dominant cultural discourse, thereby distinguishing it from other excavations in that “almost as extraordinary as the discovery itself has been the media reaction, involving the immediate attention of major newspapers, news magazines and television networks—not to mention the flurry of commentaries appearing on the internet” (Forth 13). This rabidity only partially represents the level of enthusiasm surrounding the 19th-century technology influencing the selected Wells novels. Hobbit man and 19th-century technology represent “not a creation of the popular press, but of the scientific discoverers themselves” (Forth 16). Consequently, Liang Bua cave illustrates subterranean “fusion,” a medley of concepts, paradigms, artifacts, infrastructure, and methodology that forms the unique crux found within every selected work.

Homo sapiens emerge from Subterranea to populate virtually every corner of the globe. The written and visual logograms and petroglyphs abandoned upon subterranean walls figuratively evolve upon the surface through a myriad of expressive communication forms.

Mythology represents one particular form of human communication evolution. Within Western myth, particularly Greek and Roman, unique heroes figuratively enter Liang Bua cave to walk amongst its subterranean constructs, processes, and features, simultaneously introducing new concepts. Greek and Roman deities are the namesakes of Vulcanism/Plutonism and

Neptunism. Core characteristics of these distinct subterranean personages and paradigms exist within Homer's *Iliad*. Neptune/Neptunism's identity emerges through conflict. Zeus, witnessing Poseidon's (Neptune's) destructiveness, sends the messenger Iris from the heavens to order Neptune's cessation and subsequent return to either "the tribes of the Gods, or into the sacred sea" (Homer 63). This geospatial ultimatum associates Neptune's watery niche with punitive and segregative concepts relative to Olympus itself, a concept pursued in detail within *Star Wars* through Anakin Skywalker/Darth Vader's character identity and evolution.

Zeus reconfirms his and Olympus's spatial and hierarchical dominance over other geospatial niches during discourse with Iris. Zeus's physical dominance over Neptune emerges: "lest, be he never so strong, he endure not my coming to war" (Homer 63). Zeus details Neptune's troubles, a "reckless heart [that] giveth place unto pride" (Homer 63-64). Illustrated within the selected works, pride forms the basis of recklessness, rapidity, and catastrophism leading to negative or devolutionary character evolution as illustrated by the characters of Liedenbrock, Denton, Thorin, Smaug, Anakin, and the Emperor. Iris descends to Earth to confront Neptune and relay Zeus's message. At this juncture, specific titles associated with Neptune highlight an already established conflict between himself and Hades (Pluto), the prescribed god of Subterranea. Homer uses the three strategic titles of "Glorious Shaker of Earth," "Girder of Earth," and "Earth-enfolder." The first title evokes imagery and connotations of earthquakes and other subterranean geophysical processes of motion. The second title evokes imagery and connotations of rigid subterranean hierarchy, layering, and structures. The last title evokes imagery and connotations of massive subterranean geomorphology and transformations. Of paramount relevance to this thesis, these titles refer to and introduce Neptune—not Pluto. Consequently, a significant Neptunist association and presence within Subterranea exists at this

time. Unlike Zeus, Pluto finds Neptunist power and advances overwhelming. Homer's *Iliad* illustrates the conflict-ridden and disproportionate struggle between Neptunism and lone Plutonism, as well as the need for the upcoming fusion of Plutonism and Vulcanism to effectively counter Neptunist advances within Subterranea.

The above titles for Neptune highlight a violation of assigned Greek and Roman geospatial rule. Neptune himself confirms this violation through his response to Iris as he directly identifies himself as ruler of the "hoary sea" and Subterranea with "the murky gloom where Hades [or Pluto] fell" (Homer 65). Consequently, Neptune's titles provide evidence of direct invasion against and into Pluto's domains.

In the Roman pantheon, Jupiter rules from lofty Olympus while Neptune commands water mediums and processes, and Pluto rules the dark confines of Subterranea. Pluto "won" Subterranea during a game of lots with Zeus and Neptune. Consequently, chance or luck represents a permanent, constituent part of Subterranea. Pluto's inability to counter Neptunism, as illustrated by the selected passages, highlights a gross deficiency within an otherwise perfectly postured deity. Contrastingly, Neptune wields masterful control over a watery medium as well as a potent arsenal of water-based processes. In defensive posturing, the subterranean construct god Pluto fuses with the subterranean process god of Hephaestus or Vulcan. Consequently, a vehemently omnipotent duo manifests—Vulcanism/Plutonism. Singularly, Vulcan and Pluto represent deficient or incomplete gods. Vulcan wields dominance over powerful, fire-based subterranean features and processes such as volcanoes, yet harbors overt structural or construct deficiencies as illustrated through a lame and misshapen body. Lucas uniquely and creatively expounds upon Vulcan's lame and misshapen identity through the character of Darth Vader within *Star Wars*. Vulcan's contributions to Subterranea emerge from the literal and figurative

concepts surrounding blacksmithing, metalworking, sculpting, and metallurgy. Pluto's primary contribution emerges from the elemental medium of fire, the essence of Subterranea.

The fused name Vulcanism/Plutonism represents complete control of all subterranean constructs and processes. However, the title also highlights the inability of each god or paradigm to singularly and effectively thwart Neptune, a god/paradigm that directly targets this weakness later along the subterranean timeline.

Vulcanism/Plutonism establishes a balanced subterranean construct that thwarts Neptunist advances as well as positions fire-based concepts as the primary paradigm within Subterranea. This alpha positioning of the abstract fire-based paradigm mirrors the previously detailed alpha positioning of literal fire-based features and processes within Subterranea. Consequently, Vulcanism/Plutonism literally and figuratively governs subterranean constructs into which the selected characters enter.

Vulcan/Hephaestus enters Subterranea seeking shelter from societal ridicule of his deformities, fusing with the awaiting Pluto. Subsequently, Greek and Roman heroes begin to enter a dual-inhabited niche. These heroes represent apex character traits within Greek and Roman culture; Subterranea offers a unique geospatial setting in which to showcase them. While modern subterranean science fiction and fantasy uses many Greek and Roman motifs, a primary distinction exists between the two genres—evolution. Modern characters enter Subterranea potentially to self-actualize through newly acquired skills; classic Greek and Roman heroes enter Subterranea merely to showcase existing “surface” skills, traits, and abilities while overcoming unique obstacles. The following selections illustrate typical uses and perceptions of Subterranea by dominant classic Greek and Roman mythology.

The demi-god and founder-hero Heracles/Hercules illustrates the classic hero-figure entering Subterranea to overcome unique obstacles; his quests to steal the three-headed dog Cerberus and rescue Alcestis illustrate this concept. The distinguished founder-hero Aeneas attempts to acquire esoteric information within Subterranea, a classic plot device that evolves along the subterranean timeline within modern science fiction and fantasy as illustrated by Luke Skywalker's evolutionary quest in *Star Wars*. The information-gathering journeys of Aeneas and Luke illustrate distinct uses and perceptions of Subterranea relative to character evolution.

Greek and Roman heroes exhibit no character evolution or self-actualization during their subterranean experiences, as their "surface" identities remain static throughout the storyline. These fully actualized characters enter into and overcome subterranean stressors without any dynamic transformation. Hence, classic subterranean heroes seemingly possess no deficiencies, and character adaptation represents a foreign and unrequired concept. These "perfect" characters merely showcase skills within exotic subterranean arenas, coliseums where preexisting characteristics and skills overcome subterranean demands. Ironically, this definition describes *The Time Machine's* Time Traveller, a self-actualized alchemist forced to showcase and use Vulcanic/Plutonic concepts for mere survival within a Neptunist coliseum.

Despite the absence of character evolution within classical Subterranea, the classical theme of destiny evolves into a crucial—though devolutionary—concept within modern science fiction and fantasy as illustrated in *Star Wars* and *Journey to the Center of the Earth*. Lucas's *Star Wars* storyline centers upon a destiny-laden personage—Anakin/Darth Vader, a character crippled by lack of independent thinking and decision-making. Verne's *Journey to the Center of the Earth* further illustrates these devolutionary concepts through Professor Liedenbrock, another character devoid of personal decision-making processes. Verne's professor figuratively and

literally adheres to a predetermined route previously mapped by the alchemist Saknussem. Furthermore, the professor completely adheres to the single paradigm of Neptunism throughout the journey. Anakin/Darth Vader and Liedenbrock illustrate character pathways completely dictated by established “roadmaps” presented to them by subterranean masters, possessors of esoteric knowledge garnered through self-experience. Despite the opposing paradigm alignments of the two respective secret masters Saknussem and the Emperor—Vulcanic/Plutonic versus Neptunist—the concept of destiny forces each “student” along a devolutionary path of least resistance towards a stagnant core. Consequently, the selected works showcase the severe qualitative and quantitative ramifications of character adherence to destiny concepts within Subterranea.

The Greek/Roman concept of luck or chance, fused with Subterranea during a game of lots between gods, evolves along the timeline into an obscure, yet integral, component of subterranean character experiences, particularly within *The Time Machine* and *The Hobbit*.

This thesis demands the mentioning of pronounced Neptunism within classical Subterranea. A unique example includes Neptune’s son Theseus violating Subterranea to directly abduct Pluto’s wife Persephone. Theseus’s actions, however, merely represent minor antagonisms within an overarching Neptunist assault against and within Vulcanic/Plutonic Subterranea. Paramount examples include the five subterranean rivers of Styx, Phlegethon, Acheron, Lethe, and Cocytus, which penetrate to Subterranea’s core and converge upon a vast marshland, a unique evolutionary environment of Vulcanism/Plutonism and Neptunism that evolves into the potent evolutionary swamps of Dagobah within *Star Wars* later along the timeline. Each river of Hades represents distinct subterranean concepts. Styx forms a boundary between the surface and Subterranea, thereby manifesting—and justifying—the earlier-

mentioned subterranean titles referencing Neptune. Within the waters of Styx swirls a trait particularly lethal to character evolution—hate. Water and emotion fuse, reflected through Styx’s alternate title of “the river of hate,” a fusion of classic Neptunist medium and emotion that forms the crux of Anakin/Darth Vader’s devolutionary trajectory within *Star Wars*. The river Phlegethon or “the river of fire” figuratively blends with “the river of hate,” visually illustrated by Lucas upon the planet Mustafar, where Anakin/Darth Vader physically and symbolically transforms upon a riparian landscape of hate and fire. The river Acheron illustrates various associated subterranean themes. Acheron flows into the Ionian Sea, the deepest point in the Mediterranean Sea, as well as one of the most seismically active areas in the world. Consequently, Acheron’s waters represent the core subterranean features and characteristics of fire, water, depth, and conflict. Neptunism’s subterranean influence increases through Lethe, a river associated with the subterranean cave of Hypnos. As the waters of Lethe flow around Hypnos, any person drinking from these waters experiences complete forgetfulness, a character trait culminating within subterranean storylines as characters become “lost.” Tolkien and Verne each use the literal act of drinking this “water of forgetfulness” as a pivotal plot device. Illustrating Subterranea’s dualism, another permutation of the word Lethe means “truth,” the primary goal of character penetration into subterranean science fiction and fantasy constructs. Grief, regret, and sorrow churn through the waters of Cocytus, a river foreshadowing Subterranea’s ultimate fate. These emotions manifest at the massive, desolate, and frozen sea by which a lone Time Traveller stands within the final pages of Wells’s *The Time Machine*.

Greek and Roman Subterranea evolves upon the timeline through the cognate disciplines of mining, blacksmithing, and alchemy. Mining represents a process of exploration to locate and retrieve valued metals, ores, or gems from subterranean environments. This process figuratively

illustrates self-actualization, a quest for subterranean truth. Unimportant, common, or unrestricted resources require no mining; consequently, the attributes of worth, rarity, or restriction envelop the discipline. Subterranean characters represent miners, individuals seeking hidden, valued commodities of information, experience, and artifacts. Once located, these unrefined products require “processing” through which characters synthesize and internalize acquired subterranean concepts. During this process, unique subterranean “secret masters” take center stage.

Secret masters emerge as figurative blacksmiths or alchemists, personages assisting and directing character transformation processes within Subterranea. Each profession represents figurative transformative constructs and processes governed by knowledge privy to limited and select members. The manipulation and transformation of base subterranean materials into refined products through the use of fire showcases the strong link between alchemy and blacksmithing. Not only do alchemists and smiths assist in the transformation of characters, but they themselves evolve within modern subterranean science fiction and fantasy.

Pluto provides subterranean space for forges; the secret master Vulcan ignites and wields the fiery processes found within them. This duo shares their fiery transformative world with Neptunism or water, a secondary and conflicting paradigm or medium. Permanently interjected into Subterranea via the five earlier-described rivers, Neptunism’s presence reflects more than Vulcanic/Plutonic tolerance. Within the figurative forges and laboratories of Subterranea, smiths and alchemists require water.

Amidst a forge environment, water enables rapid cooling of worked and heated materials to obtain critical evolutionary properties. Rapid cooling thwarts devolutionary, low-temperature

phase transformations that result in impurities, instabilities, and weaknesses, and also increases hardness or resiliency.

Various permutations of the forge manifest within the selected works, illustrated by Wells's Labour Company facilities in *A Story of the Days to Come* and Tolkien's dragon hoard in *The Hobbit*. Lucas's *Star Wars* showcases a particularly unique permutation of forge and refinement concepts at the locations of Mustafar and Cloud City. Despite a definitive presence of the smith and forge within the works, the alchemist emerges as the de facto secret master, a personage represented within, and influencing, each subterranean work.

The classic alchemist searched for two distinct concepts, the Philosopher's Stone and the Elixir of Life. The former represents qualitative attainment, the latter quantitative attainment. The Philosopher's Stone requires sophisticated manipulation and transformation of base elements such as iron, lead, and copper into a complex, apex material—gold. This coveted element doubles as a figurative representation for self-actualization within subterranean science fiction and fantasy. Self-actualization represents the apex level of evolutionary achievement by a “base” character through which his maximum or full potential emerges—a “golden form.” This process mirrors the alchemical quest to transform base materials into gold. A selected passage from the alchemist Roger Bacon illustrates the figurative connection between subterranean alchemical processes and subterranean character evolution processes: “that by our wisdom and discretion, and by our artificial fire, we may attain unto the uttermost cleanness of it, and the purity of the flame, and bring it to that pass, that after the work ended, it might be a thousand thousand times more strong and perfect” (Bacon 8). A character using wisdom and discretion amidst Subterranea's trials may potentially pass through the fire-laden construct to become a stronger, golden version of his previous surface identity.

Hermeticism, the core philosophy of alchemy, furthers the association between alchemy and Subterranea through the characteristics of depth and layering via “as above, so below,” a principle detailing that experiences on any one “level” of reality manifest results on other levels. Distinctions between subterranean layers, relative to the above surface, quickly emerge as a superficial example. However, a subtle and sophisticated psycho-social example also emerges. Character evolution represents an internal process of advancing through complex psychological levels to potentially culminate at the apex level of self-actualization. Dynamic evolutionary experiences and advances “above” in a character’s head directly mirror or reflect the level of dynamic penetration reached at “below” subterranean levels. Self-actualization emerges as the ultimate illustration of “as above, so below.” Bilbo Baggins’s evolution, relative to Tolkien’s Middle-earth construct, deftly illustrates this concept.

As with forges, the transformative processes within alchemy directly require water. Water represents the sole ingredient for argent-vive, an esoteric element formed through a fusion of water, heat, and time deep within Subterranea. The Philosopher’s Stone, the quest for figurative and literal gold, requires argent-vive. Consequently, water and fire effectively coevolve unrefined items and characters within literal and figurative forge and laboratory environments.

Portals enable characters to enter the above evolutionary forges and laboratories. Variegated features and constructs represent portals. Examples within *The Hobbit* range from basic physical caves to complex abstract psycho-social constructs. Despite portal variations, each effectively transports a character into an environment housing evolutionary potential. A glaring exception from the selected works materializes—the Time Traveller. Consequently, Wells’s *The Time Machine* represents a unique retrospective analysis showcasing contributive devolutionary

variables. Portals connect known worlds with unknown worlds; each represents a distinct paradigm. A character's established surface paradigm immediately clashes with the awaiting subterranean paradigm. Consequently, psychology and sociology act as influential disciplines for analysis of the selected works.

Upon entering Subterranea, varied psycho-social stressors immediately challenge a character's homeostasis, a condition of stability and constancy. Life inherently strives to maintain equilibrium. Conflicts manifest from the difference between current character identity and required character identity. Character inability to address the stressors and conflicts results in death, expulsion, or assimilation. Character adaptation through acquisition of new skills, paradigms, and artifacts leads to evolution.

Unique stressors and variables enable subterranean character evolution, a personal, introspective journey represented by Person-Environment Interaction (PEI), a formal theory quantifying discordancy or incongruence between an individual and an environment. Within subterranean science fiction and fantasy, "Person" represents character surface identity upon initial entrance into Subterranea or "Environment." "Interaction" illustrates any actions or processes undertaken by "Person" to overcome, avoid, or assimilate subterranean stressors. The character's initial "Interaction" creates litmus, a distinct marker allowing quantification and tracking of all forthcoming subterranean interactions and evolution. Within the selected works, "Person" and "Environment" represent static concepts; "Interaction" represents the only dynamic or modifiable variable.

Surface experiences, discourses, abilities and roles form a character's "Person." Conflicts resulting from new subterranean stressors, relative to "Person," produce discordancy. Stressors range from physical conditions such as darkness, confinement, heat, deprivation,

isolation, and exertion to the complex stimuli of time travel, alpha predators, and altered states. Interaction with these stressors highlights incongruence between character and environment. The difference between “Person” and “Environment” creates a “subterranean demand,” a deficit that must be satisfied for character evolution to transpire.

Subterranean demand creates a new and modified character role, an identity highlighting increased and differentiated role responsibilities within Subterranea. The ambiguity of this new role creates classic subterranean symptoms such as indecisiveness, confusion, and hopelessness. Every character within the selected texts displays these characteristics. Each character’s “Person” directly influences the construct into which Subterranea places them. Ultimately, these constructs contain stressors specifically designed to create discordance. A primary example emerges from group or solo roles. Subterranean group experiences typically require assimilation, control, and evolution of complex psycho-social concepts, illustrated by Wells’s *A Story of the Days to Come*, a story illustrating a classic psycho-social group construct where Denton, a surface pacifist, academic, introvert, and loner, finds himself within a violent social construct demanding pugilistic interaction with “uneducated” persons. This unique gestalt houses a complete character experience enabling his eventual self-actualization. Solo experiences typically require assimilation, control, and evolution of primal emotions, illustrated by Tolkien’s *The Hobbit*, Lucas’s *Star Wars*, and Wells’s *The Time Machine*. Tolkien’s *The Hobbit* illustrates the classic subterranean solo experience. Bilbo Baggins, a genial community fixture who loves gardens and order, finds himself within harsh, foreign, and restrictive constructs demanding solitary, impromptu engagement with various alpha predators. The above examples illustrate the strategic nature by which Subterranea assesses and then subsequently exposes characters. In essence, Subterranea’s primary function emerges as the placement of characters within antithetical

environments. The selected works illustrate various permutations of the group and solo role concept.

Character evolution represents a private, internal transformation. Nowhere “on earth” resides a more appropriately private, transformative environment than “within earth.” Within Subterranea’s confines, character transformation “tends not to be arbitrary. Often it reveals the real nature of the subject. . . . However a metamorphosis can be understood—whether longed-for or abhorred by the subject—it does not happen by accident: it comes from the nature of the subject” (Clute and Langford 1999). Subterranea harbors and stokes the fires of character transformation. It is into these fires that Professor Liedenbrock now enters via arguably the de facto flagship work of subterranean science fiction and fantasy—Jules Verne’s *Journey to the Center of the Earth*.

Works Cited

- Bacon, Roger. *The Mirror of Alchimy*. London: Printed by Thomas Creede for Richard Oliue, 1597. Ebook.
- Clute, John, and David Langford. "Metamorphosis." *The Encyclopedia of Fantasy*. Eds. John Clute and John Grant. New York: St. Martin's Griffin, 1999. 641-42. Print.
- Edwards, Malcolm, Brian M. Stableford and David Langford. "Time Travel." *The Encyclopedia of Science Fiction*. Eds. John Clute, David Langford, Peter Nicholls and Graham Sleight. New York: St. Martin's Griffin, 1995. 1227-29. Print.
- Forth, Gregory. "Hominids, Hairy Hominoids and the Science of Humanity." *Anthropology Today* 21.3 (2005): 13-17. Print.
- Hartwig, George. *The Subterranean World*. London: Longmans, Green. 1871. Print.
- Homer. *The Iliad of Homer Done into English Verse*. Trans. Arthur S. Way. London: Sampson Low, Marston, Searle & Rivington Limited, 1888. Print.
- Langford, David, and Everett F. Bleiler. "Underground." *The Encyclopedia of Science Fiction*. Eds. John Clute, David Langford, Peter Nicholls and Graham Sleight. Web. 14 Oct. 2015.
- Stableford, Brian. "Scholarly Fantasy." *The Encyclopedia of Fantasy*. Eds. John Clute and John Grant. New York: St. Martin's Griffin, 1999. 842-43. Print.
- Stableford, Brian M. and David Langford. "Great and Small." *The Encyclopedia of Science Fiction*. Eds. John Clute, David Langford, Peter Nicholls and Graham Sleight. New York: St. Martin's Griffin, 1995. 518-20. Print.
- Verne, Jules. *Journey to the Center of the Earth*. Trans. Scott McKowen. New York: Sterling, 2007. Print.

Chapter 2 – *Journey to the Center of the Earth*

The two centuries preceding *Journey to the Center of the Earth*'s 1864 publication showcase dynamic evolutions within academic paradigms influential to Subterranea. Paradigm shifts, as seen in major works by Athanasius Kircher, Thomas Burnet, Anton Lazzaro Moro, James Hutton, Abraham Werner and Charles Lyell, form the literal and figurative bedrock upon which *Journey to the Center of the Earth* rests: “in Verne’s *Journey to the Center of the Earth*, scientific pedagogy provides the necessary perspective and justification through the thrill of a unique ‘life-through-time’ experience” (Debus 415). These works afford Verne an opportunity to integrate various evolutionary concepts into his novel. Despite the emphasis on scientific pedagogy, Verne’s characters form the crux of a storyline “framed within a (secondary) disbelief [that] suspend[s] geological debate over the Earth’s central heat. [Consequently], Verne’s real focus is on organic transformation” (415). Despite the concerted focus on “organic transformation,” Professor Liedenbrock represents the only character from the selected works to forego transformation within evolutionary Subterranea.

Athanasius Kircher’s *Mundus Subterraneus, Quo Universae Denique Naturae Divitiae* (1665) emerges as arguably the most comprehensive analysis of Subterranea ever written. The work represents a single repository of all “factual” and “scientific” subterranean knowledge until its publication date through its integration of concepts from disciplines and genres currently identified as theology, mythology, alchemy, geology, philosophy, engineering, chemistry, metallurgy, science fiction, and fantasy. The voluminous twelve-volume book work foreshadows the evolutionary concepts found within the selected subterranean science fiction and fantasy works. Consequently, *Mundus Subterraneus* manifests upon the subterranean timeline as the original subterranean analysis. The work emphasizes “hard science,” disciplines using rigorous

methodology, precision, and objectivity. The inclusion of alchemy and mythology, crucial concepts within subterranean science fiction and fantasy, fleshes out the work.

Mundus Subterraneus fuses literal volcanic features with figurative alchemic experiments. This unique fusion then integrates character evolution components through analysis of subterranean animal life showcasing human fossils within linear evolutionary frameworks containing divine beings or “golden forms.” Consequently, Kircher’s work represents the earliest form of character evolution within Subterranea.

The dragon, an apex subterranean alpha-predator showcased later within Tolkien’s *The Hobbit*, originally emerges within Kircher’s work. Through text and illustrations, Kircher presents the dragon as a complete subterranean stressor uniquely interacting with characters. Consequently, the pivotal conflict between the hobbit Bilbo Baggins and the dragon Smaug figuratively manifests in print roughly two and a half centuries prior to *The Hobbit*’s publication.

Finally, *Mundus Subterraneus* showcases the pivotal conflict between Vulcanism/Plutonism and Neptunism. Amongst the myriad of pages detailing fire-based phenomena resides a plethora of conflicting and counterbalancing water-based phenomena. Kircher’s work introduces the balanced and evolutionary environment into which Professor Liedenbrock enters.

In 1681, English theologian Thomas Burnet (1635-1715) published *The Sacred Theory of the Earth*, a speculative text introducing a massive hollow environment inside Earth, a concept later known as Hollow Earth Theory. The work illustrates how catastrophic water-based events such as Noah’s flood or universal deluge produce the transformational processes and features within, and upon, Earth. This specific emphasis on Neptunism and Hollow Earth Theory forms the crux of *Journey to the Center of the Earth*.

Vulcanism/Plutonism formally emerges on the timeline through the work of Anton Lazzaro Moro (1687-1764), an Italian abbot and geologist who studied subterranean volcanic processes. Moro proposed that rocks were formed within environments dominated by fire-based processes, a concept radically conflicting with Burnet's Neptunist theory. The academic bout between Vulcanism/Plutonism and Neptunism formally begins. Importantly, *Journey to the Center of the Earth* showcases Moro's subterranean Vulcanism/Plutonism alongside Burnet's subterranean Neptunism. Liedenbrock's refusal to acknowledge these Vulcanic/Plutonic concepts ultimately creates his unique and devolutionary subterranean experience within the novel.

In 1788, James Hutton (1726-1797) published *Theory of the Earth; or an Investigation of the Laws Observable in the Composition, Dissolution, and Restoration of Land upon the Globe*. This work weaves the subterranean characteristics of heat and pressure into a uniformitarian theory showcasing the "rock cycle," a process detailing the gradual and continuous formation of Earth through Vulcanism/Plutonism. Like Moro's theory, Hutton's theory clashes with Burnet's catastrophic Neptunist paradigm of water-based "one-offs." Importantly, Hutton's theory highlights transformation through fire and pressure, figurative and omnipresent characteristics within subterranean character evolution.

Contrasting Hutton and Moro, the German geologist and mineralogy professor Abraham Werner (1749-1817) proposes that rocks form within the waters of Earth's early oceans. Of paramount relevance to an analysis of *Journey to the Center of the Earth*, the characteristics and identity of Professor Liedenbrock mirror those of Abraham Werner in virtually every aspect. Liedenbrock, also a German geologist and mineralogy professor, overtly adheres to Wernerian Neptunism, a theory that exaggerates the role of water within Subterranea at the expense of fire.

Werner figuratively usurps the transformative powers from Vulcanism/Plutonism and reassigns them to Neptunism, an action mirrored by Liedenbrock within *Journey to the Center of the Earth* at five distinct and strategic locations. The beliefs of Liedenbrock and Werner derive from “absolutes” since Wernerian Neptunism represents a rigid theory not open for speculation or modification. These traits dominate Liedenbrock’s perspective and actions throughout his subterranean journey, as well as Anakin/Darth Vader’s devolutionary journey within *Star Wars*. Liedenbrock’s trek within *Journey to the Center of the Earth* represents the figurative descent of Abraham Werner into a subterranean world housing Vulcanic/Plutonic processes and features diametrically opposing his Neptunist theory.

Vulcanism/Plutonism reasserts itself via Charles Lyell (1797 –1875), a British geologist who published *Principles of Geology* between 1830 and 1833. Lyell evolves Hutton's Vulcanism/Plutonism into a complex, comprehensive theory of change illustrating massive dynamics and fluidity. Subterranea and Vulcanism/Plutonism inherently affect, and are affected by, change or evolution. Rigid Neptunism falls to a secondary and supportive role within figurative Subterranea through an inability to self-modify or evolve. Unable to evolve, Neptunism’s only recourse to reestablish itself as the apex subterranean paradigm emerges as the complete eradication of Vulcanism/Plutonism, a process detailed through the selected Wells works.

Ironically, despite the overt paradigm shifts, Jules Verne emerges “as someone behind his time rather than truly in tune with contemporary developments” (Unwin, “Jules Verne” 8). Verne’s asynchronous identity emerges through discordance with concepts relative to the Vulcanism/Plutonism versus Neptunism debate. Neptunism’s demise in the 1830s leads to a natural assumption of Verne integrating and using Vulcanism/Plutonism, the de facto geological

paradigm during the years *Journey to the Center of the Earth* was written, as the primary paradigm. However, Liedenbrock's actions represent complete divergence or incongruity with Vulcanism/Plutonism. The professor vehemently adheres to Subterranea's longtime nemesis—Neptunism.

Liedenbrock materializes upon the subterranean timeline definitively associated with his house study, a surface construct littered with static, devolutionary characteristics created through references to dust, museums, death, and depreciation. Consequently, this feature emerges as an architectural manifestation of the professor himself. The house sits adjacent to a canal, a water feature that literally and figuratively illustrates the genesis of Liedenbrock's Neptunist journey. The canal's waters saved Liedenbrock's house from fire, the quintessential symbol of Vulcanism/Plutonism, during the great 1842 Hamburg conflagration. Mineralogy, Liedenbrock's professional field of study, represents a branch of geology riddled with "half-Greek" and "half-Latin" terms. These "halves" represent incomparability, partiality, and imperfection, characteristics emerging through Liedenbrock's professional vernacular, a restrictive language used throughout the novel at the expense of his fluent or "whole" Icelandic, German, French, Hebrew, English, Italian, and Latin.

Liedenbrock's characteristics and surroundings introduce the professor as a Neptunist extension: "the figures of Vulcan, Prometheus, Icarus, Neptune and others reappear in modern guise, as engineers and scientists become godlike creatures in turn" (Unwin, *Jules Verne* 30). As with Neptune, Liedenbrock exhibits a "restless impatience" and has "no notion how to wait; nature herself was too slow for him" (Verne 5). These Neptunist traits fuse with iron, an element and character trait describing Liedenbrock's disposition. Iron, a base element with unique traits relative to evolution concepts, represents the most common element within Subterranea; its

elemental and ubiquitous nature clashing with the complex and esoteric traits of gold, the literal and figurative apex element within alchemy. The use of subterranean elements enables “Verne [to become] a mythologist [as] his work resembles the imaginary world of alchemy, where ‘symbols are variable terms, their meaning specified by their grouping’” (Smyth 95). Gold and iron reside within a specific and small grouping of six elements within Roger Bacon’s *Mirror of Alchemy*. Within this work, gold represents a perfect body requiring no other substances or processes. Contrastingly, iron represents an unclean and imperfect body requiring fusion, purity, and weight (Bacon 3). Despite this uncleanliness and imperfection, iron’s required fusion and purity illustrates character evolution processes within Subterranea. Additionally, iron’s softness and malleability, as well as the need for “impurities” to harden and strengthen it, further illustrate subterranean character transformation. Although not self-actualization or “gold,” this transformation still illustrates progressive character evolution. Verne highlights these two elements within Liedenbrock’s stagnant study: “iron [and] gold, [represent] metals whose current value altogether disappeared in the presence of the republican equality of scientific specimens” (Verne 6). Reintroduced into a dynamic subterranean framework of Vulcanism/Plutonism, these two elements regain evolutionary characteristics and concepts.

Evolutionary “gold” concepts within *Journey to the Center of the Earth* reflect the influence of Edgar Allan Poe, an author with “perhaps the most important literary influence on the *Journey* (Butcher 13). Verne’s simultaneous 1864 publishing of both *Journey to the Center of the Earth* and *Edgar Allan Poe and His Works* reflects Poe’s general influence; Verne’s emphasis on “The Gold Bug” and *The Narrative of Arthur Gordon Pym* within *Edgar Allan Poe and His Works* reflects Poe’s influence upon character evolution and paradigm alignment within *Journey to the Center of the Earth*. These two Poe works illustrate the core concepts found

within *Journey to the Center of the Earth*. Alchemic character evolution concepts manifest in “The Gold Bug,” a story detailing character obsession with subterranean treasure upon being bitten by an exotic bug made of pure gold. Disproportionate paradigm alignment emerges through *The Narrative of Arthur Gordon Pym*, a text dominated by a classic sea journey, a literal and figurative mode of conveyance within *Journey to the Center of the Earth* illustrating Liedenbrock’s complete Neptunist alignment at the expense of Vulcanism/Plutonism.

Opportunity for Liedenbrock to enter Subterranea emerges through a book containing a subterranean message from the secret master Arne Saknussemm, a 16th-century alchemist. Saknussemm represents the first alchemist from the selected works upon the subterranean timeline. Despite being a savant of the hard sciences, Liedenbrock immediately recognizes the provenance of the alchemic author.

Liedenbrock’s “pre-descent” character conceptually comprehends the evolutionary potential located within awaiting Subterranea as exhibited by his academic research contributions titled “A Treatise upon Transcendental Crystallography.” This symbolic title figuratively and effectively encapsulates the complete process of character evolution within Subterranea. “Treatise” represents concentrated knowledge illustrating systematic and distinct stages, a concept representing the gradual, progressive stages of subterranea character evolution. “Transcendental” reflects hierarchical concepts existing outside of normal—or surface—constructs, a concept representing apex or gold ideals located within stratified Subterranea. “Crystallography” refers to the study of internal structures and arrangements, a concept representing internal character change or transformation. Ultimately, *Journey to the Center of the Earth* illustrates Liedenbrock’s inability to transfer his conceptual understanding of transformation processes into a literal subterranean construct.

Gold and evolution concepts fuse following an academic conversation, discourse highlighting the perceived transformative properties and stages of gold when exposed to subterranean heat, between Liedenbrock and his nephew Axel. The discussion climaxes when Liedenbrock places a quantity of gold in a leather belt, a “supportive” item carried upon his person throughout the upcoming trip. Liedenbrock states: “equipped like this...there is no telling how far we may go” (Verne 64). This belief not only illustrates the professor’s adherence to static, non-evolutionary concepts tied to literal gold within his surface library, but also foreshadows his upcoming inability to recognize and capitalize upon dynamic, evolutionary concepts of subterranean gold. The “gold” in hand and already achieved, Liedenbrock’s upcoming journey now centers completely upon evolutionary concepts associated with iron.

Before descending into Subterranea, Liedenbrock violates the essence of character evolution concepts awaiting him below: “The earth has been heated by combustion on its surface, that is all.... [W]hen the waters penetrated into the fissures of the crust of the earth, they broke out into fresh combustion with explosions and eruptions. Such was the cause of the numerous volcanoes at the origin of the earth” (34). As did Werner, Liedenbrock usurps subterranean processes and potency from Vulcanism/Plutonism and reassigns them to Neptunism. This action figuratively establishes Neptunism as the dominant paradigm within “Liedenbrock’s Subterranea.” Importantly, all of the professor’s forthcoming actions within *Journey to the Center of the Earth* illustrate a continuation of this single pre-descent alignment.

Liedenbrock descends “[with]in the mythology of the intermittent fertility of the Earth-Mother, [as] volcanoes naturally have a special place...in Verne’s universe; they provide the most dramatic thresholds, initiatory access to the *point supreme*” (Smyth 98). This mythic threshold manifests as the Icelandic volcano of Mt. Sneffels, a feature under which lies a

complex, evolutionary world. Liedenbrock's journey to Mt. Sneffels from Hamburg requires a sea journey, a mode of transport that introduces and inundates the subterranean portal amidst stagnant and devolutionary concepts. The volcano's location highlights the concerted effort by Verne to illustrate a continuous Neptunist journey by Liedenbrock. As a plethora of land-based volcanoes existed upon the European continent which Verne could have potentially chosen, several in Liedenbrock's native Germany, this idea of a seamless Neptunist journey strengthens.

The *Valkyrie*, the ship transporting Liedenbrock, further illustrates the professor's devolutionary Neptunist trajectory. Within Norse mythology, valkyries represent female personages tasked with choice at a symbolic life juncture, the life or death of individuals in conflict. Upon the *Valkyrie*, Liedenbrock figuratively awaits life (evolution) or death (devolution). Despite the enveloping stagnant, water-based concepts, iron's evolutionary characteristics emerge within hidden figurative embers, a character evolution plot device also used by Wells in *A Story of the Days to Come*. Coal, a primary reducing agent during iron smelting within forge furnaces, appears as the first listed cargo upon the *Valkyrie*. Though subtle, this Vulcanic/Plutonic reference hints at the potential, yet limited, character evolution still available if paradigm realignment occurs.

Upon reaching Iceland, Liedenbrock enlists Hans to act as guide, and the party subsequently treks to Mt. Sneffels. Atop the volcano rests a granite boulder etched with Arne Saknussemm's name. The boulder represents one of two pivotal geospatial points along Saknussemm's earlier, and Liedenbrock's current, route. Liedenbrock figuratively begins his journey with Saknussemm at this 16th-century marker. The second granite place marker located far below in Subterranea represents a symbolic divergence point. For the 16th-century alchemist,

the second marker represents the beginning or entrance into deeper, abstract subterranean levels or concepts; for Liedenbrock, the second marker represents his exit point from Subterranea.

Liedenbrock stands at the location where “Sneffels had driven forth fire and lava from its central furnace” (Verne 89). Entrance into this furnace requires the correct selection of one of three chimneys—three possible routes. Liedenbrock successfully “chooses” the correct chimney through adherence to Saknussem’s journal, marking the first of many subterranean obstacles surmounted through no effort or understanding by the professor.

Liedenbrock encounters a variety of stressors within Subterranea. Anticipating these stressors, the professor brings a myriad of surface supplies including instruments, tools, arms, and provisions. Consequently, Liedenbrock effortlessly descends the chimney that undoubtedly presented Saknussem with multiple stressors. Throughout the novel, these surface supplies allow Liedenbrock to overcome subterranean obstacles or demands without error or hesitation. Ironically, “error and inaccuracy, as a central part of Verne’s system, are a necessary stage in the discovery of knowledge, since knowledge is only relative and can only be a process of gradual correction of previous errors” (Unwin, “Jules Verne” 7). Liedenbrock’s impatience and rapidity manifests the preponderance and use of the surface supplies. The effectiveness and rapidity at which the surface supplies overcome subterranean obstacles occur at the expense of Liedenbrock acquiring subterranean knowledge. Consequently, his character evolution potential proportionately disappears. Contrastingly, Tolkien’s Bilbo Baggins traverses a subterranean landscape without any surface artifacts and identity; the tools used within the hobbit’s journey represent acquired subterranean skills and knowledge. Through the supplies, two characteristics foreshadowing Liedenbrock’s upcoming journey emerge. First, Liedenbrock brings no water into Subterranea; the professor will depend on subterranean springs throughout his entire journey.

Liedenbrock's unending search for this most essential of basic needs within unknown subterranean confines emerges as the literal and figurative crux of his character evolution—or lack thereof.

Secondly, the supplies include Rhumkorff lamps, apparatuses used to light Subterranea's dark confines. Rhumkorff lamps were created to replace natural flame torches used within subterranean environments, particularly those during mining. Rhumkorff lamps contain no fire, the symbolic crux of evolutionary Vulcanism/Plutonism. Liedenbrock's fireless subterranean light source figuratively replaces the evolutionary flames which guided Saksussemm during his 16th-century journey with a technology consisting of tubes, batteries, and coils. Saksussemm and Liedenbrock literally and figuratively explore Subterranea through different perspectives or paradigms created through disparate methods of illumination, a process describing a method of supplying light as well as intellectual or spiritual enlightenment. This concerted and symbolic use of technology, illumination, and light source seen within *Journey to the Center of the Earth* evolves along the subterranean timeline, culminating as primary character evolution concepts within Lucas's *Star Wars*.

Thus illuminated, the party descends 3,000 feet into the vertical chimney, a feature that subsequently changes into a horizontal lava tube. Lava tubes represent subterranean labyrinths, linear features dictating movement by forcing characters through predetermined routes. Further along and within these predetermined routes, a unique and symbolic alpha-stressor typically awaits. Consequently, labyrinths represent constructs that test a character's current evolutionary stage. The Minotaur-laden labyrinth within Greek mythology, as well as the Sith-laden labyrinth of Lucas's Cloud City, illustrates a unique alpha-stressor hidden along a predetermined route specifically designed for forced character interaction. Contrastingly, subterranean mazes reflect

character choice or options, a concept where multiple routes or pathways exist within a single feature. Importantly, the earlier-mentioned chimneys atop Sneffels represent a maze construct of three distinct pathways, each leading characters through a distinct construct harboring various knowledge and tests relative to character choice. Liedenbrock's use of Saknussemm's journal removes the learning potential associated with maze choice and transforms the feature into a labyrinth or test feature. This new labyrinthine test feature transforms into a worthless construct with no character evolution value, as Liedenbrock uses the surface supplies to quickly and effortlessly descend.

The awaiting alpha-stressor within the horizontal lava tube poignantly manifests as thirst, the lack of water. Prior to experiencing thirst, Liedenbrock effortlessly overcomes the labyrinthine stressors of hunger, fatigue, fear, and darkness through the surface supplies. These wasted evolutionary experiences transpire amidst environments resplendent with various Volcanic/Plutonic phenomena. Liedenbrock, an avid classifier, deems none of these phenomenon worthy enough to be named. Subterranean nomenclature represents a process where personal values are assigned to newly introduced features or concepts. The omission of Volcanic/Plutonic nomenclature during the early stages of the journey introduces a pattern of devolutionary behavior, culminating with a preponderance of Neptunist-named features later along the journey.

The labyrinthine lava tube abruptly transforms into a maze as two distinct tunnels, one leading west and one leading east, emerge. Choice, removed at the three chimneys atop Sneffels, again materializes along Liedenbrock's journey. At this strategic geospatial stressor, three character evolution concepts emerge. First, Saknussemm's journal mentions nothing of this juncture. Consequently, upcoming actions reflect Liedenbrock's internal instincts rather than Saknussemm's. Next, the seemingly omnipotent surface supplies become deficient in the

presence of this new subterranean stressor. Lastly, Liedenbrock illustrates classic Neptunist catastrophism and rapidity as he haphazardly chooses the eastern tunnel without hesitation or contemplation.

The above three character evolution concepts fuse and create a tunnel feature rampant with devolutionary concepts. Linear temporal references illustrate a devolutionary trip through time. The party initially travels through subterranean features of Gothic architecture existing within the high and late medieval periods. Subsequently, the party encounters subterranean features indicative of Romanesque architecture. Further along the tunnel, low structures resembling beaver huts emerge. Liedenbrock figuratively travels back into prehistoric periods and evolutionary stages reflective of Liang Bua cave. This time travel transpires amidst a sustained and bearable temperature, an environmental condition that when coupled with the tunnel's upward trajectory towards the surface away from the Volcanic/Plutonic core illustrates overt Neptunism. Indicative of this Neptunism, Liedenbrock repeatedly slides, scrambles, and tumbles along this devolutionary tunnel.

The eastern tunnel journey terminates with symbolism and irony amidst a stratified layer containing fossil remains of ancient seas and marine life. Liedenbrock admits within this watery layer his blatant divergence from levels containing fire-based phenomena. Surrounded by fossilized images of marine and sea life, the party suffers from acute dehydration. Rationing of water, the essence of Neptunism, commences as the party figuratively retrace their steps through time towards the tunnel confluence point.

Evolutionary concepts immediately manifest when the party enters the western tunnel. Green, a color indicative of growth and rebirth, permeates the rock beds. Copper and manganese, core alchemic elements, appear in broad threads. Gold, the apex alchemic element representing

self-actualization, periodically materializes within the rock matrix. The western tunnel leads to a world of evolutionary concepts “buried at such profound depth...that they run no chance of ever being molested by the pickaxe or the spade” (Verne 117). Indicative of evolutionary subterranean environments, Neptunist concepts and features coexist alongside Vulcanic/Plutonic concepts and features, illustrated when the party detects an almost imperceptible murmur of water behind the tunnel walls. Liedenbrock’s party brandishes the above-referenced pickaxe to symbolically molest the evolutionary path in search of immediate satisfaction of thirst. Nothing—to include character evolution—could “be more delicious than the sensation that [their] burning intolerable thirst was passing away” (122). Within a tunnel of coexisting paradigms, Liedenbrock overtly aligns with Neptunism at the expense of Vulcanism/Plutonism. Gushing water from the hole in the wall forms an artificial stream, a linear Neptunist feature now running down the western tunnel. This stream will instantaneously quench any forthcoming thirst, its literal function. Liedenbrock introduces the stream’s figurative function: “with this stream for our guide, there is no reason why we should not succeed in our undertaking” (124). Subterranean success, according to Liedenbrock, requires Neptunist guidance. This Neptunist lifeline represents the first feature worthy of nomenclature, and the professor names the stream Hansbach in honor of the Icelandic guide who penetrated the wall upon his command. The Hansbach introduces a pivotal leitmotif within *Journey to the Center of the Earth*, as Liedenbrock will consistently showcase a predisposition towards Neptunist features and concepts amidst coexisting Vulcanism/Plutonism and Neptunism.

The violation of the western tunnel represents an unnecessary action, as Saksussemm’s earlier and successful passage along the same route testifies. The alchemist’s 16th-century journey illustrates trust and adherence to afforded conditions, a concept verified by the dry

seamless tunnel existing prior to Liedenbrock's violation. Consequently, despite progressing along the same tunnel, Liedenbrock's path now radically diverges from Saksussemm's.

The western tunnel opens into a vast underground grotto, a spacious cavern filled with numerous Volcanic/Plutonic features. Despite this literal Vulcanism/Plutonism, abstract Neptunism emerges as the dominant paradigm influencing Liedenbrock. The presence and location of the Hansbach receives first mention. Remembered suns and stars, subterranean genesis points, become subordinate to observed fossils, a term now used as self-identification by the party. Ancient remains take center stage. Within this grotto, the Atlantic Ocean manifests as the de facto feature. Within the overhead Neptunist medium, the party envisions the tails of ocean creatures beating upon the roof of their Volcanic/Plutonic "prison." These new violations, coupled with Liedenbrock's previous transgressions, figuratively remove the professor's "evolutionary potential" from Subterranea.

Liedenbrock's character now stands within a Subterranea completely devoid of all evolutionary potential. This new construct forms around a unique Neptunist core, a faux epicenter where "all the clefts and fractures of the globe radiated round" (146). Having reached "his" center of the Earth, Liedenbrock encounters a subterranean sea of immense proportions. The professor selects and names this worthy feature the Liedenbrock Sea, an absolute Neptunist medium. "Golden" sand forms the shoreline, a "crown" peppered with indentions, nicks, cavities, and pits. Small shells from primordial lifeforms—fossils—lie mingled with the gilded sand. Unceasing waters, an unending erosive process, lap at the shoreline.

Liedenbrock surveys the stagnant, devolutionary shoreline to find the additional and supporting water-based features of vapors, springs, waterfalls, and streams. One of these streams, the Hansbach, "loses[s] its little volume quietly in the mighty sea" (155). Attached to the

professor far above within the evolutionary western tunnel, this Neptunist tentacle effectively pulled Liedenbrock into a devolutionary subterranean construct of his own design.

Terminating the shoreline exploration, the professor embarks upon the Liedenbrock Sea to literally and figuratively continue the seamless Neptunist journey that originated in Hamburg upon the *Valkyrie*. Prior to embarkation, Liedenbrock selects and names a third subterranean feature—Port Grauben, a name referencing Axel’s love interest in Hamburg. The port’s strategic value emerges strictly through adjacency and interaction with water and highlights the professor’s continued predisposition and adherence towards Neptunism.

In addition to Liedenbrock, Thomas Burnet and Abraham Werner figuratively board the raft leaving Port Grauben to experience the ramifications of their rigid catastrophic paradigms and theories. The party tethers themselves to these paradigms and theories through fishing lines, linear timelines showcasing devolutionary results at their endpoints. The fish brought to the surface via these timelines belong to an extinct family known to Liedenbrock only as fossils. Within pure Neptunism, life devolves, dies, and becomes extinct. This process forms the crux of the upcoming Wells analysis. The caught fish “have no identity with any living species” (166) and represent this extinctive trajectory. The fish are “blind, and not only blind, but actually [have] no eyes at all” (166). This character trait mimics and reflects Liedenbrock’s perception of Subterranea formed via the fireless Rhumkorff lamps, apparatus flooding and introducing Subterranea with a Neptunist point of view.

A symbolic Volcanic/Plutonic centroid, introduced through a massive geyser that captures the professor’s attention from far in the distance, lies below the Liedenbrock Sea. The geyser spews from the center of an islet at the center of the Liedenbrock Sea. The unique layering of sites—the Liedenbrock Sea, the islet, and the geyser—creates the classic, concentric

onion-skin layering indicative of subterranean science fiction and fantasy. The epicenter of this onion-skin construct illustrates the crux of classic subterranean science fiction and fantasy—a Vulcanic/Plutonic core illustrating truth. The geyser sits atop a subterranean shaft that penetrates into a fire-based Vulcanic/Plutonic core, a feature based on the rule of primacy where the innermost layer contains the concepts required for character evolution within that specific work. Despite penetrating the onion-skin construct to the geyser layer, Liedenbrock remains shielded from this innermost Vulcanic/Plutonic layer by the Neptunist waters of the Liedenbrock Sea.

Coexisting heat (fire) and water within a unique subterranean construct produce the geyser. Despite being formed of water, the geyser illustrates the supremacy of subterranean fire. The subterranean truth or reality that “th[e] water issues from an ardent furnace, which is not all in harmony with Professor Liedenbrock’s theories” (178), forms the literal and figurative crux of Liedenbrock’s inability to evolve within *Journey to the Center of the Earth*. This single geospatial location illustrates the perpetual discordance between objective reality and subjective paradigms. Despite continuous evolutionary concepts along his journey, Liedenbrock fails to recognize and capitalize upon them due to rigidity or static interaction, a non-evolutionary concept within the subterranean Person-Environment Interaction model. Illustrating this rigidity, the professor selects and names a fourth subterranean feature—Axel Isle.

Axel Isle represents a strategic and complex slight by Liedenbrock. By ignoring the geyser, the dynamic feature originally attracting his attention, the professor avoids showcasing the responsible Vulcanic/Plutonic processes. Like Port Grauben, Axel Isle illustrates a feature’s worth and existence manifesting through positioning relative to the Liedenbrock Sea. However, Axel Isle differs from previous selections in that it usurps Vulcanic/Plutonic potency and processes and reassigns them to Neptunism, a pillaging process that mirrors those by Werner

within his Neptunist theory. Liedenbrock's ultimate expulsion from Subterranea figuratively forces the professor back to, and within, this geyser feature to reevaluate and witness Vulcanic/Plutonic dominance firsthand.

Liedenbrock embarks from Axel Isle and enters the first stages of his removal from Subterranea. Through sustained and systematic assaults, Vulcanism/Plutonism will force the mineralogist off the Liedenbrock Sea. Fire manifests in the air as St. Elmo's fire and subsequently descends upon the raft as literal fire. Electric fires spontaneously ignite around Liedenbrock, a man now startled by powers unknown to him. Ceaseless arrays of fiery arrows dart through the sky as vaporous masses glow with incandescent subterranean heat. Flashes of primal light, exponentially more lurid than that produced by Rhumkorff lamps, streak overhead. Heaving waves of water transform into fiery volcanic hills belching forth flames, each distinct crest plumed with dancing fire (182-83). Intense flashes and vivid fires intersect each other to fuse into balls of living fire. Dazzling light and tongues of fire deluge the party (183-84). The Liedenbrock Sea boils like spittle upon the massive, scorching furnace. Vulcanism/Plutonism effectively drives the professor from the waters off the Liedenbrock Sea.

The shipwrecked party awakens upon a rocky coastline near the second granite geospatial marker, a feature physically demarcating the terminus of Liedenbrock's subterranean penetration. Three centuries earlier, this location signified for Saksussemm the beginning or threshold of a unique evolutionary world. Contrasting the preponderance of surface technology used by Liedenbrock to reach this point, Saksussemm's solitary steel knife—used to engrave his initials upon the marker—lies upon the ground. As stated earlier, the mineralogist and alchemist reach this location following two disparate paths. The alchemist arrived through strict adherence to Vulcanism/Plutonism, a journey illustrating his fire-based occupation of transformation.

Liedenbrock arrives at the second marker in spite of Vulcanism/Plutonism, the professor's journey completely dominated by Neptunism and the systematic usurpation of fire-based concepts. Liedenbrock's journey represents a linear manifestation of the abstract concepts presented within Wernerian Neptunism.

The boulder or "living rock" demarcates the world of evolutionary concepts lying beyond and under it. At this strategic point, Liedenbrock selects and names a fifth and final subterranean feature—Cape Saknussem, a name illustrating another strategic and complex slight by Liedenbrock. The name exposes the concerted search by Liedenbrock for any available marine-associated feature. The boulder lies upon a headland overlooking, and extending into, the Liedenbrock Sea. Cape Saknussem, like Port Grauben and Axel Isle, further exaggerates the value of the Liedenbrock Sea as a cape's existence manifests through positioning relative to the Liedenbrock Sea. However, this last nomenclative transgression figuratively separates Saknussem from Vulcanism/Plutonism, to subsequently align the alchemist with Liedenbrock and Neptunism. The forced alignment of the quintessential Vulcanic/Plutonic personage with Neptunism represents a sacrilegious act within Subterranea. Consequently, mere hours separate the naming of Cape Saknussem and the final stages of Liedenbrock's exile from Subterranea.

Collectively, the five selected and named subterranean features represent Liedenbrock's inherent values and beliefs. Despite numerous examples of Vulcanic/Plutonic dominance within Subterranea, the five features illustrate a Subterranea viewed through a Neptunist point of view: "Language does not merely designate reality ... it is reality itself, in all its cornucopian diversity.... Words in whatever language, are the 'open sesame' to the secrets of the universe. Since the infinite variety of nature has its precise parallel in the endless inventiveness of human languages, the task of the ... explorer or scientist, is to link the two—to find words that match

the objects, and objects that match the words” (Unwin, *Jules Verne* 163). Fluent in seven languages, Liedenbrock possesses immense mastery of “whole” linguistic concepts; variegated vocabularies of immense proportions lie at his disposal. Despite this repertoire, the five selections reflect character reliance on and use of a single and static “half” paradigm—Wernerian Neptunism. Consequently, the mineralogist fails to recognize, categorize, and capitalize on Subterranea’s hidden truths.

Immense depth and opportunity lie beyond and under the second inscribed granite boulder. The entrance into this Volcanic/Plutonic world, a region completely closed to Liedenbrock, lies at the end of a tunnel through “living rock.” Entering, and travelling a few feet along this feature, Liedenbrock encounters a granite slab that bars further penetration. Continuing the point of view used throughout the journey, a Ruhmkorff lamp illuminates the rock obstacle. The radical lens reveals neither cracks nor openings along the edges by which to open or circumnavigate the barrier. Consequently, the rock emerges as an impenetrable hermetic seal, a protective barrier invented and used by alchemists. Liedenbrock possesses neither knowledge nor skillsets to overcome the obstacle. As with thirst, the previous stressor in the earlier tunnel, Liedenbrock catastrophically addresses the rock by producing fifty pounds of guncotton from the surface supplies with which to obliterate the hermetically sealed gateway.

The barrier’s upcoming destruction, the catalyst for Liedenbrock’s rapid expulsion from Subterranea, illustrates multiple character evolution concepts within *Journey to the Center of the Earth*. The inscribed boulder, the tunnel, the rock slab, and the Volcanic/Plutonic core represent discrete units associated with the evolutionary threshold upon which Liedenbrock now stands. His unwarranted presence occurs only through the use of Saknussemm’s alchemic journal. Consequently, the mineralogist fails to perceive the truth enveloping the restrictive rock barrier

blocking his path. Before Liedenbrock lies the Philosopher's Stone, a feature that represents the required accumulation of esoteric alchemic processes and knowledge enabling the transformation of base subterranean materials into apex elements. The rock literally and figuratively represents a "capstone" experience within Verne's Subterranea. Upon reaching the stone, individuals who acquired subterranean knowledge and concepts throughout their journey may potentially penetrate the hermetic seal to experience evolutionary concepts beyond.

Liedenbrock's cumulative and definitive Neptunist actions prior to the stone barrier negate any possibility of his comprehending or navigating beyond the obstacle. Consequently, he employs catastrophic measures and becomes "hurled along, the plaything of the fierce elements of the deep" (Verne 212). The explosion allows Liedenbrock a fleeting and tantalizing glimpse into the massive evolutionary world lost to him. This world of evolutionary potential disappears as the unfathomable void draws Liedenbrock and the Liedenbrock Sea into its depths. The professor enters this void upon the raft, the unmanned craft having picked up Liedenbrock as it rushed by upon an immense wave. The third sea voyage within *Journey to the Center of the Earth* commences.

The third marine voyage illustrates multiple narrative uses. First, the voyage illustrates Liedenbrock's continued and seamless Neptunist journey. Secondly, the voyage effectively removes Liedenbrock from Subterranea. Next, the voyage figuratively forces Liedenbrock into and through the earlier slighted geyser system, a definitively Vulcanic/Plutonic feature reflective of subterranean core or truth concepts. Finally, the journey showcases the systematic annihilation of Wernerian Neptunism through Vulcanism/Plutonism. The journey begins with an emphasis on classic subterranean stressors, obstacles avoided by Liedenbrock during his journey due to surface supplies and Neptunism. Subterranea figuratively devours the surface supplies as they

tumble off the raft; instruments, ropes, ladders, spades, hammers, and pickaxes disappear into the abyss. Liedenbrock's order and rigidity, characteristics maintained throughout the journey due to surface supplies and Neptunist adherence, dissolve as the small craft spirals out of control. Mirroring the waters containing the earlier described "blind fossils," the Liedenbrock Sea engulfs the party in complete darkness, the symbolic Rhumkorff lamps finally devoid of their radical illumination.

The latter part of the third sea voyage showcases heat and water within a unique system of fissures, fractures, and porous spaces allowing the rapid movement of Liedenbrock. Despite ultimately becoming a volcano, the above geologic conditions create a figurative geyser system through which Liedenbrock must experience firsthand the Vulcanic/Plutonic power and processes he irreverently attributed to Neptunism upon Axel Isle.

Increasing heat transforms anxiety into the fear of being burned alive or reduced to ashes within an environment "compare[d] ... to the heat of a furnace at the moment when the molten metal is running into the mold" (222). Consequently, the forthcoming transformations transpire within a classic subterranean forge environment. The forge conditions exponentially increase, climaxing when Vulcanism/Plutonism targets the conveying waters of the Liedenbrock Sea. Exhibiting classic Vulcanism/Plutonism, gradual and systematic heat scalds the waters bearing Liedenbrock. Verne allows the professor a last, symbolic surface supply during this process—a compass, the needle of which begins to spin wildly out of control. The rapidly spinning and uncontrollable piece of technology illustrates a simple plot device, one used by Wells within *The Time Machine*, to effectively illustrate the final and wayward devolutionary trajectory of the professor. This trip through time terminates within an exotic environment of intense heat and humidity. Verne effectively recreates the earliest period of coexisting Neptunism and

Vulcanism/Plutonism. As the Neptunist waters boil and bubble, dense vapors and steam emerge. Liedenbrock figuratively devolves into the simplest form of life within the heated and radiated waters of primordial pools.

Vulcanism/Plutonism now targets Neptunism itself. The water beneath the raft, in reaction to the incredible heat and stress, transforms into a viscous river of lava. This symbolic feature fuses with Liedenbrock's recent devolutionary transformation. This powerful and vivid plot device remains upon the subterranean timeline and climaxes with Darth Vader's physical transformation upon the fiery riparian landscape of Mustafar in *Star Wars*.

Vulcanism/Plutonism temporarily obliterates all semblance of Neptunism. This radical, homeostatic environment represents a vehemently non-evolutionary construct. Consequently, Subterranea returns to a balanced and conflict-laden world of coexisting Vulcanism/Plutonism and Neptunism upon Liedenbrock's expulsion through Mt. Stromboli volcano.

Stromboli represents one of the Aeolian Islands, a name derived from Poseidon/Neptune's son Aeolus. Consequently, Vulcanism/Plutonism discards Liedenbrock, another Neptunist son, upon the ocean god's doorstep. Verne takes creative liberties by allowing Liedenbrock the ability to see Mt. Etna, a feature on the southern horizon well beyond the professor's restricted point of view. Seventy-three miles from Stromboli upon the island of Sicily, the forges of Hephaestus/Vulcan lie directly below Mt. Etna, a symbolic reference and reminder of Liedenbrock's failed evolution within the now vacated subterranean smithy. As with Verne's previous choice of Mt. Sneffels, Stromboli represents another illustration of Liedenbrock's consistent and seamless Neptunist adherence. Verne could have used any one of the many continent-based volcanoes as the professor's exit point from Subterranea. Stromboli's location and use mandates a fourth and final sea voyage. This final leg solidifies Liedenbrock's

character as absolute Neptunism. The professor leaves Stromboli upon the French ship *Volturne*, French for Volturno. Like the *Valkyrie*, the *Volturne* emerges as a symbolic ship, one directly referencing the Volturno, a strategic river in south-central Italy. Volturno derives from Voltumnus, the Roman water god. Consequently, Liedenbrock sails home amidst concentrated Neptunism, to reenter his stagnant and rigid Hamburg library confines as an unevolved character.

Liedenbrock and *Journey to the Center of the Earth* violate “Verne’s apparent obsession with volcanoes and eruptive islands—especially as they relate to humanity’s age-old mythic battle with the forces of Nature, its descent into subterranean netherworlds, and its heroic rebirth” (Smyth 25). The blatant omission of subterranean rebirth, within an evolutionary environment perfectly designed for that purpose, distinguishes the novel and Liedenbrock from the other selected works and characters.

Subsequent to *Journey to the Center of the Earth*, Verne’s posthumously published and symbolically titled *The Golden Volcano* (1906) attempts to utilize elemental subterranean themes and features within a conflict-laden social construct of mines, obstacles, quests, rivers, information, mountains, fire, gold, plans, battles, vices, and destinations. Ironically, these characteristics form the bedrock of J. R. R. Tolkien’s *The Hobbit*, a subterranean novel that effectively utilizes primal emotions within complex, historically based, psycho-social constructs to evolve characters.

Works Cited

- Bacon, Roger. *The Mirror of Alchimy*. London: Printed by Thomas Creede for Richard Oliue, 1597. Ebook.
- Butcher, William. Introduction. *Journey to the Centre of the Earth*. By Jules Verne. Trans. William Butcher. Oxford: Oxford UP, 1992: 1-30. Ebook.
- Debus, Allen A. "Re-Framing the Science in Jules Verne's 'Journey to the Center of the Earth.'" *Science Fiction Studies* 33 (2006): 405-20. Print.
- Smyth, Edmund J. *Jules Verne: Narratives of Modernity*. Liverpool: Liverpool UP, 2000. E-book.
- Unwin, Timothy A. *Jules Verne: Journeys in Writing*. Liverpool: Liverpool UP, 2005. E-book.
- . "Jules Verne: Negotiating Change in the Nineteenth Century." *Science Fiction Studies* 32.1 (2005): 5-17. Print.
- Verne, Jules. *Journey to the Center of the Earth*. Trans. Scott McKowen. New York: Sterling, 2007. Print.

Chapter 3 – *The Hobbit*

The opening sentence of *The Hobbit* (1937), “In a hole in the ground there lived a hobbit” (Tolkien 1), unearths a literal and figurative subterranean world stemming from J. R. R. Tolkien’s personal interests: “If you really want to know what Middle-earth is based on, it’s my wonder and delight in the Earth as it is, particularly the natural earth” (Fonstad ix). Despite *The Hobbit* being a definitively subterranean novel, the location and character mentioned above represent arguably the least subterranean locale and personage within the novel. Of all the rooms within this “subterranean” home, Tolkien’s hobbit—Bilbo Baggins—cherishes those with windows looking out upon sun-drenched gardens and meadows. These preferred, and blatantly anti-subterranean, landscapes contrast with the dark restrictive tunnels and caves emerging later in the novel. Despite the inferences and descriptions, Bilbo Baggins lives merely upon Subterranea’s doorstep. Despite living “in a hole in the ground,” the hobbit has never experienced subterranean processes.

The Hobbit’s subterranean “deficiencies” quickly disappear and the novel transforms into one of the most fully actualized subterranean texts in science fiction and fantasy. This analysis showcases several unique subterranean “evolutions” and characteristics that enable this transformation. In contrast to *Journey to the Center of the Earth*, *The Hobbit* illustrates a unique subterranean construct; Middle-earth emerges as completely subterranean. The storyline and physical geography each reflect the other. A single hierarchical pit or well of distinct evolutionary layers manifests; distinctive subterranean characters and stressors populate each layer. *The Hobbit* shifts from the forward-thinking, scientific paradigms illustrated within Verne towards “reverse-thinking” revolving around established historical and theological frameworks. Subsequently, the “traditional” layers within *The Hobbit* illustrate hierarchical interconnectivity based upon historical design, a format allowing the character evolution of Bilbo Baggins.

Additionally, *The Hobbit* uses the element of gold to bind the entire subterranean matrix together, placing special emphasis within the two “mega-layers” of the Gollum/Ring and Smaug/Hoard constructs. The Vulcanic/Plutonic alchemic personage—Gandalf—introduces further evolutionary concepts relative to gold. Finally, *The Hobbit* illustrates the continued evolutionary conflict between Vulcanism/Plutonism and Neptunism.

The Hobbit effectively uses word play, primarily riddles, at various locations. Consequently, this analysis symbolically begins through semantic wordplay of the word “subterranean” itself; anagrams effectively and succinctly introduce the plot of *The Hobbit*, as well as the primary associative subterranean concepts. A diminutive “saunterer” inspired by a dwarfish “serenata” transforms into an “absenter” of his beloved Shire. Traversing the “barrenest” “terrane” of his life, he unearths troves of “treasure” protected by various “nauseant” species such as trolls, goblins, spiders, and dragons. These subterranean experiences contribute to his eventual transformation, during which two crucial “aberrants” and “banterers” (i.e., Gollum and Smaug), housed within specialized subterranean constructs, enable assessment of his character maturation process. Within the final construct harboring the “unbeaten” “ensnarer” Smaug, Bilbo’s transformation culminates through unique character forging under the Lonely Mountain.

Bilbo’s ultimate transformation showcases the cumulative effectiveness of Tolkien’s subterranean processes, locations, and structures. Despite being fantasy, *The Hobbit* illustrates character transformation amidst seemingly familiar constructs: “Middle-earth is a ... complex world.... In order to maintain verisimilitude ... Middle-earth is based upon a realistic depiction This realistic base allows for the reader’s transition from the real to the imaginary” (Brisbois

198-99). Tolkien's "realistic depiction" and construct contrasts with Verne's construct in one major regard—a thorough use of historical concepts.

Throughout this thesis, history and science evolve alongside Subterranea and subterranean science fiction and fantasy. Tolkien's *The Hobbit* continues the trend of evolution with a twist; character evolution requires a reversal of direction. Verne, like Wells, propels Subterranea into futurity using contemporaneous, protean scientific paradigms. Tolkien pulls Subterranea back into history through historical and theological constructs because he "questioned the impact of [the] current understandings ... of Darwinism on human meaning, [particularly] that [which] rejected the dehumanizing impact of scientification" (Mitchell 1). Consequently, Bilbo Baggins transforms within "the Christian doctrines of incarnation and eschatological hope at the center of the meaning of myth, religion, and history" (1). Relative to subterranean analysis, this religious myth-based historical construct seamlessly fuses with Subterranea, a unique geospatial niche where "Tolkien increased the complexity ... with recourse to the ... period when underground space dominated the conception and perception of the world: the Middle Ages" (Pike 186). Consequently, the "nature of Middle-earth [and *The Hobbit*] is based upon medieval theology [that illustrates] the notion of nature as the result of providential design and control [as] an essential tenet" (Brisbois 202) to individual transformation. This theological construct manifests rigid subterranean layering mimicking the geological law of superposition, subterranean layering relative to primacy.

As the hobbit penetrates and traverses this construct, "Tolkien's medieval(ist) point of view is constantly visible in the background suppositions of meaning-production in Middle-earth" (Nagy 57). Bilbo Baggins "is part of a basically theological hierarchy (as in a medieval world model), where knowledge and meaning are available in 'levels.' The further one is from

the “theological core” ... the more mediators his knowledge will have passed through: the more opaque the surface, the more obscure the meaning. But meaning is always there” (57). Bilbo begins his descent into Subterranea in the Shire, the antipode of Tolkien’s “theological core.” Reaching the core requires Bilbo’s exposure to, and surmounting of, the above-mentioned “mediators,” increasingly more complex creatures and personages that enable potential character evolution. The Shire’s location, relative to Bilbo’s ultimate destination and transformation, illustrates “a moral geography [where] good flows from, and returns to, the West. Evil lurks in the East where its chief stronghold is; attack upon evil comes from the West” (Stanton 11). Smaug lies within Tolkien’s “theological core,” a discrete geospatial location under the Lonely Mountain in the East from which the dragon dominates every distinct subterranean layer that Bilbo must pass through. Each layer represents numerous medieval paradigms fused with fantasy components. Consequently, Bilbo unearths subterranean secrets, knowledge, and artifacts, each constituting variables within the hobbit’s transformation.

Tolkien’s Middle-earth becomes progressively more subterranean as the storyline—and Bilbo—move from the Shire in the West towards the Lonely Mountain in the East. The Lonely Mountain, a vertical feature that exaggerates the depth of the Smaug/Hoard construct, resides amidst a literal and figurative maze, a feature requiring Bilbo to first successfully navigate through a labyrinth feature—the Gollum-laden tunnels beneath Goblin Town. Each of these two features or “mega layers” lie within an overall construct of numerous subterranean layers, stratified character evolution concepts and opportunities. Each distinct layer or environment contains subterranean stressors, “evil” creatures or personages. This deadly mix of Middle-earth denizens and “their dwelling places reflect[s a] hierarchy through their distance from the earth” (Chance 60). Consequently, Smaug emerges as Bilbo’s last and deadliest stressor due to the

dragon residing within the bowels or center of Tolkien's massive subterranean construct. Despite the dragon's "privileged" position, the Smaug/hoard mega-layer affects, and is affected by, each layer and construct preceding it. Consequently, "[t]he basis of Middle-earth [emerges as] a single, united nature" (Brisbois 204), a concept highlighting the need for Bilbo to progress through each layer and accumulate the required experiences and knowledge ultimately required under the Lonely Mountain.

A map of Middle-earth illustrates Bilbo's journey to the Lonely Mountain from the Shire as potentially and uninterestingly planar. With the exception of the gold hoard under the Lonely Mountain, few subterranean obstacles or environments seemingly lie along the hobbit's projected pathway. However, recognizable and distinct subterranean layering and hierarchy emerges as Bilbo "descends" eastward; distinct locations and/or events along the quest route unveil an overarching subterranean construct. Each layer houses certain subterranean artifacts, themes, or processes, items or concepts relative to preceding and/or succeeding layers. Consequently, the subterranean layers of Middle-earth showcase interrelatedness, a crucial concept of linear character evolution. The layers create a distinctively shaped subterranean construct where characters are challenged and transformed. This "aspect of Tolkien's representation ... allows the reader and critic to draw meaning out of the natural world of Middle-earth and contribute to the sense of that 'enormous well' lying beneath the novel's narrative" (Brisbois 201). As characters progress downward through this distinctive subterranean construct, readers effortlessly track character evolution and maturation processes through spatial relationships. Figure 1 illustrates the unique overall subterranean "well" construct created within *The Hobbit*.

Layer 1 emerges as the most "superficial" layer within the overall construct, thus reflecting the earlier statement that neither Bilbo nor his home represent subterranean concepts.

Within this introductory level reside two critical artifacts—a map and a key. These artifacts remain worthless until Bilbo and party descend into level 3. Within the third layer, acquired subterranean knowledge transforms the two artifacts into items of tremendous character evolution value.

Eastward movement from Bilbo’s house introduces further evolutionary opportunities and concepts, the first occurring within “Roast Mutton.” “Roast Mutton” or level 2 shows the transformation of Bilbo’s beloved green and sunny meadows into a world dominated by perpetual darkness. Trolls, creatures that avoid and innately detest the sun Bilbo cherishes, personify the symbolic transition into subterranean darkness. Within this new level of darkness, a second key emerges as a critical artifact. Found by Bilbo, the key unlocks the first physical subterranean feature—a nearby troll cave. Luck or chance materializes for the first time in the selected texts. Luck never materializes within *Journey to the Center of the Earth*. Consequently, this esoteric subterranean characteristic seemingly presents itself only to receptive Vulcanic/Plutonic characters within the selected works. The cave contains the sword Sting, an artifact crucial to Bilbo’s evolution in the upcoming layers where the hobbit faces varied subterranean stressors. Sting, in cooperation with the forthcoming gold ring, showcases a complex, multilayer interdependency through which Bilbo achieves transformation. Level 2 introduces the themes of carnal vice (via troll gluttony), darkness, luck, and treasure/artifacts. Each theme or characteristic remains and evolves throughout Bilbo’s subterranean quest.

From level 2, Bilbo and party “slithered and slipped in the dusk down the steep zig-zag path into the secret valley of Rivendell” (Tolkien 47), a unique location emerging as the third layer within Tolkien’s Middle-earth. Classic Vulcanic/Plutonic heat begins to emerge within Subterranea: “The air grew warmer as they got lower They went down and down” (47).

Ironically, *The Hobbit's* earlier-mentioned verisimilitude first emerges through fantasy concepts: “Although readers of *The Hobbit* and *The Lord of the Rings* may think of Elves primarily in association with forests ... it is interesting to note that all three of the First Age kingdoms mentioned are associated with rocks, caves, and underground fortresses” (Dickerson 103). History and provenance now established, critical information regarding the entrance into the Smaug/Hoard construct emerges. This new information illustrates the classic subterranean traits of accumulation and association. The first level artifacts of the map and key introduce mediums through which Bilbo’s character must evolve. Additionally, esoteric information regarding Sting, a second level artifact, emerges within Rivendell. As with the map and key, Sting plays a crucial role in Bilbo’s character evolution. Importantly, concepts and artifacts introduced within earlier layers ultimately evolve upon the third layer.

Located directly below the Rivendell layer lies the Gollum/Ring construct. This fourth layer represents the first of two mega-levels and will be analyzed with the Smaug/Hoard construct after analysis of the “traditional” layers given their comparative and thematic similarities. Cumulatively, the Gollum/Ring construct and the first three levels constitute *The Hobbit's* upper or first half.

Below the Gollum/Ring construct layer resides the “pine tree” layer, a fifth layer represented by the chapter “Out of the Frying-pan into the Fire.” The primary function of the fifth layer emerges as strategic positioning or comparative posturing; level 5 constitutes the uppermost level of *The Hobbit's* second or lower half. Comparatively, this layer emerges as radically more sophisticated than the uppermost layer of the first half. Consequently, layer five showcases the cumulative and progressive effects of subterranean descent into Middle-earth.

Level 5 uses its arboreal nature to further the concept of strategic positioning or comparative posturing. As Bilbo and the party members move up through distinct limb levels, literal and figurative stratification ensues. This arboreal ascent figuratively continues as Bilbo ascends atop a rocky mountainside cliff through the aid of the Eagles. This mountain, a geographical feature used numerous times by Tolkien within *The Hobbit*, distinguishes layer 5 from the other traditional levels as Tolkien's two mega-layer constructs house the only other mountain features. Through the cumulative ascent created by the trees and mountain, Bilbo and the party figuratively reside somewhere between the fourth and fifth layers. This unique exaggerated placement creates a figurative "jump-off" point from which Bilbo rapidly descends into *The Hobbit*'s second half, increasingly complex layers terminating with the Smaug/Hoard construct layer.

Descent into *The Hobbit*'s second half begins through a subtle yet classic subterranean feature—a cave. Bilbo and the party descend from the mountain and enter into a small cave, a feature residing upon the level 6. The Vulcanic/Plutonic nature of the cave influences Gandalf's use of alchemic dialogue and references to introduce Beorn, the party's forthcoming host. Level 6 emerges from "Queer Lodgings," a chapter and layer showcasing increasingly concentrated darkness, deception, isolation, and secrecy. Within this level, Gandalf further demonstrates the practicality, legitimacy, and need for deception and trickery to Bilbo. Though elemental upon level 6, these "impure" concepts evolve further within Tolkien's Subterranea into the crux of Bilbo's character evolution. In addition to secrecy and deception dominating Gandalf's introduction of the party to Beorn, these "impure" concepts figuratively manifest the character of Beorn, a secretive skin-changer shrouded in esoteric knowledge seemingly vital to the party's

success within the upcoming Mirkwood forest layer. Ironically, the misuse or ignoring of Beorn's knowledge arguably leads to Bilbo's most poignant character maturation experience.

The descent from level 6 into level 7, the Mirkwood layer, occurs as Bilbo and the party “walked in single file. The entrance to the path was like a sort of arch leading into a gloomy tunnel made by two great trees.... Soon the light at the gate was like a little bright hole far behind, and the quiet so deep that their feet seemed to thump along” (Tolkien 140). Bilbo and the party stand upon arguably the most evolutionary and classic subterranean layer within *The Hobbit*. This layer, represented by the chapter “Flies and Spiders,” exaggerates clichéd subterranean imagery and phobias such as darkness, insects, isolation, and confusion. These subterranean traits merge with an abstract, spiritual construct of “uncontrolled gluttony and anger on the lowest level” (Chance 59). Within this unique level, Bilbo showcases multiple character advancements. Use of his evolving inherent physical traits emerges when he spies a hidden boat at a pivotal and symbolic Neptunist feature—a forest river. Having been warned of the river by Beorn, Bilbo successfully prevents a dwarf from falling into the dark river, again through the use of his before-mentioned evolving physical traits. Bilbo's evolving physical prowess continues to be showcased when he figuratively climbs out and above layer 6 to glean a bird's-eye perspective from atop the tree canopy. Despite these examples of Bilbo's ability to overcome specific stressors through evolving innate traits, Tolkien soon introduces stressors which far exceed the hobbit's evolved inherent traits or “surface” identity. Upcoming stressors demand Bilbo use acquired or learned subterranean concepts.

Bilbo's transition from reliance upon inherent, physical “surface” traits into acceptance and display of learned, abstract subterranean concepts begins within the Mirkwood level. During battle with a giant spider, Bilbo symbolically “beat the creature off with his hands ... until he

remembered his sword and drew it out” (Tolkien 133). At this strategic point, Bilbo’s character symbolically stops using inherent surface skills or identity and begins to use “found” or learned subterranean concepts and beliefs. The fight with the first and solo giant spider introduces three pivotal character evolution concepts. The ring—an artifact discussed later within the Gollum/Ring and Smaug/Hoard analysis—emerges as an unused, and therefore unrequired, artifact or concept. Subsequent to this initial fight, Bilbo uses the ring while fighting a group of spiders. Though used during the second fight, the ring emerges as ineffective, a trait resulting from the ring’s above-mentioned unrequired and unnecessary nature.

Each of the two spider battles highlight Sting’s worth at this level or stage of Bilbo’s evolutionary journey. Though diminutive, the sword represents the origins of Bilbo’s subterranean evolution: “the killing of the giant spider, all alone by himself in the dark without the help of the Wizard or the Dwarves or of anyone else, made a great difference to Mr. Baggins. He felt a different person, and much fiercer and bolder” (Tolkien 134). Ironically, the physical nature of Sting and the battles birth abstract concepts. Using Sting during the Mirkwood battles enables “Bilbo [to] manifest more abstract qualities like courage” (Chance 67). Such abstract cognitive and/or emotional traits, not physical artifacts, emerge as essentials within the deeper and highly abstract psycho-social layers.

Integral to Bilbo’s character evolution upon the Mirkwood layer, Sting “devolves” into a virtually useless artifact within the deeper layers of Middle-earth Subterranea. Despite Sting’s impending impotency with the deepest layers, the ring’s impotency emerges much earlier; this difference illustrates a subterranean artifact “power hierarchy.”

Mirkwood, Bilbo, Sting, and the ring illustrate evolutionary incongruities. An example emerges during Bilbo’s second fight with the group of spiders. The ring’s primary power of

invisibility becomes useless and the spiders effortlessly locate the hobbit. Invisibility represents the primary benefit of a character wearing the ring during battle. Invisibility does not eliminate or overcome subterranean stressors; it merely hides characters from them. As mentioned within the thesis introduction, subterranean character evolution occurs when characters encounter and overcome exotic stressors—not hide from them. Therefore the ring emerges as completely non-evolutionary. The ring’s devolutionary identity strengthens when analyzed with the construct where Bilbo found it, a vehemently Neptunist water feature.

The Mirkwood spiders represent a sophisticated subterranean predator utilizing non-visual predation skills. Tolkien’s spiders produce and manipulate extensive web designs that render the ring’s invisibility useless within a “motion sensed” Mirkwood forest. Showcased later within the Smaug/Hoard analysis, the ring’s impotency climaxes in the presence of Tolkien’s apex, alpha-predator Smaug, a creature possessing multiple methods with which to locate Bilbo. Ultimately, Bilbo rescues the dwarves from the spiders. The hobbit achieves massive evolutionary strides towards character maturation: “From this point on, Bilbo has the self-esteem needed to fulfill his responsibilities as a mature and trustworthy leader” (Matthews 36). Bilbo immediately uses these newly acquired and showcased traits. Having been rescued, the dwarves are quickly captured by Wood-Elves and ushered down into the eighth layer.

Tolkien’s eighth layer reflects the increasing complexity formed by descent through Tolkien’s Middle-earth. Despite being a mega-layer, Bilbo navigated earlier level 4 tunnel features virtually unrestricted. Comparatively, level 8 tunnels emerge as restrictive features limiting free will and choice—a Neptunist labyrinth. This restriction forms through a physical construct manifested from identity and purpose: “The king’s cave was his palace, and the strong place of his treasure, and the fortress of his people against their enemies” (Tolkien 143). This

labyrinthine fortress uses magical locks and gates, features similar to a river-lock system. This construct eliminates the possibility of an upward escape for the dwarves. Escape from this magic-laden fortress requires further penetration into Subterranea. The lowest regions of level 8 contain the Forest River, a feature further illustrating the Neptunist presence. Using theft, trickery and subterfuge learned from Gandalf, Bilbo leads the dwarves into these lower regions into the Forest River: “It is through his ingenuity that they escape from the dungeon prisons in the subterranean halls of the wood-elves” (Matthews 36). This showcased ingenuity emerges again within Tolkien’s deepest level—the Smaug/Hoard construct—and unearths vital esoteric information regarding Smaug’s only weakness. Floating upon the Neptunist-laden Forest River, Bilbo descends into this highly complex mega-layer.

The Gollum/Ring and Smaug/Hoard constructs distinguish themselves from traditional novel layers, as well as from each other, in numerous ways. These unique, mega-layer constructs form around a literal and figurative apex concept—gold.

Gold emerges as the figurative and literal crux of *The Hobbit*; the novel uses a myriad of historical, social and scientific concepts associated with the element. Tolkien’s gold-laced Subterranea “is a complex and manifold creation. It is not simply a backdrop to a story ... but a significant series of signs, symbols, and indexes. Nature is both familiar and alien to the reader, at once realistic and fantastic” (Brisbois 203). Routine materials such as wood, iron, stone, and cloth construct the skeletal framework of Middle-earth. Within this framework gold forms the soul or heart.

Verne and Wells use subtle alchemic concepts relative to gold within the respective selected texts. Contrastingly, *The Hobbit* figuratively and/or literally uses gold upon each level of Tolkien’s Subterranea. Ironically, subterranean gold originally forms within stars, stellar

entities mentioned throughout this entire thesis. Gold forms through the process of stellar supernova nucleosynthesis, a process of “stellar self-actualization.” This process illustrates an exploding star reaching its full potentiality, the radiation of the maximum energy able to be emitted over the star’s entire life span. Gold forms during this process. Upon and within forming planets, heat and pressure pull stellar gold into molten cores where the element accumulates in rocks, veins, and alluvial deposits. Consequently, gold emerges as an element created through a symbolic transformation, as well as a hidden, apex commodity representing worth and attainment. Gold’s value resides in its rarity, malleability, non-corrosiveness, and distinct color. These characteristics symbolize various concepts within *The Hobbit*, as well as the other selected texts. Gold represents socio-economic and socio-political cruxes within Tolkien’s fantasy world. This role emerges from Tolkien’s use of medieval concepts and frameworks. Medieval and Middle-earth frameworks and processes represent populations and monetary policy dominated by gold and gold concepts. Importantly, gold’s value emerges when virtually every Middle-earth race and/or species congregates near the Lonely Mountain to contest and claim the dragon hoard upon Smaug’s death, a demise riddled with associations to gold. Within *The Hobbit*, pristine and flawless materials such mithril and the Arkenstone rank far above gold in both worth and rarity. However, “impurities” associated with gold, as well as its familiarity and ubiquitous worth, renders the element perfect for representing subterranean evolutionary concepts within *The Hobbit*.

Gold dominates Tolkien’s medieval hierarchy. The element symbolizes the alchemic quest for a golden-form, self-actualization of base impure materials. Within *The Hobbit*, characters such as Gandalf, Thorin, Gollum, the Elven king, Smaug, and Bilbo represent various forms and stages of self-actualization, the realization of one’s full potential. Self-actualization

seemingly ignores concepts of “good” or “bad.” Within this analysis of *The Hobbit*, characters representing “dark” or “bad” self-actualized forms exist; two crucial examples are Gollum and Smaug, each residing at the core of their respective mega-level. Dark or bad concepts exist throughout the Middle-earth Subterranea that Bilbo journeys through. During this journey, alternative pathways for the hobbit emerge from these concepts.

Good or pure concepts figuratively merge with bad or impure concepts through gold and its inherent impurity-laden processes. *The Hobbit* introduces a 24K Bilbo Baggins, soft and “nonfunctional.” Twenty-four carat gold becomes more effective when transformed into an alloy containing base or impure metals. These impurities include copper, iron, deceit or larceny. *The Hobbit*’s subterranean construct reflects the associated stages, transformations, and impurities of gold. Consequently, a “pure” Bilbo enters a construct of ever increasing heat and pressure where he experiences intensive “alloy stages” that use the impurities afforded upon each level. This transformative journey mirrors the various stages of gold, an element that degrades from pure 24K into 18k, 14k, and 10k. The ultimate goal of this process emerges as the attainment of balance between functionality and purity. Too much impurity transforms the alloy or person into a worthless, ineffective gilded entity; too little impurity leads to insufficient transformation. A balanced amount forges a highly functional and self-actualized being.

Impurities emerge within *The Hobbit* as vices and/or sins. Examples include illusions, trickery, cheating, and larceny. These concepts seemingly clash with the sought-after form of self-actualization. These concepts represent vital ingredients to Bilbo’s final self-actualized character, a rank or position within Middle-earth hierarchy that reflects medieval theological attitudes of morality and good. This position stratifies the hobbit relative to other Middle-earth “kings” or self-actualized beings: “Hierarchical order clearly dominates ... [and] ...

[c]ategorizing and ranking are as prominent among Tolkien's villains as they are among his individual races or his ideal characters" (Burns 140). Despite Bilbo's apex positioning over other characters within the novel's hierarchy, the hobbit only achieves the position because of the other characters. This interconnectedness highlights the evolutionary process of descending into Tolkien's Middle-earth construct.

Tolkien capitalizes upon the literal and figurative characteristics of gold. Gold remains solid or unchanged under normal conditions—surface or non-subterranean conditions. Within “stressful” environments, gold emerges as one of the least reactive chemical elements. Gold's categorization as a “transition” metal allows for a myriad of creative and figurative evolutionary opportunities. The element's inherent chemical and physical properties such as brightness, high-malleability, and rarity mirror desired character evolutionary traits. Gold manifests a unique association with the Vulcanism/Plutonism versus Neptunism conflict as the above-mentioned properties remain intact when exposed to water. Within Middle-earth Subterranea, particularly the two mega-levels, gold and gold concepts dominate the storyline.

Subsequent to the Rivendell layer, Bilbo enters the Gollum/Ring construct, the first of the two mega-layer constructs. The Gollum/Ring and Smaug/Hoard constructs distinguish themselves from the other layers through complexity, descent mechanisms, and construct. The two constructs divide *The Hobbit* into halves. Each construct houses an isolated, symbolic, and representative creature at its core. Each creature affects, and is affected by, the subterranean levels and processes surrounding it. Both environments lie strategically under lofty mountain features. Consequently, their depth becomes exaggerated. Despite the similarities, radical distinctions between the two constructs exist.

Each creature, and its respective construct, represent an accumulation of the subterranean concepts, stressors, and artifacts above. Consequently, the deeper Smaug/Hoard construct emerges as a more complex, varied, dangerous, and evolutionary. The Smaug/Hoard construct “derives its essential nature from Smaug as spiritual sin” (Chance 58). Contrastingly, the relatively simpler Gollum/Ring construct “derives its essential nature from Gollum as bodily sin” (Chance 58). The positioning of bodily sin above spiritual sin reflects the hierarchical medieval construct used by Tolkien.

Physical, elemental constructs form the Gollum/Ring construct. Consequently, basic physical subterranean features such as darkness, tunnels, and isolation form the crux of this feature. These characteristics give way to complex abstract moral themes such as vanity, deceit, and greed within the Smaug/Hoard construct. This change represents an “inherent acceptance of truthfulness as what should ideally be part of the natural order... [A] theological technicality [is] that sins of the spirit (such as lying) in Christian terms are much worse than sins of the flesh (such as murder). That is, any sin is bad enough, but harm done to the immortal spirit is worse than harm done to merely mortal flesh... Much of the evil done by the likes of ... Smaug is ascribed to [his] mixing truth and falsehood to sow dissension and distrust” (West 7-8). Hence, Bilbo’s interaction with each creature showcases a “hierarchy of monsters [that] begins with the least dangerous and evil and [progresses] to the most dangerous and evil” (Chance 58).

Figure 2 illustrates an upward radiating concentric and hierarchical matrix construct of vast proportions. Distinct layers form this construct. Bilbo and the quest party enter a cave seeking refuge from a torrential storm. Bilbo stands at the doorstep of the Gollum/Ring construct, a feature approached with no apprehension. Contrastingly, the approach towards the doorstep of the Smaug/Hoard construct creates extreme anxiety with Bilbo. The cave represents

one of two rock-hewn, goblin-guarded access points that block entrance into the construct. Bilbo, upon being pulled into the construct by goblins, descends into a construct designed around one single artifact—a gold ring.

Bilbo escapes from the goblins into a seemingly endless tunnel where oppression, isolation, and deprivation target him. While addressing these stressors, the hobbit journeys deeper and ultimately arrives at primordial genesis or roots of the mountain. Within these roots lies a lake, a strategic Neptunist medium. Arriving at this location, the scale of the Gollum/Ring construct radically changes. The first five levels of the Gollum/Ring construct illustrate the hobbit having to traverse a tremendous amount of distance. Upon reaching the lake, the macro-scaled layers give way to micro-scaled layers. The last five levels represent a distance of only a couple hundred yards. Through minute descriptors, Tolkien details the precise location and protected nature of the gold ring within the massive overall construct.

Arriving at the lake, a character must traverse across the entire radius of the lake where an island lies at the center. Upon arriving at the island, a rocky shoreline emerges. Within this jumbled, maze-like rock substrate, a character must then dig or look “in the rock” (Tolkien 71). Only upon choosing the correct hole will a character find the gold ring, an artifact continuously protected by the ever-watchful Gollum. The entire Neptunist Gollum/Ring construct radiates and spirals upward from this minute epicenter that houses an artifact enabling character evolution through its nonuse. This Neptunist onion-skin construct virtually mirrors Verne’s onion-skin construct surrounding the Liedenbrock Sea within *Journey to the Center of the Earth*. Tolkien, like Verne, places a character changing feature or concept at the heart of a heavily-Neptunist construct. Each of these constructs acts as a prison, a term specifically used by Liedenbrock’s party to describe their location within Subterranea. Tolkien essentially creates an oubliette, a

unique medieval dungeon layout. Like Liedenbrock, Gollum remains incarcerated within a “forgotten place” where he devolves and self-actualizes into a lowly “king.”

Within this unique subterranean construct, chance, introduced on the Troll Fire/Cave level, emerges again. Tolkien’s Gollum/Ring construct allows a quantifiable visual representation of the impact of chance or luck within a subterranean science fiction and fantasy storyline. Two-thirds of the protective barriers within the Gollum/Ring construct dissolve through chance or luck when Bilbo finds the ring—the epicenter of the Gollum/Ring construct—between layers 3 and 4 (see figure 2). This chance find strips seven distinct layers of protection from around the ring. Only through chance or luck does Bilbo obtain the gold artifact.

Despite living in a hole, the hobbit figuratively enters Subterranea for the first time. The harsh subterranean conditions within the Gollum/Ring construct remove Bilbo’s keen sight, hearing and agility. Tolkien showcases a crawling, groping Bilbo. Thus postured, the infantile hobbit awaits exposure to subterranean impurities. Ahead of Bilbo in the tunnel lies the gold ring, an artifact enveloped within complex character evolution concepts. The ring seemingly modifies a subterranean environment through its ability to render the wearer invisible and therefore to operate freely. However, this power does not transfer beyond the Gollum/Ring construct. As detailed earlier, the ring’s powers do not exist nor assist within the deeper layers where Bilbo’s character transformation transpires. Delusion, deceit, and arrogance form the ring. Bilbo, within the deeper layers, overcomes stressors despite the ring, not because of it. However, certain impurities within the ring such as deceit and trickery allow Bilbo to survive the upcoming riddle game with Gollum. Importantly, the ring assists Bilbo within the Neptunist construct where it was found. Once removed from this Neptunist construct, the ring becomes useless as Bilbo requires more complex and evolutionary concepts. Bilbo violates traditional Middle-earth

protocol: “He knew, of course, that the riddle-game was sacred and of immense antiquity, and even wicked creatures were afraid to cheat when they played at it” (70). Bilbo, having assimilated numerous impurities, eludes Gollum and exits the Gollum/Ring construct through the only remaining access point.

Despite the exotic stressors within the Gollum/Ring construct, the feature represents elemental and discrete barriers dominated by darkness, isolation, and confusion. Within these confines, all characters navigate the same linear tunnel system to successfully enter and/or exit. This static, simple, and non-personalized construct emerges as limited. The construct houses a treasure both deceptive and devolutionary, traits that surround the Dark Side within *Star Wars*. The ring becomes weak and nonfunctional within upcoming layers. Gollum reflects both the construct and the ring, as the creature uses the artifact for deception to acquire the simple bodily need of subsistence. Of extreme importance, Tolkien describes the ring’s construct as traversing “through the heart of the mountains” (85). This description details a mere physical location. Contrastingly, Tolkien describes the upcoming and pivotal Arkenstone within the Smaug/Hoard construct as “the Heart of the Mountain” (195). This description details a literal and figurative gem of immense spiritual and soulful character evolution. The Gollum/Ring construct represents a physical subterranean location housing an elemental artifact enabling extrinsic gain; the Smaug/Hoard construct represents an abstract location housing a complex artifact enabling intrinsic evolution. Unlike the narrow, impersonal, subterranean tunnels that navigate the Gollum/Ring construct, the Smaug/Hoard construct emerges as amorphous and highly personalized. Within the vast chambers and rooms under the Lonely Mountain, characters may navigate almost limitless pathways. Bilbo enters the Smaug/Hoard construct with impurities and experience coursing through his character.

Unlike the narrow and delimited confines of the Gollum/Ring construct, the confines of Smaug/Hoard construct emerge as amorphous, a characteristic reflecting the construct's ability to tailor itself to specific characters entering it. Consequently, the construct shown in Figure 3 represents a feature specifically designed for Bilbo Baggins. Despite its adaptive nature, the construct's first layer forms through two precise requirements—a key and a map. As Tolkien's alchemist Gandalf possesses both artifacts, entrance into the Gollum/Hoard construct emerges as being highly restricted. Bilbo's entrance into the lower layers requires each of these artifacts to be ascertained and their secrets revealed. This requirement illustrates a primary distinction between the two mega-layer constructs. Whereas the Gollum/Ring construct figuratively pulls Bilbo into its confines via the Goblins, the Smaug/Hoard construct demands numerous conditions to be met upon its first layer. Despite "acquiring" the artifacts within the first chapter, Bilbo only learns of the artifacts' secrets upon the Rivendell layer. Hidden information regarding a secret door emerges. The map reveals a secret door that only opens during the setting sun of Durin's day with the key. As with the Gollum/Ring construct, the Smaug/Hoard construct possesses two access points. Smaug guards the main entrance and time, a restrictive and esoteric sentry, guards the second entrance. As entrance through the main gate welcomes certain death, the second entrance emerges as the goal of quest party. Consequently, time emerges as the second layer of the Smaug/Hoard construct. The Rivendell layer, which unlocks artifacts introduced within the first chapter as well as introducing the time variable, illustrates the amorphous nature of the Smaug/Hoard construct as it extends well beyond the physical parameters of the Lonely Mountain.

Abstract concepts continue to dominate the Smaug/Hoard construct as illustrated in the subsequent "fear layer," a highly individualized barrier or layer. Unlike Gollum/Ring layers, this

layer enables the Smaug/Hoard construct to project individualized obstacles far upon the landscape. Relative to Bilbo, this obstacle manifests through the Lonely Mountain, a feature of intimidation to the hobbit. Character dialogue introduces the Lonely Mountain as a fear-laden feature associated with Smaug and the treasure hoard. Importantly, the narrative and “fear layer” emerge long before the mountain is seen. This towering sentinel perpetually evokes ever increasing fear upon the nearing party—particularly Bilbo.

Deeper within the Smaug/Hoard construct, the fourth layer emerges through “A Warm Welcome,” a chapter using distinct ploys and traits of Smaug, particularly dissension and mistrust. The characters of Thorin, the Master of Dale, the Elven-king, and Smaug populate a layer of chaos formed via a surplus of “kings.” Thorin and Smaug simultaneously claim the title “King under the Mountain,” the same mountain: “Tolkien calls his dragon Smaug “King under the Mountain”.... The epithet serves to link this inhuman monster with similar monsters—and monstrous kings or leaders—elsewhere in *The Hobbit*.... These include the Elven-king, the Master of Dale, the Dwarf-king Thorin, and even Bilbo” (Chance 54). The “kings” within the “Confusion and Descent” layer represent intertwined characters that figuratively feed upon each other. Within this cannibalistic layer, Bilbo successfully navigates the deadly stressors presented by the Smaug/Hoard construct.

Complex, interwoven themes and concepts dominate the “Confusion and Descent” layer. The Elven-king, an extremely powerful personage within the region, wants Thorin’s escaped party back in his dungeons. However, due to the mystery surrounding Thorin’s escape, the Elven-king harbors fear and chooses not to pursue the issue. The Master of Dale, subordinate to and blatantly fearful of the Elven-king, assumes a more aggressive stance due to the Elven king’s absence, as well as a fear of losing his position from not knowing the veracity of Thorin’s claim.

The Master of Dale, swayed by popular vote, decides not to return Thorin. Free to continue his journey, Thorin represents the one “king” left without a physical throne to sit upon as Smaug, the originator of the chaos, sits upon it. Within this level, any alternate action or reaction by one single “king” would terminate Bilbo’s journey. Ultimately, Bilbo navigates this complex layer through appropriate actions and “inactions.”

Descending further, Bilbo encounters the only elemental, physical barrier within the Smaug/Hoard construct in the form of a single tunnel leading behind the secret rock door. Despite being an elemental feature, the tunnel distinguishes itself from the tunnels within the Gollum/Ring construct as it requires specific artifact use at a specific time. Before Bilbo enters the tunnel, the hobbit references a star, a primordial subterranean feature represented throughout this thesis. Bilbo’s trek through the tunnel to the treasure hoard constitutes a short journey. Despite the brevity, Tolkien uses a myriad of evolutionary Vulcanic/Plutonic descriptors such as *glow, red, light, hot, vapor, bubbling, fire, and rumble*. Ultimately, this physical tunnel represents a transition from the surface world into subterranean forge housing the single-most concentrated Vulcanic/Plutonic stressor within *The Hobbit*—Smaug.

Smaug, the medium through which Bilbo transforms, oversees a construct figuratively extending across Middle-earth to Bilbo’s own house. The hobbit’s first direct or literal exposure to the dragon emerges within a glow resembling a slowly cooling foundry cauldron. The dragon and cauldron perform the same function, the transformation or “forging anew” the materials put within their confines for the purpose of higher functionality. Within these low fires Bilbo steals a single gold cup; the impurity-laden action acts as the catalyst which unlocks the deeper level of “Spiritual Sins.”

Whether from avarice or pride, Smaug's sole obsession upon finding the cup stolen revolves around revenge. As illustrated earlier, Tolkien's medieval theological construct positions moral stressors such as anger, envy, pride, and avarice as deadly obstacles for Bilbo's continued evolutionary progress. Bilbo's theft and Smaug's revenge initiate a spiritually infused hurricane.

Smaug reflects the construct he guards, as well as a perfectly constructed character evolution medium. Fiery and complex, Smaug simultaneously emerges as an instrument of destruction and evolution; the dragon manifests characteristics and environments particularly suited for spiritual demise: "Dragons are evil monsters and being dangerous and destructive is their role. And Smaug ... lives up to this expectation. He turns out to be as bestial and as monstrous as the best of dragons" (Jakobsson 27-28). Smaug's character has many facets. Simply stated, the dragon appearing before the hobbit is more complex than anything Bilbo Baggins has yet encountered.

Smaug's status as the premier subterranean predator emerges when Bilbo enters the dragon's presence: "Well, thief! I smell you and I feel your air. I hear your breath" (Tolkien 182). Unlike the Mirkwood spiders that require movement to sense Bilbo or Gollum who requires the ring to track prey, Smaug effortlessly has every available sense to locate Bilbo—sight included. Despite wearing the ring, Bilbo huddles in the shadows seemingly aware that any advance from the dark into Smaug's fiery, illuminated presence will result in a noticeable shadow. However, Smaug's ability to locate Bilbo pales in comparison to the dragon's intelligence and abstract thinking: "Tolkien's dragon ... is not a beast. The moment it speaks, it becomes a character, an intelligent person who is not merely governed by his bestial instincts The dragon is clever and subtle and formidable in an eerie way. This opens up a Pandora's Box

of new and uncanny possibilities” (Jakobsson 28-29). These “new and uncanny possibilities” include exotic and unknown stressors, “x factors” virtually mirroring the unknown stressors created by the variable of time within Wells’s *The Time Machine*. Upon sizing up Bilbo, Smaug generates the emotional stressors of doubt and confusion, mental states created from the disparity between party quest goals and Bilbo’s personal quest goal.

Level 4 (see figure 3) illustrates Bilbo’s interactions and observations within a socially charged environment. Within the deeper and more sophisticated level 6, Smaug reuses these themes in a very personal and concentrated form which results in Bilbo experiencing various internal, psychological stressors, of which his isolation from the quest party emerges as paramount. This isolation represents a key component of Bilbo’s maturation within Subterranea. Hence, Smaug unexpectedly and unintentionally benefits Bilbo with the reintroduction of level 4 themes. Isolated, the hobbit successfully navigates varying quagmires of confusion and doubt. Ultimately, the hobbit stays the course towards character maturation. Exiting this exotic psychological layer, Bilbo not only survives but has done so within an environment that positions him for the final stages of character maturation.

For the Smaug/Hoard construct to offer successful character evolution, Smaug must be destroyed, a process enabled by the classic subterranean concept—a secret. Tolkien’s subterranean alpha-predator becomes vulnerable and destructible through irony and vice.

Confusion and doubt, conditions created by Smaug to force Bilbo to succumb to any one of a myriad of spiritual sins, quickly emerge. Ironically, Bilbo successfully navigates the trap while Smaug falls victim to pride, a trait exploited by the hobbit during lengthy verbal banter with the dragon. Bilbo covertly massages Smaug’s ego with the descriptor “impenetrable,” a word used to describe the dragon’s armored scales and overall personage. The regal title of

“Lord Smaug the Impenetrable” emerges as simultaneously ironic and symbolic. While showing Bilbo the extent of his magnificence, Smaug also shows his vulnerability, a small unprotected area on his belly. This revelation illustrates the interconnected nature of Smaug relative to the overall Smaug/Hoard construct as both dragon and construct now become penetrable, a concept already manifesting as witnessed by Bilbo’s present depth.

Despite Smaug unveiling his vulnerability, the dragon’s actions do not mandate his demise. A complex safeguard to protect Tolkien’s dragon from such an eventuality exists. Smaug’s demise, though initiated by Bilbo, requires the coordination of multiple, unlikely parts to see it to fruition.

Bilbo reaches the current layer through evolutionary processes experienced within isolation. Though successful upon previous layers, the current layer now requires Bilbo to perform within a unique group construct. As mentioned in the thesis introduction, Subterranea uses either solo or group roles to effectively evolve characters; Tolkien’s Subterranea requires Bilbo to use both. Though isolated, Bilbo’s actions represent a constituent part within a complex string of events performed by multiple individuals. As discussed earlier, gold appeals to every race upon Tolkien’s Middle-earth. Subsequently, the unending quest and desire for the element virtually eliminates the possibility of coordination amongst the potentially vying and multiple races. These conditions and traits protect Smaug. The destruction of the highly cunning and physically potent dragon requires coordination between distinct individuals possessing unique qualities from multiple races. Due to the inherent nature of gold, relative to vices, Smaug’s destruction emerges as an unlikely event. Gold, the goal of Bilbo’s subterranean journey, figuratively protects the very obstacle—Smaug—that the hobbit must overcome to achieve self-actualization. Smaug, upon his gold hoard, emerges as a creature guarded by a myriad of

spiritual sins being generated from the hoard itself. Consequently, the unlikely cooperation amongst the distinct Middle-earth races emerges as more impenetrable than the secret of the dragon's vulnerable belly. Despite these odds, the required complex chain of events transpires and seemingly eradicates Tolkien's draconic sentinel:

Bilbo discovers Smaug's vulnerable spot, the Old Thrush overhears Bilbo's account and relays the information to Bard, and Bard shoots the arrow that takes Smaug's life.... Tolkien here introduces the Old Thrush, thus effectively removing control of his information from Bilbo (who in any case has no idea what to do with it) and at the same time making possible Bard's slaying of the dragon, without giving him any greater control or any cause to take credit for more than understanding and archery. (Glenn)

Symbolically, no single person slays the crux of the complex Smaug/Hoard construct.

Deficiencies abound within each participating individual. Collectively, the group overcomes a predator which could easily defeat each isolated character outside the chain of events.

Smaug's "death" does not bring about Bilbo's self-actualization. An unaddressed subterranean obstacle or stressor exists between Bilbo's evolutionary status after Smaug's "death" and the hobbit's ultimate "golden form." Symbolically, Smaug figuratively reappears as the unaddressed obstacle. The dragon emerges through Thorin, a character whose identity and title of "King under the Mountain" allows for a seamless rebirth for Smaug. However, more important than the same title, Thorin and Smaug exhibit the exact characteristics and vices: "Yet Thorin, king of the Dwarves, does reveal most blatantly the sins of avarice and pride.... Like the greedy dragon whose role as 'King under the Mountain' he assumes after his death, Thorin refuses to share the hoard with 'thieves' and 'enemies'" (Chance 61).

Greed, pride, anger, and revenge envelop Thorin, a character who represents a reborn Smaug. Tolkien simply removes the vice-laden crown from the fallen dragon and places it upon the head of the dwarf. Roac, a wise thrush, witnesses the transferal of title, power, and emotions to the dwarf and subsequently warns Thorin that “The treasure is likely to be your death, though the dragon is no more” (Tolkien 253). A new face appears upon the draconic sentinel of the gold hoard. As stated earlier, Smaug must be overcome in order for the Smaug/Hoard construct to offer successful character evolution. Now Bilbo must overcome the reborn dragon.

Bilbo’s success in overcoming “Smaug” resides with the Arkenstone, a critical artifact affecting an entire layer through its literal and figurative worth. Despite the flawless literal nature of the gem, massive figurative impurities exist within and around the artifact. Bilbo successfully deflects these impurities: anger, envy, pride, covetousness, and avarice. However, he strategically and willingly accepts the impurities of larceny and deceit. Symbolically, this “conflicted” gem acts as a final medium for Bilbo, a character who “then relinquishes to the Dwarves’ enemies (the Elves and Men) the [A]rkenstone he has stolen from them so that the Dwarves may bargain with Thorin and end the dispute. This highly moral act redeems Bilbo” (Chance 68-69). Illustrating Tolkien’s medieval theological framework, Bilbo’s selfless act—though impurity-laden—illustrates moral fortitude of a “golden” nature. Bilbo himself summarizes this unique relationship: “I may be a burglar ... but I am an honest one” (Tolkien 224).

Bilbo’s subterranean journey exposes him to unique stressors and impurities, and “[t]he way that Bilbo defeats these adversaries in almost every case involves a type of burglary, as if in practice for the final and most crucial theft of the [A]rkenstone” (Chance 66). The hobbit’s experiences prepare him for transformation within a construct overseen by a draconic master

blacksmith. Ultimately, through subterranean descent and dissent of surface identity, Bilbo Baggins achieves self-actualization within Tolkien's Subterranea.

Within *The Hobbit*, the omnipresent subterranean themes of Vulcanism/Plutonism versus Neptunism and the alchemist interweave throughout the storyline. This ancient conflict and subterranean personage create a highly transformative Middle-earth Subterranea. The Vulcanism/Plutonism vs Neptunism conflict emerges naturally from Tolkien's historical medieval framework where fire and water play symbolic roles. First, historic medieval social concerns surrounding highly prevalent, rampant water-borne diseases such as typhoid creates a paradigm of devolution and death—Neptunism. Hence, people rarely drank and generally avoided water. Secondly, fire and water represent integral parts of medieval theological and judicial views in the forms of Ordeals by Fire and Ordeals by Water. Tolkien's medieval framework embraces the coexisting relationship between fire-smithy and water. *The Hobbit* uses all of these select examples within its storyline. The fire-forged One Ring lies strategically centered within a devolutionary subterranean lake environment. The devolutionary Mirkwood forest stream lies within arguably the most evolutionary level of Tolkien's Subterranea. The remains of the evolutionary fire-drake Smaug symbolically rot within the dark waters of Long Lake. These examples of intense Neptunism reinforce the need for coexisting paradigms within subterranean constructs if characters are to evolve. Ultimately, continual conflict within subterranean science fiction and fantasy works illustrates a recognizable crux in the Vulcanism/Plutonism versus Neptunism conflict, as well as character evolution.

The Vulcanism/Plutonism versus Neptunism conflict literally and figuratively forms Middle-earth's subterranean landscape. Beginning with the heavy rains within the "Troll Fire" level, each subsequent Vulcanism/Plutonism versus Neptunism conflict reflects evolutionary

opportunities or constructs for Bilbo. Each subterranean level interweaves with preceding and succeeding levels, as do Tolkien's "fire-water" conflicts. The devolutionary Mirkwood Forest River represents a tributary of the River Running which originates at The Lonely Mountain under which the fire-drake Smaug lies. However, Gollum's fire-forged ring, both useful and protected within the Neptunist lake construct, emerges as a useless artifact against the Vulcanic/Plutonic fire-drake Smaug. Tolkien's Subterranea showcases continual conflict and contrast, characteristics that enable effective character evolution.

In conclusion, the familiar subterranean alchemist—Gandalf—plays a significant role within Bilbo's character evolution. The wizard emerges as a resource of effective, and sometimes impure, subterranean processes and guidelines. The wizard's esoteric knowledge and pivotal confrontations provide valuable learning experiences for the hobbit. Tolkien's alchemist emerges as a strategic "point character," a personage frequently absent when Bilbo applies learned subterranean concepts who then suddenly reappears for assessment and further instruction. An example of this occurs within "Roast Mutton" where Gandalf becomes appropriately absent during the vast majority of the party's conflict with the trolls. The wizard's absence reflects the subterranean demand of isolation when characters confront stressors. Gandalf, a learned master, emerges at the last minute to illustrate the benefits of trickery, deceit, and word play. Gandalf models the practicality and legitimacy of impurities throughout Bilbo's subterranean quest. The hobbit, an astute learner, uses these learned impurities repeatedly throughout his journey.

As mentioned, Bilbo's journey requires Gandalf's occasional guidance, knowledge, or protection. However, the alchemical "golden form" towards which Bilbo strives demands individual surmounting of subterranean stressors. Thus "Gandalf realizes he must depart in order

for Bilbo to develop his own physical, intellectual, and spiritual qualities” (Chance 65-66). While isolated within distinct subterranean constructs, Bilbo replicates Gandalf’s alchemical processes which result in his self-actualization, thereby legitimizing the presence of the long-established personage within subterranean fantasy. Finally, whereas Verne’s Saknussem represents an isolated “one-off” or alchemic original who teaches self-taught, self-regulated subterranean concepts, Gandalf represents one of “a great council of ... white wizards, masters of lore and good magic” (Tolkien 244). Coupled with the fact that Verne’s alchemist figuratively maintained a constant presence around Liedenbrock via a journal, the sporadic nature of Gandalf further distinguishes the two alchemists. Consequently, *The Hobbit* illustrates the evolving role of the alchemist upon the subterranean timeline.

Within Tolkien’s Subterranea, Bilbo Baggins “develops into a type of the good ‘king’ when he tests his courage, justice, prudence (wisdom and intelligence but also awareness of moral good), and finally temperance or mensura (the bridling of emotions by moderation) in battles with those monsters” (Chance 55). These precise characteristics and pitfalls distinguish the evolutionary pathways taken by Anakin and Luke Skywalker in George Lucas’s subterranean epic *Star Wars*.

Works Cited

- Brisbois, Michael. "Tolkien's Imaginary Nature: An Analysis of the Structure of Middle-earth." *Tolkien Studies* 2 (2005): 197-216. Print.
- Burns, Marjorie. "The Exalted and Lowly in Tolkien's Created Worlds." *Lord of the Rings, 1954-2004 : Scholarship in Honor of Richard E. Blackwelder*. Eds. Richard E. Blackwelder, Wayne G. Hammond, and Christina Scull. Milwaukee: Marquette UP, 2006. 139-152. Print.
- Chance, Jane. *Tolkien's Art: A Mythology for England*. Lexington: UP of Kentucky, 2001. Print.
- Dickerson, Matthew T. and Jonathan D. Evans. *Ents, Elves, and Eriador: The Environmental Vision of J. R. R. Tolkien*. Lexington: UP of Kentucky, 2006. Print.
- Fonstad, Karen W. *The Atlas of Middle-Earth*. Boston: Houghton Mifflin, 1991. Print.
- Glenn, Jonathan A. "To Translate a Hero: *The Hobbit* as *Beowulf* Retold." University of Central Arkansas, 2005. Web. Accessed 3 November 2015.
- Jakobsson, Armann. "Talk to the Dragon: Tolkien as Translator." *Tolkien Studies* 6 (2009): 27-40.
- Matthews, Dorothy. "The Psychological Journey of Bilbo Baggins." *A Tolkien Compass*. Ed. Jared Lobdell. Peru, IL: Open Court, 2003. 27-40.
- Mitchell, Philip Irving. "Legend and History Have Met and Fused: The Interlocution of Anthropology, Historiography, and Incarnation in J. R. R. Tolkien's 'On Fairy-stories.'" *Tolkien Studies* 8 (2012): 1-22.
- Nagy, Gergely. "The 'Lost' Subject of Middle-earth: The Constitution of the Subject in the Figure of Gollum in *The Lord of the Rings*." *Tolkien Studies* 3 (2006). 57-80.
- Pike, David L. *Subterranean Cities: The World beneath Paris and London, 1800-1945*. Ithaca:

Cornell UP, 2005.

Stanton, Michael N. *Hobbits, Elves, and Wizards: Exploring the Wonders and Worlds of J. R. R.*

Tolkien's 'The Lord of the Rings.' Gordonsville, VA: Palgrave Macmillan, 2002.

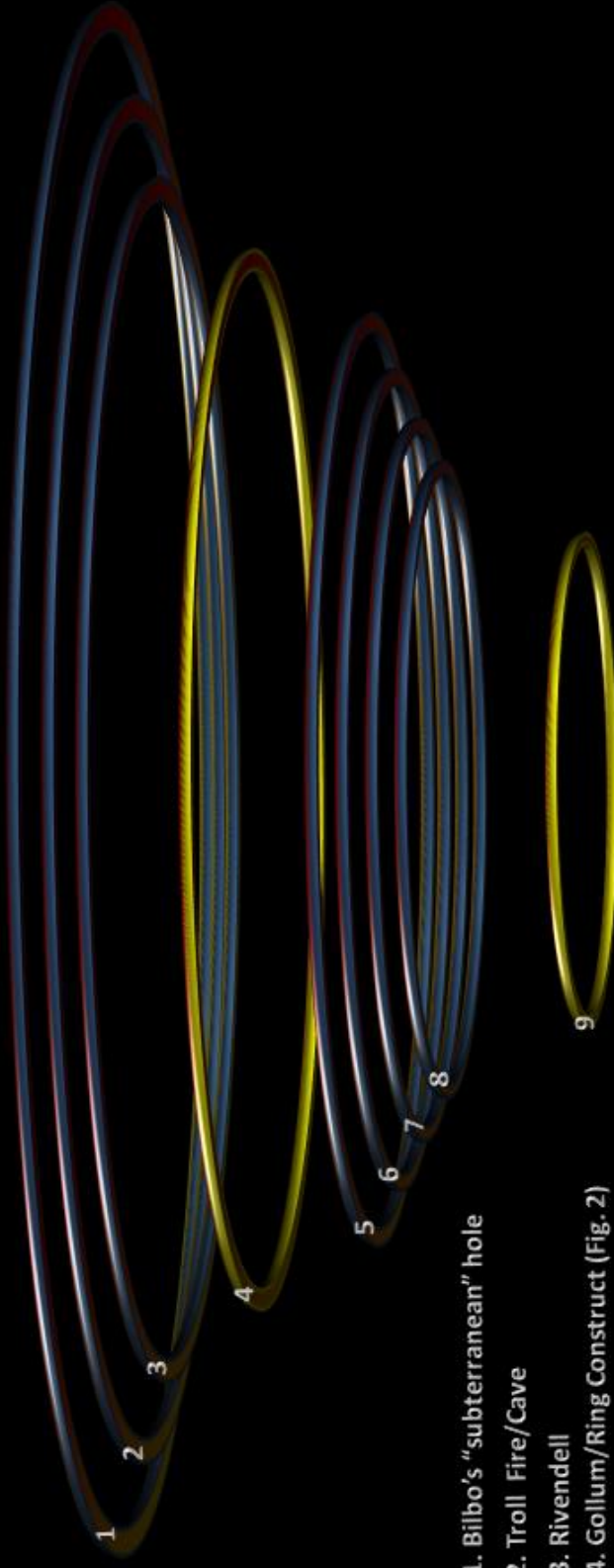
Tolkien, J. R. R. *The Hobbit, or, There and Back Again.* Houghton Mifflin Harcourt, 2014.

Kindle E-book Edition.

West, Richard. 'And She Named Her Own Name': Being True to One's Word in Tolkien's

Middle-earth." *Tolkien Studies* 2 (2005): 1-11. Print.

Tolkien's *The Hobbit* Construct

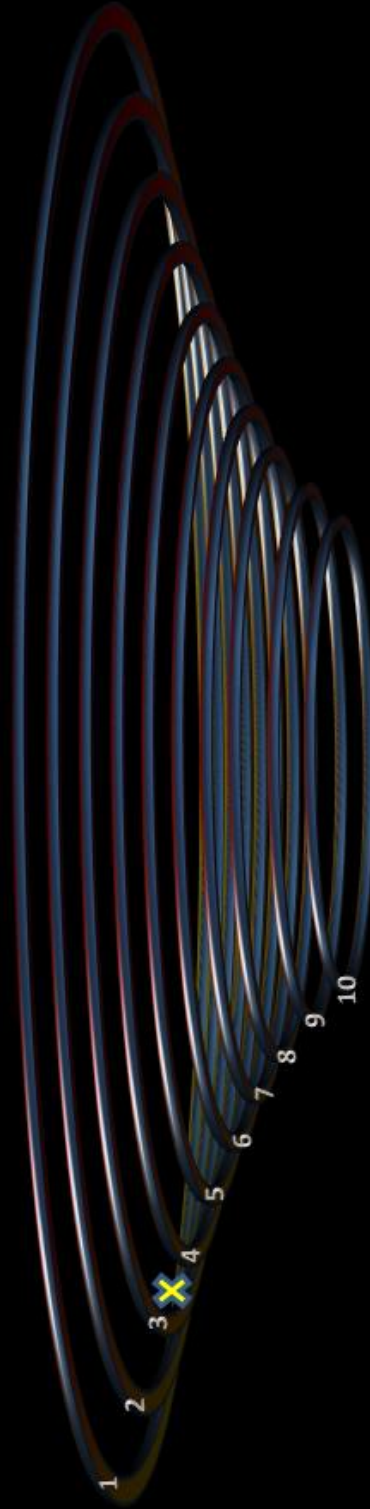


1. Bilbo's "subterranean" hole
2. Troll Fire/Cave
3. Rivendell
4. Gollum/Ring Construct (Fig. 2)
5. Pine Trees
6. Beorn's House
7. Mirkwood
8. Wood-Elves
9. Smaug/Hoard Construct (Fig. 3)

Figure 1

Ian T. Richard 2015

The Gollum/Ring Construct



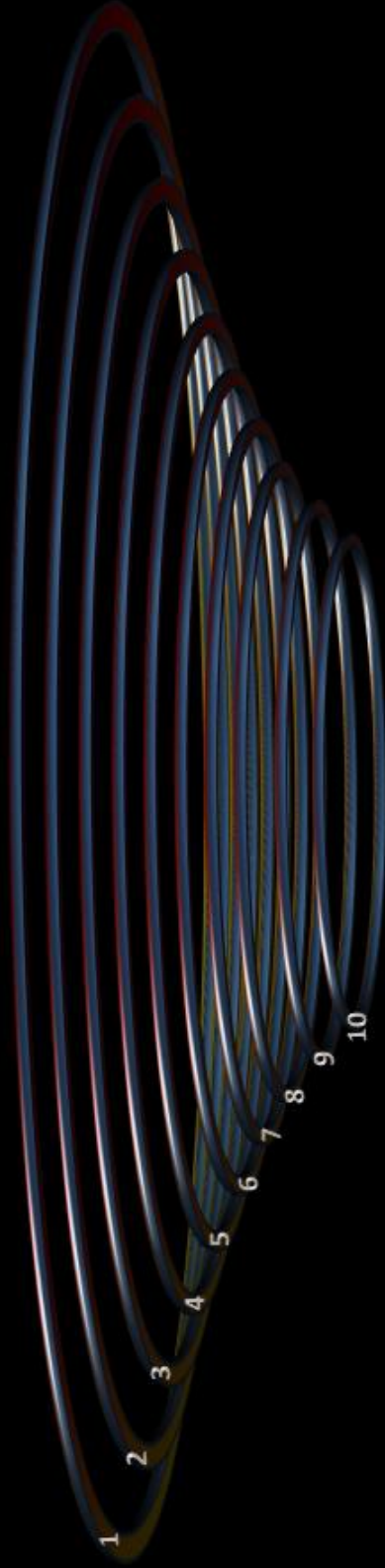
1. Goblin guarded gate/cave entrances
2. "Deep, deep, dark" (p. 53)
3. "Crossed and tangled" passages (p. 53)
4. "Tunnel [with] no end" (p. 61)
5. "Down at the very roots of the mountain" (p. 63)
6. In "a deep dark subterranean lake" (p. 62)
7. "On his island" (p. 71)
8. "In the rock" (p. 71)
9. "In a hole" (p. 71)
10. Gollum "always going back to look at it" (p. 71)

X Location of Ring when found

Figure 2

Created by Ian T. Richard 2015

The Smaug/Hoard Construct



1. Artifacts
2. Time
3. Fear
4. Confusion and Descent
5. Physical Barriers
6. Spiritual Sins
7. Smaug's Secret
8. Coordinated Multiplicity
9. Reincarnation
10. Arkenstone

Figure 3

Ian T. Richard 2015

Chapter 4 – *Star Wars*

Star Wars emerges as arguably “the most powerful mythic cycle of the twentieth century” (Brin and Stover 11), constructed from a visual kaleidoscope of subterranean concepts. The title itself exudes core subterranean themes. “*Star*” references fiery, stellar Vulcanic/Plutonic processes and potentiality displayed within stellar nucleosynthesis, a process of self-actualization. “*Wars*” references the required evolutionary conflicts and encounters between contrasting paradigms. When combined, these two words foreshadow massive evolutionary subterranean concepts.

This film analysis includes *Star Wars: A New Hope* (1977), *The Empire Strikes Back* (1980), *Return of the Jedi* (1983), *The Phantom Menace* (1999), *Attack of the Clones* (2002), and *Revenge of the Sith* (2005); the former three movies constitute the “original trilogy,” the latter three movies the “prequels.” Additionally, the 1976 screenplay novelization of *Star Wars: A New Hope* further showcases Lucas’s consistent subterranean theme. Character evolution of Anakin Skywalker (Darth Vader) and Luke Skywalker forms the analysis parameters; the term Skywalker within this chapter represents concepts representative of both characters.

This analysis has three distinct parts. The first part defines the unique, overall geospatial construct housing character evolution within *Star Wars*—Subterranea with emphasis upon galactic organization. The second part analyzes the abstract subterranean feature of the “conduit,” a distinct, private, subterranean feature traversing the storyline’s entirety. The conduit contains all knowledge, artifacts, characters, encounters, and communication crucial to Skywalker evolution. Though symbolically twisted, it is the linear backbone of *Star Wars*. The final part details specific character evolution concepts, with particular emphasis upon *Star Wars*’s radical deviation from traditional balanced Vulcanism/Plutonism versus Neptunism

concepts into themes of imbalance and the “Force.” Additionally, the pivotal artifact of the lightsaber illustrates the essence of Skywalker evolution.

This chapter will showcase unique and radical deviations from the standard subterranean constructs within earlier texts. The primary deviation is the existence of evolutionary components entirely upon an “antipodal layer” of the subterranean core. The traditional vertical descent into a concentrated core shifts towards exaggerated lateral movement upon upper layers. This new lateral trajectory satisfies the traditional requirement of descent. The conduit feature addresses the new subterranean spatiality; it encapsulates and connects the posturing or “cause” components within the traditional core to evolutionary or “effect” components upon the upper layers.

Classic, concentric onion-skin layering illustrates Lucas’s layered *Star Wars* galaxy (see figure 1). Like the subterranean cores within the previous selected works, the Deep Core symbolizes the epicenter of character evolution concepts. However, as represented by the films, destructive upheaval, dissent, and conflict scatter these evolutionary concepts to the galaxy’s farthest reaches; a unique, radial, upward, conic dispersal pattern (see figure 2) visually illustrates this process. Consequently, subterranean descent into this core results in ineffective character evolution experiences; self-actualization no longer resides anywhere near the core region. Existing within the core are catastrophic, stagnant, devolutionary concepts that “push” evolution-seeking characters far into the galaxy. Multiple, scattered fragments represent previously concentrated Deep Core concepts, tethered and highlighted by the conduit.

Outward from the Deep Core ascend six more distinct subterranean layers of the *Star Wars* galaxy: Core, Colonies, Inner Rim, Expansion Rim, Mid Rim, and Outer Rim. The Deep Core represents the literal and figurative epicenter of *Star Wars*. This inner region, where the

character evolutionary Force was first studied, remains balanced through coexisting Light Side and Dark Side concepts, two halves of the omnipotent, ubiquitous, metaphysical power. Positive traits such as honesty, compassion, self-sacrifice, and mercy, exhibited by Tolkien's Bilbo Baggins in the previous chapter, here represent Light Side concepts. Luke and—ultimately—Anakin illustrate these Light Side traits. Intense raw emotions such as megalomania, anger, hatred, aggression, greed, jealousy, and fear, illustrated by Gollum, Smaug, and Thorin in *The Hobbit* chapter, emerge through Vader and the Emperor (Chancellor Palpatine) as signature Dark Side traits in *Star Wars*. These dark emotions or vices act as barriers to character evolution, effortlessly symbolizing Neptunism, a paradigm of rigidity, stagnation, death, catastrophism, non-inclusiveness, and devolution. Within *Star Wars*, this devastating paradigm manifests through the Emperor.

The Jedi Order, a subterranean group which studies, serves, and utilizes the Light Force, originated their tenets within the Deep Core (Wallace and Anderson 6); the Sith study, serve, and utilize the Dark Force. A fusion of Force origins, central geospatial positioning, stellar association, and extreme isolation form the Deep Core, a literal and figurative focal point and litmus against which *Star Wars* character evolution concepts are contrasted. Both character evolution and galactic construct are directly linked with this inner, lowest layer.

The Core resides directly above the Deep Core; this stratum physically manifests abstract Deep Core concepts. Preceding the events of the prequels, adherents to both Light Side and Dark Side concepts were physically and symbolically represented within and by this layer for millennia. An ecumenopolis planet symbolic of these historical coexisting and conflicting paradigms dominates this stratum—Coruscant. Events within *The Phantom Menace*, *Attack of*

the Clones, and *Revenge of the Sith* showcase radical modification of both Coruscant and the Core.

The prequels illustrate a successful, concentrated Neptunist/Dark Side assault upon Vulcanic/Plutonic/Light Side concepts within the Core. Ultimately, a Neptunist-dominated core region devoid of character evolutionary concepts emerges. Among the millions of buildings upon Coruscant, four strategic structures deftly illustrate this Neptunist campaign. These structures include the Imperial Palace, the Senate Building, the Jedi Temple, and the Chancellor Palpatine Surgical Reconstruction Center.

The Imperial Palace was originally known as the Palace of the Republic, but renamed by Supreme Chancellor Palpatine upon attaining power. From this building, edicts eradicating the Jedi Order, as well as transforming the Republic into a Galactic Empire, are issued. Within its walls, the Emperor christens Anakin Skywalker with the name Darth Vader.

The Senate Building was originally the seat of power for the Galactic Senate. Upon Palpatine dissolving the Galactic Senate, the building becomes the Imperial Senate, seat of the Galactic Empire. Under Imperial domination and law, all opposing paradigms are systematically targeted for eradication.

The Jedi Temple, Jedi Order headquarters until events in *Revenge of the Sith*, is the infamous location of brutal Jedi genocide by Anakin Skywalker at the Emperor's command. Anakin's actions at this location literally and figuratively form the epicenter of an overarching campaign driven by the Emperor (Neptunism) to eradicate or disperse Deep Core Light Force concepts and its adherents from the core region. Forced from the core region, evolutionary concepts are thus scattered to the farthest galactic reaches.

The vertical spire of the Chancellor Palpatine Surgical Reconstruction Center dominates the Coruscanti skyline. A quad-lobed structure atop the spire—a symbolic feature used again within Skywalker “evolution”—showcases the transformation of a charred and disfigured Vader within the iconic, encapsulating black suit. Anakin Skywalker’s transformative journey into Darth Vader transpires entirely upon Coruscant, a planet upon which the Emperor seduces, names, instructs, and transforms Anakin. The prequel films definitively establish the core region as a devolutionary, stagnant location devoid of its original evolutionary concepts, now scattered outward amongst the stars.

Ascending further through the galaxy, the Inner Rim, Colonies, and Expansion Rim layers are successively penetrated. The films are strategically devoid of locations or events within these layers; they form a buffer, a visual and spatial barrier, between the devolutionary core region and the evolutionary upper layers of the Mid Rim and Outer Rim.

The evolutionary locations within the upper layers include Naboo Power Core, Mustafar, Polis Massa, Tatooine, Death Star I, Hoth, Dagobah, Cloud City, Endor, and Death Star II. Except for the Mid Rim planet of Naboo, all locations reside upon the Outer Rim stratum, the “antipodal layer” of Deep Core concepts. These locations are natural or artificial, representing “environments [that] are neatly divided into the natural and the man-made, and coded to their inhabitants’ stations in the moral universe” (Lamster 233). The natural locations are represented by Mustafar, Polis Massa, Tatooine, Hoth, Dagobah, and Endor, bodies formed from natural geologic and cosmic processes. Nonetheless, each is radically distinct, thus introducing a “constituent” concept. The artificial locations of Naboo Power Core, Death Star I, Death Star II, and Cloud City represent smaller, artificially-constructed features. Despite the distinctions between natural and artificial locations, both house effective character evolution environments.

As the sole Mid Rim representative, Naboo manifests an equally unique Skywalker evolution concept—the creation of the conduit. Within the Naboo power core, a perfectly postured construct waits for the upcoming characters and events.

Distinct environmental conditions represent each natural, Outer Rim planet. These conditions symbolize discreet, evolutionary concepts within Skywalker evolution. The extreme, fiery, Vulcanic planet of Mustafar literally and figuratively symbolizes absence of Neptunist (water) concepts. Mustafar's surface landscape of 0% water and 35% lava (Lund et al. 13) illustrates a homeostatic environment where one dominant paradigm affects all constructs and process. This radical landscape uses the industry of lava surface mining, illustrated in *Revenge of the Sith*, to represent a crucial component along Skywalker evolution. This industry visually symbolizes the minuscule depths of Anakin's subterranean evolutionary explorations. In contrast, Vader utilizes deep underground mining techniques attempting to trap the more evolved Luke upon Cloud City, effectively illustrating the evolutionary distinctions via vertical depth.

Excepting the artificially maintained environment housing medical facilities, Polis Massa is a barren asteroid. Showcased in *Revenge of the Sith*, Padmé Amidala births twins Luke and Leia upon this barren rock and subsequently dies. Of extreme relevance to Skywalker evolution, Luke's birthplace is a static Plutonic medium thoroughly devoid of any dynamic Vulcanic activity. Luke figuratively emerges as from and as absolute Plutonism—a static, subterranean spatial medium through which dynamic Vulcanic process works in tandem—within *Star Wars*.

Anakin and Luke each claims Tatooine as their home-world. All films except *The Empire Strikes Back* strategically utilize the planet's Outer Rim location, which manifests an extreme environment devoid of Neptunist (water) concepts. The “Dune Sea,” a massive scorching sand desert, represents Tatooine's sole “Neptunist” feature; the cumulative homeostatic environment

creates a non-evolutionary construct. Ultimately, Tatooine's multiple appearances, non-evolutionary environment, Skywalker perceptions, and lightsaber introductions posture the planet as a strategic location of introduction and discovery within Skywalker evolution.

The previous water-deprived planets of Tatooine and Mustafar sharply contrast with the Outer Rim planets of Hoth and Dagobah. The subterranean trait of isolation forms the crux of Hoth, a desolate world thoroughly covered with the symbolic Neptunist features of ice and snow; concepts of rigidity and non-inclusiveness cover this harsh, frigid landscape. Within and around a minuscule ice cave, Luke's evolutionary journey formally begins.

The humid, swamp-laden planet of Dagobah harbors a unique relationship between coexisting paradigms. Within Dagobah's fog, these paradigms creatively quarantine each other. Lucas introduces viewers to this unique segregated world through Jedi master Yoda's house, a smoky, fire-lit earthen Vulcanic/Plutonic abode amidst a rain-drenched swamp feature. This concentric and demarcated landscape showcases pure Vulcanism/Plutonism encapsulated within pure Neptunism. Water-based Dagobah is a biphasic mixture, a construct consisting of the two immiscible "liquids" of oil (Vulcanism/Plutonism) and water (Neptunism). Illustrating Outer Rim conflict, Dagobah's paradigms mix but never chemically combine.

Yoda represents the epicenter of Vulcanic/Plutonic concepts upon Dagobah; Neptunist concepts are centered within a single cave—Dark Side Cave. Luke, untrained at the beginning of *Star Wars: A New Hope*, becomes tethered to his self-actualized form at the conclusion of *Return of the Jedi* by Dagobah, a unique planet of theoretical training and conceptual learning.

The small forest moon of Endor completes the analysis of natural Outer Rim locations. Endor's preponderance of faunal and floral life, symbolic of rebirth, growth and peace, deftly interweaves with Skywalker evolution. The near proximity of the vibrant moon to the sterile

harsh Death Star II positions the two locations as strategic mediums through which to illustrate the final stages of Skywalker evolution.

The artificial Outer Rim locations are no less unique. The mining metropolis of Cloud City hovers above the gas giant Bespin. Like Mustafar, Cloud City's mining association reflects symbolic evolutionary concepts; Vader's superficial "surface mined" character upon Mustafar clashes with Luke's "deeper" evolutionary attainments. Vader's goal within Cloud City is nothing less than traditional underground mining, the extraction of a valuable commodity from within a unique subterranean construct for delivery to an interested party—the Emperor—for further "refinement" to the Dark Side. Cloud City emerges as a unique, layered, urban construct positioned over a definitive core. Further illustrating classic onion-skin concentricism, Vader's goal centers around placing Luke into a smaller, interior core—a carbon freezing pit.

Death Star I and Death Star II constitute artificial, moon-sized Imperial battlestations, the latter larger and more powerful due to its symbolic role as the climatic setting for Skywalker conflict. Each Death Star forms the crux of the non-conduit storyline within its respective movie, Death Star I in *Star Wars: A New Hope* and Death Star II in *Return of the Jedi*. However, Death Star "value" precipitates from their relationship to Skywalker evolution events.

The name "Death Star" symbolizes the stellar nucleosynthesis process. Detailed in *The Hobbit* chapter, a dying star reaches its full potential—self-actualization—during this process. Death Stars display distinctive, subterranean construction illustrating a balanced, evolutionary environment harboring conflicting paradigms visually formed from two equal hemispheres. The crucial battle between Darth Vader and Kenobi upon Death Star I, as well as the evolutionary climax between the Emperor, Darth Vader, and Luke upon Death Star II, illustrates this concept of balanced environments formed from conflicting paradigms within the Death Star framework.

Further mimicking a natural subterranean construct, Death Stars contain distinct zones representative of Earth's crust, mantle, outer core, and inner core. Ultimately, a symbolic hypermatter core resides at the center, forming a perfectly balanced and layered artificial, subterranean feature.

Each distinct Mid Rim and Outer Rim location represents a pivotal, constituent experience within Skywalker evolution. Each location manifests a radically unique environment, reaffirming that Lucas's "environments ... for the *Star Wars* series are, by and large, anything but warm and fuzzy" (Lamster 233). Collectively, the locations contain a complete character evolutionary experience, and upon successful navigation, character evolution or self-actualization potentially transpires.

These scattered locations produce a unique spiraling evolutionary geometry—the conduit, a feature representing a definitive and progressive evolutionary network of critical events, characters, and locations within Skywalker evolution (see figure 3). The conduit highlights evolutionary events upon the upper layers, many of which are conflicts. Contrastingly, the conduit showcases events, characters, and locations counterproductive to Skywalker evolution within the core regions. Though counterproductive, these core events and characters directly produce evolutionary countermeasures upon the upper levels. Consequently, the conduit highlights a recognizable, evolutionary pattern of cause and effect. A distinct evolutionary zone, buffer zone, and stagnant devolutionary zone, relative to the galactic structure, manifest from conduit analysis.

Though abstract, the conduit exhibits specific, discernable traits. Upper-level evolutionary conflict events are governed by distinct characteristics fused at the conduit's creation. These include lightsaber usage, color patterns, esoteric knowledge, extreme isolation,

hierarchical elevation, internal and external conflict, and private communication. These characteristics enable conduit transfer of all required knowledge, artifacts, characters, encounters, and communication essential to Skywalker evolution. The conduit becomes increasingly ineffective as an evolutionary medium as it nears the core. Ultimately, the conduit's evolutionary integrity and/or abilities are completely compromised within the confines of the lower core region, where it highlights stagnant, devolutionary events and processes directly influencing, or responsible for, upcoming evolutionary upper-layer events.

Conduit analysis uses Galactic Standard Calendar dates, a standard measurement of time relative to the Battle of Yavin illustrated in *Star Wars: A New Hope*. Events preceding the battle constitute BBY (Before Battle of Yavin), successive events constitute ABY (After Battle of Yavin). Figure 3 illustrates all referenced "locations" within this chapter.

Two critical Skywalker evolution events transpire prior to the conduit's creation; the locations provide insight into their evolutionary relevance. Anakin Skywalker was "conceived" by midi-chlorians in 42 BBY through Shmi Skywalker. Jedi Qui-Gon Jinn and Obi-Wan Kenobi locate Anakin in 32 BBY on Tatooine (location 1). Jinn introduces Anakin to the lightsaber, a critical conduit component, upon meeting him. Sensing a strong Force presence, Jinn believes Anakin is the Jedi prophecy's "Chosen One," the individual who will bring balance to the Force. Consequently, Jinn's expressed interest of taking Anakin to the Jedi Council on Coruscant elicits critical insight into Anakin's evolutionary tendencies, directly linked to Tatooine. Anakin tells his mother he "does not want things to change." Change, a result of character introduction into Subterranea, seemingly violates Anakin's predetermined tendencies. His statement summarizes and foreshadows preference for hurried, catastrophic processes to overcome stressors at the expense of gradual, evolutionary change. Upon Coruscant, the Jedi Council denies Anakin

training (location 2). Anakin's perceived vulnerability to catastrophic Dark Side concepts forms the crux of the decision. This denial, the seed for upcoming isolation, distrust, anger, and betrayal within Anakin, spatially positions his evolutionary self-perceptions against established core region Jedi concepts. Unknown to the council, Jinn vows to covertly train Anakin himself. This act associates the traits of esoteric knowledge and private communication with Skywalker evolution. Jinn, Kenobi, and Anakin travel to Naboo, where the two Jedi play a crucial role in the conduit's creation during a duel with Darth Maul. During this duel, numerous characteristics already associated with Anakin are integrated.

Maul is a Dark Force Sith assassin sent by Palpatine, whose connection with the conduit's creation is counterbalanced by his presence at its closure. Conduit accretion begins as Maul unshrouds; his lightsaber ignition immediately fuses the artifact with the forming feature. Subterranean isolation envelops the duelists during separation from non-conduit characters. Descending into a private world introduced by dual beacons of vertical blue light, the duelists enter a harsh, isolated, stratified world dominated by conflict—Subterranea.

Artificial light hues of red, orange, blue, and white dominate Lucas's artificial subterranean evolutionary environments, the colors representing variegated natural flame hues relative to varying temperatures. No ubiquitous light source resides within Subterranea; symbolic black dominates the domain. However, incandescence and bioluminescence exist within Subterranea. Incandescence, the emission of visible light from an object with a high temperature, symbolizes evolutionary concepts related to subterranean processes; magma illustrates this concept. Bioluminescence, the production and emission of light by a living organism, also symbolizes evolutionary concepts related to subterranean life—or characters; the glowworms

Arachnocampa illustrate this concept. Subterranean blackness showcases incandescent and bioluminescent light, the contrast or difference a visual litmus of the “subterranean demand.”

Distinct colors represent various “regions” within fire flame, the color and region being products of temperature variances relative to distance from the fuel or source. Within *Star Wars*, the presence and confrontation between Light Side and Dark Side concepts constitute a source. Hot flame exists close to a source, burning white and blue—conflict. Cooler flame resides further from the source, burning orange and red; cooler hues suggest generic Vulcanic/Plutonic concepts in the absence of white and blue conflict flame. This template showcases a variegated color spectrum representative of evolutionary concepts surrounding conflict within artificial constructs in the evolutionary upper layers.

Downward penetration into the power core unearths a myriad of interlaced stratified catwalks mimicking classic subterranean layering, all amidst white conflict hues. The duelists leave the blue/white color spectrum and temporarily enter a pronounced partitioned area of orange and red. Within this non-combat stage, Jedi meditation takes center stage. As soon as orange-red hues disappear, the conflict immediately becomes enveloped in blue-white conflict hues. This example effectively illustrates the use of color within the conduit relative to a source of conflict. This template exists throughout the entire *Star Wars* series. The duel climaxes within an interior melting pit room, where Jinn is mortally wounded. Kenobi bisects Maul, whose body plummets down the nearby shaft. Near this shaft, deep within the artificial, subterranean structure, a dying Jinn asks Kenobi to promise the continued training—the evolution—of Anakin. Upon Kenobi’s agreement, the recently formed conduit and its unique traits of the lightsaber, color, knowledge, isolation, hierarchy/elevation, conflict, and communication fuse

with a specific goal. Within the evolutionary Outer Rim layers, the conduit will highlight and evolve Anakin Skywalker—the Chosen One (location 3).

Reentering the core region, the conduit highlights stagnant devolution and catastrophic destruction. The first noticeable sign of campaigning Neptunism is via Palpatine’s election as the new Supreme Chancellor (location 4), a position enabling a Neptunist foothold within the core that ultimately eradicates Vulcanism/Plutonism from the region.

Attack of the Clones showcases Anakin’s continued training in the Jedi arts under Kenobi’s supervision, a relationship continuing until its momentous termination in *Revenge of the Sith*. Additionally, *Attack of the Clones* introduces the subterranean romance between Anakin Skywalker and Padmé Amidala, a critical Skywalker evolution component climaxing in *Revenge of the Sith*.

Within the increasingly devolutionary and stagnant core layers, Palpatine befriends Anakin and appoints him as his personal representative to the Coruscant-based Jedi Council, the group that earlier denied him entrance (location 5). Despite being professionally and socially “evolutionary,” the appointment’s location belies its forthcoming counterproductive effects within Skywalker evolution. Despite the appointment and having studied under Kenobi, Anakin is declined the rank of Jedi Master (location 5). Consequently, Palpatine introduces and entices the jaded Anakin with the Force’s Dark Side within the walls of the Imperial Palace (location 6).

Five forthcoming, critical core region events orchestrated by the Neptunist Emperor solidify Anakin’s devolutionary trajectory (location 7). Symbolizing paradigm realignment, Anakin kills Jedi Master Mace Windu in defense of Palpatine, to be subsequently christened Darth Vader. Palpatine orders the death of all Jedi, personally sending Vader to massacre all individuals within the Jedi Temple. Ultimately, Palpatine forms the Galactic Empire and

symbolically becomes the Emperor. All of the catastrophic, devolutionary events detailed above transpire within the core.

The conduit exits a core devoid of Volcanic/Plutonic concepts, as the remaining evolutionary concepts are now scattered to the galaxy's furthest reaches. The conduit's showcasing of the upcoming Mustafar duel, illustrates the attempt to reestablish evolutionary Force and galactic balance. Seemingly shadowing the conduit's route, Padmé Amidala travels to Mustafar to question Anakin about the Coruscanti Jedi Temple genocide. Exiting her craft, Padmé is "Force choked" by Anakin into unconsciousness, placing the subsequent duel between Kenobi and Anakin within isolation.

Core region events preceding this encounter illustrate massive, devolutionary, catastrophic actions by Vader, impetus for these actions fueled by an ever-increasing, internal anger and desire for power and control. Rebalance of the now misaligned Force and galaxy demands "confrontation" with Vader, a Jedi perspective suggestive of his death, an event positioned to occur upon Mustafar (location 8). Represented by molten lava and fire plumes, the natural volcanic landscape of Mustafar renders the color concept utilized within artificial, Outer Rim conflicts unnecessary. This homeostatic, Volcanic environment antagonizes and exaggerates the unstable, catastrophic traits and trajectory displayed by Vader. The duel symbolizes the diverging relationship and pathways between Vader and Kenobi, with particular emphasis upon "evil" and "balance" concepts; duel dialog highlights both concepts: "You were the Chosen One! It was said that you would destroy the Sith, not join them! Bring balance to the Force, not leave it in darkness" (*Revenge of the Sith*). Unique use of elevation and hierarchy during the duel visually illustrates this concept.

“Highs and lows” riddle both duel and dialog; the literal and figurative vertical disparities represent gaps within the now conflicting paradigms. The symbolic term “high ground” signifies the duel’s hierarchical climax upon an embankment adjacent to a molten lava river, a unique fusion of Vulcanism/Plutonism and Neptunism. Kenobi, feet firmly planted on “high ground,” severs both legs and one arm of Vader. This disfigurement continues as the unique Vulcanic/Plutonic/Neptunist flame of the lava river engulfs Vader. Erringly predicting Vader’s demise and balance realigned, Kenobi picks up Vader’s lightsaber and departs.

Vader survives these massive injuries with the assistance of the Emperor, who arrives upon Mustafar and transports Vader back to Coruscant where he is encased within a specialized suit (location 9). Illustrating the non-evolutionary nature of the location, this process represents Vader’s physical transformation, not character evolution. Christened earlier within its confines, Vader’s wayward character physically transforms within the stagnant, devolutionary core region. Vader’s injuries mandate permanent encasement within the suit. A radical evolutionary environment, however, has been captured and transferred from the coexisting paradigms within Mustafar’s unique Neptunist/Vulcanic/Plutonic lava river. Trapped within a private, divisive subterranean microcosm, Vader experiences continuous and exaggerated exposure to the evolutionary traits of isolation, conflict, stress, and deficiencies. The Mustafar duel and Vader’s unique physical transformation creatively blend Neptunist and Vulcanic/Plutonic features and concepts. Consequently, the esoteric “product”—Darth Vader—harbors massive, unknown, evolutionary potential. Darth Vader is definitively subterranean, if not Subterranea itself.

Vader’s survival results in the sustained imbalance in the Force. Consequently, evolutionary countermeasures are required, illustrated by events upon the Outer Rim asteroid of Polis Massa. Within this evolutionary zone, Padmé secretly gives birth to twins Luke and Leia

Skywalker before dying, the catalyst for Skywalker evolution and galactic balance literally and figuratively birthed. Luke's birth, a process illustrating new potential or emergence, occurs simultaneously with Vader's physical transformation into the black armor, a process figuratively illustrating "death" or disappearance. Luke replaces Anakin as the primary crusader for Darth Vader's personal evolution and galactic balance. Lucas's scene toggling between these two crucial subterranean events visually illustrates character interdependency.

Evolutionary countermeasures to Vader's survival address the impending search and destruction of remaining Jedi. Consequently, Yoda exiles himself on the distinct Outer Rim planet of Dagobah (location 11) where he plays a crucial role in Skywalker evolution. Kenobi exiles himself to the Outer Rim planet of Tatooine, bringing the newborn Luke to be raised by relatives and to evade identification by Vader upon the desert planet (location 12). Kenobi covertly watches over Luke for nineteen years until subterranean data plans enabling the destruction of Death Star I reunite them.

Kenobi and Luke reunite in 0 BBY. Transpiring within a traditional Tatooine stone abode in the 1977 cinematic version of *Star Wars*, the meeting occurs within Kenobi's "well-concealed" subterranean cave in the 1976 screenplay novelization. The "temptations of Kenobi's cave" (Lucas, Glut, and Kahn 87-88) include Vader's lightsaber, kept from the Mustafar duel, and introduction to the Force. Vader's lightsaber forms the crux of the scene. Upon Kenobi presenting the weapon to Luke, a seamless transition into basic Force concepts follows.

Isolation for this critical exchange manifests as the droid C-3PO "closes down"; the remaining droid R2-D2 shuts down before lightsaber ignition or esoteric data transferal. Kenobi's subterranean version of Anakin's "death" to Luke creates tremendous internal conflict within the Jedi, illustrated by Kenobi's discernable expressions. Kenobi's "point of view," told to

Luke within this cave scene, plays a crucial role in upcoming conduit character interactions. Ultimately, Luke's potential to accept and/or understand the concepts presented in Kenobi's cave are directly linked to his perception of Tatooine itself. Luke's assertion that "if there's a bright center to the universe, you're on the planet that it's farthest from" (*Star Wars*) reveals his awareness of the evolutionary deficiencies associated with his current surroundings. In response to the subsequent deaths of his adoptive relatives, Luke relays to Kenobi: "I want to come with you to Alderaan. There's nothing for me here now. I want to learn the ways of the Force and become a Jedi like my father" (*Star Wars*). These views of Tatooine, and ultimately of change itself, indicate a compliant character receptive to upcoming evolutionary concepts; Luke departs from Tatooine seeking these evolutionary concepts. Symbolically, Anakin and Luke each leave Tatooine with radically different concepts and precepts regarding change, evolution, and homeostatic environments.

In a symbolic move, Death Star I pulls Luke and Kenobi's ship, in route to Alderaan with the subterranean data plans, inside its confines via a tractor beam. Once inside, Kenobi further descends into the station to deactivate the tractor beam. This task completed, Kenobi ascends back through the tunnels. Within these isolated corridors, Kenobi encounters Vader. The ensuing duel is backlit with white hue; no orange-red hues exist. Thus, the duel is visually postured as a major evolutionary conflict between two paradigms.

The Death Star I duel constitutes the midpoint of Skywalker evolution. Whereas previous upper-layer conflicts strictly adhered to conduit protocol, this evolutionary midpoint violates the rules through a fleeting—but purposeful—act. The isolated duel between Vader and Kenobi enters a corridor portion observable to the outside, non-conduit world. Via open corridor blast doors, Kenobi and Luke acknowledge the other's presence and role. The roles recognized,

Kenobi assumes a defenseless position with his lightsaber to be struck down by Vader. This “outside” witnessing of conduit events is unique; it effectively “pulls” Luke into the conduit replacing Kenobi. Kenobi figuratively hands the “torch” of Anakin’s evolution—handed to him by Jinn—to Luke.

The closing blast doors reestablish conduit isolation: Vader on one side, Luke on the other. Despite being located on “opposite sides,” Luke is firmly entombed with Vader as the primary champion for the Sith Lord’s evolution. Luke immediately receives the first of several, forthcoming spiritual instructions from the recently fallen Kenobi: “Run, Luke, run” (location 14).

Escaping Death Star I with the subterranean data plans, Luke subsequently attacks the Imperial battle station as part of a Rebel offensive. During this attack, Kenobi instructs Luke to “use the Force” during a critical targeting sequence. Luke switches off his targeting system and successfully destroys Death Star I using controlled Force concepts at the “expense” of technology, an act foreshadowing Luke’s forthcoming lightsaber relinquishment upon Death Star II. However, the primary role of this attack scene within Skywalker evolution revolves around Vader’s awareness of Luke’s existence. During the attack, Luke’s fighter is personally tracked by Vader’s fighter, piloted by the Sith Lord himself. Vader, sensing a strong Force presence during this encounter, will begin an exhaustive, intergalactic search for Luke—a “person of interest.”

Kenobi, Vader, and Luke navigate a myriad of corridors, tunnels, and chutes within the subterranean Death Star I. This Outer Rim location symbolizes Luke and Vader’s upcoming evolutionary conflicts: “the endless corridors of the Death Star [I] would represent for Luke ‘the crooked lanes of his own spiritual labyrinth’” (Martin and Ostwalt 80). This “spiritual labyrinth”

uniquely manifests within upcoming Cloud City, a feature highlighting Luke's temporary navigation along the "crooked lanes" of destiny. Ironically, Death Star II emerges as a "spiritual maze," not a "spiritual labyrinth," for Luke. The maze characteristics within Death Star II enable Skywalker evolution.

Despite Kenobi's sporadic spiritual advice, the untrained Luke requires specific and sustained subterranean training and information. The early scenes of *The Empire Strikes Back* address this need through a classic subterranean feature. Luke, attacked and dragged into a cave by a Wampa upon the ice planet Hoth in 3 BBY, hangs upside down from the cave's ceiling with his lightsaber out of reach upon the cave floor (location 15). The scene showcases Luke's first attempt using the Force without external guidance. He effectively retrieves the lightsaber, frees his body, and kills the attacking creature. Exiting the cave, Luke succumbs immediately to Hoth's brutal climate. Upon the white, harsh landscape, Kenobi's spirit informs Luke to continue his training upon Dagobah with the Jedi Master Yoda (location 15). Upon his rescue, Luke heeds Kenobi's advice and travels to Dagobah for his evolutionary journey's continuation.

Upon Dagobah, Yoda and Dark Side Cave form the crux of Luke's evolutionary experiences. Combined, these two "features" provide Luke the opportunity for a complete conceptual or theoretical experience: Yoda provides training and Dark Side Cave provides assessment (location 16). Luke's applicative experiences lie elsewhere within the Outer Rim. Yoda's instruction revolves around the connection between raw emotions such as fear, anger, hate, and self-destruction. Throughout Luke's training, Yoda emphasizes the Jedi concept of internal peace and restraint.

Dark Side Cave, a natural subterranean feature, works in tandem with Yoda's instruction. The cave assesses Luke's ability to utilize recently learned Jedi concepts. Luke—a "surface"

visitor—encounters stressors and features within the cave directly manifested from disparities between two conflicting paradigms, his and the cave's. Unique cave stressors illustrate the “subterranean demand” formed from these disparate paradigms. Ultimately, subterranean demand represents deficiencies.

Yoda provides specific information enabling Luke's success during assessment; the cave contains “only what you take with you” (*The Empire Strikes Back*). Hence, subsequent cave imagery and processes visually quantify Luke's current evolutionary stage brought down from the surface. Yoda explains that weapons are not necessary within the cave. This disassociation of technology from character evolution continues a theme originating at Vader's encapsulation within a technological suit, a device symbolizing Vader's devolutionary process. Luke's earlier disengagement of his targeting system upon Kenobi's advice results in successful destruction of Death Star I. The theme climaxes with Luke's lightsaber relinquishment upon Death Star II.

Ignoring this advice and symbolic of massive “surface baggage,” a fully armed Luke descends into the cave. Luke lands within the primordial depths of Dagobah, represented by ubiquitous arboreal roots. Amongst these life-sustaining tentacles, the armed Luke has already established his stagnant evolutionary status. Consequently, Luke's forthcoming cave experiences highlight the feature's secondary role, illustrating the ramifications of incomplete character evolution within Subterranea.

Dark Side Cave is sophisticated. Overtly natural and organic, the feature subtly introduces distinct, artificial features and constructs such as concrete doorways and fabricated edgings. Meshing with the surrounding environment, the artificial features form a unique “blurred” Subterranea, an environment purposefully foreshadowing upcoming Cloud City. Within this faux Cloud City, whitish-blue conflict hues forecast the upcoming cave conflict.

Luke encounters and duels a protean manifestation of Vader, whom he beheads. This symbolic Skywalker “death” results from Luke’s uncontrolled fear and dependence, symbolized by the lightsaber. Luke’s revealed face under Vader’s mask poignantly illustrates the potential devolutionary result of armed conflict within the upcoming subterranean construct. Descent and armed conflict riddled with elemental emotion characterize Luke’s Dagobah cave experiences. Illustrated later, these characteristics are the antithesis of successful evolutionary actions enabling Skywalker evolution. Though blatantly deficient, Luke prematurely terminates instruction due to premonitions forecasting his friend’s endangerment upon Cloud City. Against the advice of Yoda, who reminds him of his “failure at the cave,” Luke rushes towards the Outer Rim location of Cloud City (location 17).

Extreme isolation, brutal conflict, disturbing revelation, forced communication, and exaggerated elevations dominate the intensely dark Cloud City conflict. Luke enters Vader’s “pit room” via an elevator, which immediately closes to symbolically deny return—a labyrinth; Luke is ultimately driven into the construct’s lowest depths via this “squeezing” technique. Physical mechanisms, accidental falls, conflict searches, and self-induced jumps systematically force Luke downward. Established on Mustafar and reconfirmed upon Dagobah, descent foreshadows an ineffective and inevitable outcome.

The entire subterranean flame spectrum ignites; Vader strategically waits within hot hues. The Sith Lord underestimates Luke’s evolutionary status and abilities, and the ensuing duel arguably becomes the most iconic scene within the entire *Star Wars* franchise.

A completely artificial, subterranean construct houses the duel’s start. Through variegated, ubiquitous flame hues and steam vapor, this static, artificial feature transforms into a seething natural underworld. Like Dark Side Cave, Cloud City “blurs” natural and artificial

features. The duel's descending path along a predetermined route strategically utilizes metallic linear tubes, features mimicking natural lava tubes. These features radically restrict Luke's directional movement—choice is eradicated. The young Jedi's incomplete evolution manifests the labyrinthine construct that dictates his forced, predetermined movement, as well as mandating conflict. Vader drives Luke to the lowest physical point, where he severs Luke's hand, discloses his identity as Luke's father, and offers a joining of forces on the Dark Side. Interestingly, Vader's offer suggests the implied destruction of the Emperor by Luke—and himself. Vader's statement of ruling the galaxy as father and son further showcases an emerging emotional “chink” in his character. This scene transpires amidst the exaggerated classic, subterranean features of stellar images encircling a black hole. Despite his precarious literal foothold, Luke's symbolic Plutonic foothold remains secure. In rejection of Dark Side stagnation, he drops into Subterranea and further penetrates its evolutionary concepts.

The Cloud City duel introduces a concept particularly devastating to Skywalker evolution—destiny. Vader's use of this word during the confrontation suggests a revolution, a great or complete change resulting from predetermined actions. As mentioned, the Cloud City duel visually and structurally represents Luke's contemporaneous evolutionary status. Antonyms of “destiny” are “free will” and “choice,” characteristics a fully trained Luke utilizes within the upcoming Death Star II—a maze. Ultimately, the Cloud City duel highlights Vader's deference to destiny concepts, as well as Luke's rejection of them.

A deleted *Return of the Jedi* scene further exposes Vader's increasing emotional “chink.” Excluded from the final 1983 cinematic version, the scene remained “subterranean” until its fall 2011 release. Set in 4 BBY, the scene emphasizes the lightsaber, internal conflict, and communication. Cocooned within his private meditation chamber on a command ship orbiting

Endor, Vader psychically reaches out to Luke, located within a Tatooine rock cave across the galaxy (location 18). In combination with Kenobi's cave, the Hoth cave and Dagobah Dark Side Cave, this cave addition illustrates a discernable "obsessive fascination with caves" (Lamster 234), a highly specialized subterranean medium enabling Skywalker evolution. This private, psychic link represents nothing less than a plea by Vader, now illustrating massive internal stressors and conflict within the suit. Illustrating this conflict, a black-clad Vader sits against a white conflict-riddled backdrop. Seemingly answering Vader's plea, Luke ignites his newly constructed lightsaber, the beginning of a highly symbolic evolutionary stage.

Subterranean concepts envelop this private link, a conversation shielded from the Emperor, alerted later of the growing Skywalker bond as illustrated during a conversation with Vader. Vader states he has "felt" Luke's presence, to which the Emperor replies: "Strange that I have not. I wonder if your feelings on this matter are clear, Lord Vader" (*Return of the Jedi*). A subtle—yet discernable—division between Sith Lord and Master exists.

At this stage of Skywalker evolution, personal communication takes center stage; four successive dialogs illustrate pivotal evolutionary concepts for Luke. Luke returns to Dagobah (location 19) seeking assistance from Yoda regarding the completion of his training. Yoda informs Luke additional training is unnecessary as he possesses all required knowledge; theoretical evolutionary concepts have been mastered by Luke. Consequently, Luke states his achievement of Jedi status, a rank immediately refuted by Yoda. The dying Jedi Master introduces a final evolutionary capstone experience: "Vader, you must confront Vader. Then...and only then...will a Jedi you be" (*Return of the Jedi*). Upon confirming Vader as Luke's father, Yoda immediately warns the young Jedi he will suffer his father's fate if the Emperor's powers are underestimated.

Upon Yoda's death, Luke exits the house and moves into introspection, exhibiting classic symptoms of character isolation within Subterranea: "I can't do it ... I can't go on alone" (*Return of the Jedi*). As if in response, Kenobi's spirit engages Luke in the second dialog.

Luke displays subtle anger and confusion upon seeing Kenobi, whose earlier distorted version of Anakin's death now creates conflict within Luke. Kenobi's answer to Luke's questioning succinctly encapsulates the use and effectiveness of character evolution within Subterranea: "What I told you was true ... from a certain point of view Many of the truths we cling to depend greatly on our own point of view" (*Return of the Jedi*). Within Subterranea, no single paradigm or "point of view" effectively evolves a character. Only within a constructivist environment, an environment where characters generate knowledge and meaning from interaction between unique landscapes and experiences populated with contrasting ideas and characters, can characters self-actualize.

The later part of this conversation distinguishes Luke from—and above—Yoda and Kenobi, Jedi templates. Luke tells Kenobi that Vader has "good in him," to which Kenobi responds that Vader is "more machine than man ... twisted and evil" (*Return of the Jedi*). This association with machinery and evil eliminates Vader's human and character evolutionary potential—a Jedi "point of view." Word choice by Yoda and Kenobi deftly illustrates the perceived goal of the impending Skywalker confrontation. Yoda states Luke must "confront" Vader; Kenobi states Luke must "face" Vader. Neither word inherently implies Vader's salvation. Kenobi then assigns "destiny," a concept established as vehemently anti-evolutionary, to the upcoming Skywalker encounter.

At this juncture along Skywalker evolution, Luke accepts the self-imposed subterranean stressor of Vader's "salvation." This new obstacle materializes from Luke's mercy and

compassion: “I can't do it, Ben. I can't kill my own father” (*Return of the Jedi*). Kenobi’s response confirms that Vader’s destruction is the Jedi goal for the upcoming confrontation: “Then the Emperor has already won” (*Return of the Jedi*). As detailed by Yoda, Luke must confront Vader to achieve Jedi status. The self-imposed goal of Vader’s salvation exceeds Jedi standards. Luke, seemingly at odds with concepts and individuals directly responsible for forming his character identity—eerily similar to Anakin’s experience—seeks closure with this new obstacle.

The final two dialogs occur upon the Outer Rim moon of Endor (location 20). Luke finalizes his—and Vader’s—new evolutionary obstacle during conversation with his twin sister Leia. Upon perceiving Luke’s internal conflict, the Force-sensitive Leia asks her brother the source. Upon telling Leia of Vader’s Endor presence, as well as his and Leia’s relationship with the Sith Lord, Luke states that he “must go to him” and “face him”—Luke’s Jedi goal. Leia’s response elicits the closure Luke searches for. Upon being asked why, Luke remarks that “good” resides in Vader and that he can “save him” and “turn him back from the Dark Side” (*Return of the Jedi*)—Luke’s self-actualization through mercy, compassion, self-sacrifice, and love. As well as “loftier,” this goal is far more dangerous than simply eliminating Vader since Luke’s strong emotions are also subject to manipulation and conversion by the Emperor. With his new paradigm literally and figuratively in hand, Luke penetrates the Endor forest to confront his father.

The final pivotal dialog transpires upon an open-air catwalk amidst the natural Endor forest. Vader and Luke stand in isolation within a whitish-blue hue; Luke’s internal conflict now over, the hue reveals the massive, internal conflict residing within Vader’s suit. This private conversation represents the only in-person, non-combative encounter between Luke and Vader.

This conversation allows Vader a final opportunity to choose between Plutonism/Luke or Neptunism/the Emperor within a “safe” environment. The Sith Lord’s reference to destiny during the conversation foreshadows his continuation upon a predetermined path at the expense of personal choice or free-will. Vader’s decision to hand Luke over to the Emperor reflects a conceptual decision made during the Emperor’s absence—and Luke’s safety. No acute subterranean stressor dictates an absolute decision upon this isolated catwalk.

The lightsaber, discussed in detail in the character evolution section, heavily influences the dialog. Luke acknowledges Vader as his father, an act illustrating mastery of potentially detrimental concepts. Luke describes a sensed conflict within Vader using the term “good,” this association of “good” with Vader being a foreign concept to the Sith Lord. Of paramount importance, Luke reaffirms his stalwart Plutonic position by stating he “will not turn” to the Dark Side, a paradigm represented by the Neptunist Emperor. For the first time, the two radically distinct and entrenched paradigms position themselves on either side of Vader. Despite being masked, a solitary Vader displays the discernable effects of the conflict upon Luke’s removal.

The epic confrontation between Luke and the Emperor lies atop the Emperor’s Tower on Death Star II near Endor (location 21). This 100-story spire extends into the large, open reactor shaft plunging into Death Star II’s core. The cumulative depth of the tower, shaft, and core constitute the subterranean pit into which Vader ultimately throws the Emperor. The Emperor’s tower peaks at a four-lobed compartmentalized level, a symbolic feature indicative of choice and multiple pathways. A similar feature atop the Chancellor Palpatine Surgical Reconstruction Center illustrated elimination of choice, replaced by destiny-laden governance. This familiar—yet new—structure envelops forthcoming conflict events with evolutionary transformation potential.

Luke's ascension to the four-lobed level contrasts with his two previous descents to confront Vader. The presence of Luke, Vader, and the Emperor seemingly violates traditional two-person conduit conflicts; in actuality, it mirrors Kenobi, Jinn, and Darth Maul's presence at the conduit's creation. These two counterweighted "bookends" signify upcoming rebalancing.

White, stellar imagery backlights the Emperor's rhetoric of hate, anger, and death. The catastrophic, Neptunist dialog creates a gestalt vehemently discordant with Luke's Plutonic concepts. Despite Luke's massive evolutionary gains, a discernable disadvantage exists. Luke represents Plutonic spatiality, one half of an omnipotent duo. The other Vulcanic processes half stands a few feet away. Unless reunited, the disadvantage will remain.

The Emperor quickly removes Luke's ability to maintain control of his emotions, the catalyst for the final confrontation between Vader and Luke. Despite this lapse of Jedi protocol, Luke reestablishes emotional control, illustrated by numerous lightsaber disengagements to engage in reflective, persuasive dialog with Vader. Luke's extinguished lightsaber, the only such example by any conduit character, symbolizes Skywalker evolutionary potential.

Luke commands his emotions throughout the duel until he inadvertently betrays the subterranean existence of his twin sister. Vader, now with a viable "alternative," implies that Luke's rejection of the Dark Side can be countered by Leia's acceptance of it. Luke loses control of his emotions for the second—and final—time, as pure anger fuels an offensive effectively crippling Vader. Realizing the massive, evolutionary ramifications of this act, Luke terminates his attack prior to destroying Vader. Luke extinguishes his lightsaber and symbolically discards it. Luke (Plutonism) directly confronts the Emperor (Neptunism) and highlights the Emperor's failure to transform him. A vehemently enraged and more powerful Emperor initiates Luke's destruction.

Watching the Emperor slowly kill Luke, Vader's destiny concepts evolve into genuine choice amid the massive subterranean conflict; dormant evolutionary concepts seemingly reignite "by the hero's efforts and example, to rebel and achieve the Enemy's overthrow" (Colebatch 16). Behind the mask, within the symbolic divergently pathed spire top, Anakin/Vader breaks from destiny to hurl the Emperor down the massive subterranean reactor core. Vulcanism/Plutonism is reunited. Life-altering results, both literal and figurative, manifest from this act of mercy, a collapsed, dying Vader an immediate result of the attack on the Emperor. Luke/Plutonism—a subterranean medium—physically assists and guides the crippled Anakin/Vulcanism—subterranean processes—down his new chosen path. Skywalker exodus from Subterranea nearly complete, Anakin collapses at the bottom of the open shuttle ramp. Upon Anakin's request, Luke obligingly removes the mask, a symbol of massive transgressions, internal and external conflict, and excruciating isolation.

The Death Star II scene illustrates radical modification or termination of upper layer conduit conflict traits. Contrasting with Dark Side Cave and Cloud City, Death Star II illustrates ascension into a subterranean feature for confrontation. Within this elevated internal structure, evolutionary success lies in unarmed conflict and control of elemental emotions. Whereas lightsaber ignition and use dominates the evolutionary upper layer, Death Star II illustrates repetitive attempts to extinguish and relinquish the weapon. Esoterism and overarching concepts represent the knowledge and communication ascertained throughout the conduit; clarity and intimacy envelop the final conversation between Luke and an unmasked Anakin. Vader's unmasking symbolically opens all isolated corridors, caves, cores, and chambers along the lengthy conduit. The brutal multi-character conflicts cease, evolving into an intimate calm between father and son. The numerous, radical elevations of the conduit's unique constructs

dissolve, a meagre shuttle ramp up which Luke carries his father the last remaining vestige. Luke and Anakin exit the closing conduit, a feature that effectively illustrated Skywalker character evolution.

Luke returns Vader's body to the small forest moon of Endor, where Vulcanic flame engulfs it upon a funeral pyre (location 22); the small, intimate conflagration amidst a preponderance of faunal and floral life sharply contrasts with the planet-wide destructive plumes of Mustafar. Within the green of Endor, Anakin is reforged.

The concept of balance directly relates to Skywalker evolution, represented by the metaphysical, ubiquitous power of The Force. The Force is a science fiction version of the alchemical concept "As Above, So Below," effectively manifesting two equal, yet opposing sides; no middle ground exists within *Star Wars* as every character is assigned a "side." This seemingly elementary concept "creates a complete and self-sufficient world of its own, one populated with intentionally flat, archetypal characters" (Martin and Ostwalt 73) representing "good" or "evil." Ironically, both terms are strategically used within the conduit to describe Anakin/Vader. Consequently, Anakin/Vader—the crux of the six feature films—is uniquely positioned between two paradigms as a "corrupted champion of the good" (Colebatch 14).

Earlier selected works detailed Vulcanism/Plutonism versus Neptunism. Two "characters" versus one, succinctly described as 2:1. As discussed in the introduction, only combined Plutonic geospatiality and Vulcanic processes prevent Neptunist domination. The 2:1 enables balanced, evolutionary subterranean environments and concepts to exist. A Neptunist splintering of Vulcanism/Plutonism results in a homeostatic environment devoid of character evolutionary opportunities.

Star Wars illustrates the temporary imbalance of the Force and its subsequent correction; 1:2 represents this imbalance created from Luke versus Vader/Emperor. Luke (Plutonism) and the Emperor (Neptunism) represent distinct subterranean paradigms; Anakin/Vader, raw uncontrolled Vulcanic power, represents the evolutionary “swing vote.” A stable, evolutionary environment is not attainable without Vader’s allegiance to Luke, illustrated for a fleeting moment as the Emperor electrocutes Luke. A homeostatic, devolutionary environment is not achievable with Vader’s allegiance to Luke, illustrated when Vader decides to save Luke from the Emperor’s onslaught. Vader’s allegiance with either paradigm radically alters evolutionary possibilities. Ultimately, Anakin/Vader reestablishes the evolutionary 2:1 and restores galactic balance. This restoration of balance depends upon Vader first achieving self-actualization, and Vader’s self-actualization depends upon Luke’s ability to “save” Vader.

Despite Vader’s massive and numerous transgressions, his identity is overtly Vulcanic. This seemingly counterintuitive concept illustrates the Roman viewpoint of the god Vulcan who wields both destructive and constructive uses for fire. Anakin/Vader’s unique “forging” through fire alongside a river of lava magnifies his Vulcanic identity. Additionally, as machinery constitutes one of the main provinces of Vulcan, Vader’s encasement within mechanical technology exaggerates his Vulcanic identity exponentially. This encasement essentially transforms Anakin into an automaton, a self-operating machine. Poignantly, automatons were built specifically by Vulcan/Hephaestus to perform Vulcanic tasks. Finally, Vulcan/Hephaestus represents the only exiled Olympian having the opportunity for ascension back to Olympus. Thus, Vader’s character evolution within *Star Wars* is symbolically summarized as well as his Vulcanic identity galvanized.

Vulcanism/Plutonism versus Neptunism figuratively represents Skywalker evolution. This ancient, symbolic conflict represents overarching, macro concepts, saliently delimited within and by the conduit. However, self-actualization is vehemently personal, and further delimited, or micro, litmus is required. Therefore, as the conduit succinctly represents evolutionary concepts between layers, events, and characters, the lightsaber succinctly represents evolutionary conduit concepts relative to a specific character within the evolutionary upper layers. Ultimately, a detailed analysis of lightsaber use reveals the distinct evolutionary stages of Skywalker evolution.

The lightsaber is arguably the most recognizable artifact in modern science fiction and fantasy. Despite this popularity, its role within the conduit remains vehemently personal. Each Jedi creates his own lightsaber, a visual, combative extension of the paradigm held by the wielder—a sustained “point of view.”

Creation and transferal define the primary role of the lightsaber upon Naboo in the fight between Jinn, Kenobi, and Maul. The weapon’s ignition effectively catalyzes the evolutionary conduit, wherein Kenobi loses his lightsaber near the scene’s end. Kenobi’s defeat of Maul demands “acceptance” of the fallen Jinn’s lightsaber lying nearby on the floor. This act symbolizes the crucial transfer of Anakin’s training or evolution from Jinn to Kenobi.

Kenobi literally and figuratively holds Anakin’s evolution in his hands. Identical blue-hued lightsabers, the same paradigm, illustrate the strong bond between master and student. The Mustafar duel symbolically illustrates the conflict resulting from diverging viewpoints of the same paradigm. Anakin “loses control” of original concepts taught to him by Kenobi, symbolically illustrated when Kenobi retrieves Anakin’s lost “point of view” or saber off the ground.

Possessing his own and Anakin's lightsabers, Kenobi relocates to Tatooine with Luke. Nineteen years later, Kenobi introduces Luke to Anakin's lightsaber. This single lightsaber illustrates Kenobi's teachings, Luke's introduction to the Force, and his association with concepts once held by his father. However, this lightsaber also has the "evolutionary baggage" of being both owned and discarded by Anakin/Vader.

Within Death Star I, the lightsaber's use extends beyond paradigm representation and into affective and effective concepts. Vader's "fiery" paradigm radically clashes with Kenobi's familiar blue. Despite his master level, Kenobi's inability to physically defeat Vader manifests unique usage of the weapon in non-combative methods "meant to inspire not hopeful complacency but a determination to ensure that [good] will triumph" (Colebatch 139). Kenobi's lightsaber effectively pulls Luke into the conduit as a primary character as an observably defenseless friend is struck down. Consequently, an unknown Vader becomes a "person of interest" for Luke. Kenobi's non-use of the lightsaber in the conflict introduces effective methodology later revisited. As the blast doors close, a symbolic process transpires; the two lightsabers used during the Mustafar duel are symbolically severed. Kenobi's weapon lies upon the floor within the closed conduit, Anakin's original outside with Luke.

With Kenobi "dead" and the lightsaber association severed, Luke travels to Dagobah to establish and evolve his character—his own paradigm. His accumulated yet incomplete evolution is deftly tested within Dark Side Cave, a feature explicitly off-limits to weapons. Ignoring Yoda's warning, Luke enters the cave armed and ultimately fails his test against "Vader." This confrontation directly links lightsaber use with failure when confronting Vader. Luke prematurely leaves Dagobah before establishing his own paradigm. Hence, Luke rushes to fight

Vader with a lightsaber intricately known and familiar to the Sith Lord—his previous “point of view.”

The Cloud City duel between Luke and Vader symbolically represents the clash between the Sith Lord’s current and previous viewpoints. Despite actually wielding the weapon, Luke’s knowledge of “his” lightsaber is radically inferior to Vader’s, who carried the weapon a much longer period of time through numerous conflicts. Ultimately, the severing of Luke’s hand and the subsequent loss of the lightsaber into the massive subterranean shaft introduces three critical Skywalker evolution concepts. First, Vader symbolically places a discarded point of view deep within Subterranea, a geospatial niche capable of potentially evolving the lost paradigm. Secondly, Luke is separated from a wielded paradigm both ineffectual upon, and familiar to, Vader. Lastly, Luke must replace the lost lightsaber with a new, personally created one, one unknown to either the Emperor or Vader.

Luke creates his new lightsaber within the symbolic setting of a Tatooine cave. Within this classic evolutionary subterranean construct, Luke’s personal paradigm visually ignites upon the storyline as green, a color indicative of growth, regeneration and rebirth. Rebirth, and its associated peace, manifest upon Endor as Luke relinquishes the weapon through non-combative surrender. Both are brought before Vader, who ignites and observes the unfamiliar blade. Vader directly associates Luke’s power and skills with the construction of this new, foreign weapon.

Vader introduces Luke’s new point of view to the Emperor atop the Emperor’s Tower. Strategically placing the weapon close to him, the Emperor emotionally elicits Luke’s ignition of the weapon through raw hate. A unique lightsaber duel with Vader unfolds. Luke’s use of the lightsaber represents required “impurities” to self-actualize, a concept detailed within *The Hobbit* chapter. Luke’s use of the impure weapon must be precisely balanced. Too little impurity results

in ineffectuality—his death; too much impurity results in an altered product—his turning to the Dark Side. Luke deftly wields his lightsaber in this complex environment, using it sparingly. Extinguished numerous times throughout the duel, Luke finally “casts his ‘conventional’ weapon away, recognizing that it will no longer serve in a conflict on this plane” (Colebatch 14).

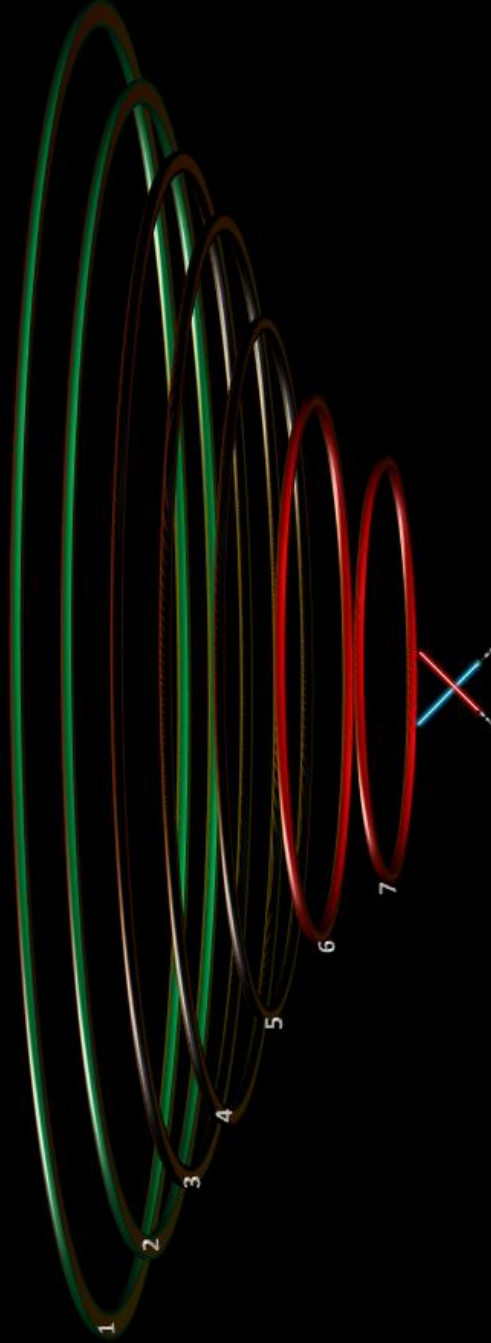
Anakin’s release of his dark paradigm atop the Emperor’s Tower, symbolically assisted by Luke, visually represents a monumental rebalancing. The red Neptunist blade falls into Subterranea—to the stagnant, devolutionary core—to land beside his original blue Vulcanic/Plutonic blade which fell there earlier during the Cloud City duel; the two conflicting blades, each discarded as isolated paradigms, recreate a balanced, evolutionary environment. Ultimately, the exiled god returns to Olympus overlooking a balanced universe.

The fiery, iconic lightsaber burns at the heart of the conduit, a vehemently effective, subterranean medium showcasing and enabling tremendous character evolution. Surreptitiously snaking its way through a definitively stratified, subterranean galactic construct, the conduit weaves its way from the stagnant, devolutionary core into the evolutionary upper layers, where it touches upon select interplanetary locations harboring distinct, critical pieces of a complex, evolutionary puzzle. Upon traversing the *Star Wars* galaxy and overcoming unique evolutionary obstacles at these locations, Luke and Anakin reach their full potential—each self-actualizes.

Works Cited

- Brin, David, and Matthew W. Stover. *Star Wars on Trial: Science Fiction and Fantasy Writers Debate the Most Popular Science Fiction Films of All Time*. Dallas: BenBella, 2006. E-book.
- Colebatch, Hal. *Return of the Heroes: The Lord of the Rings, Star Wars and Contemporary Culture*. Christchurch, N.Z.: Cybereditions, 2003. E-book.
- Lamster, Mark. *Architecture and Film*. New York: Princeton Architectural Press, 2000. E-book.
- Lucas, George, Donald F. Glut, and James Kahn. *The Star Wars Trilogy*. New York: Ballantine, 2004. Print.
- Lund, Kristin, et al. *Star Wars: Complete Locations*. New York: DK Publishing, 2005. Print.
- Martin, Joel W. and Conrad E. Ostwalt. *Screening the Sacred: Religion, Myth, and Ideology in Popular American Film*. Boulder: Westview, 1995. E-book.
- Return of the Jedi*. Dir. Richard Marquand. Perf. Mark Hamill, Harrison Ford, Carrie Fisher, Billy Dee Williams. 20th Century Fox, 2004. DVD.
- Revenge of the Sith*. Dir. George Lucas. Perf. Ewan McGregor, Natalie Portman, Hayden Christensen, Ian McDiarmid. 20th Century Fox, 2008. DVD.
- Star Wars: A New Hope*. Dir. George Lucas. Perf. Mark Hamill, Harrison Ford, Carrie Fisher, Alec Guinness. 20th Century Fox, 2004. DVD.
- The Empire Strikes Back*. Dir. Irvin Kershner. Perf. Mark Hamill, Harrison Ford, Carrie Fisher, Billy Dee Williams. 20th Century Fox, 2004. DVD.
- Wallace, Daniel, and Kevin J. Anderson. *Star Wars: The New Essential Chronology*. New York: Del Rey, 2005. Print.

Star Wars Galaxy Construct



- 1. Outer Rim
- 2. Mid Rim
- 3. Expansion Region
- 4. Inner Rim
- 5. Colonies
- 6. Core
- 7. Deep Core

Figure 1

Ian T. Richard 2015

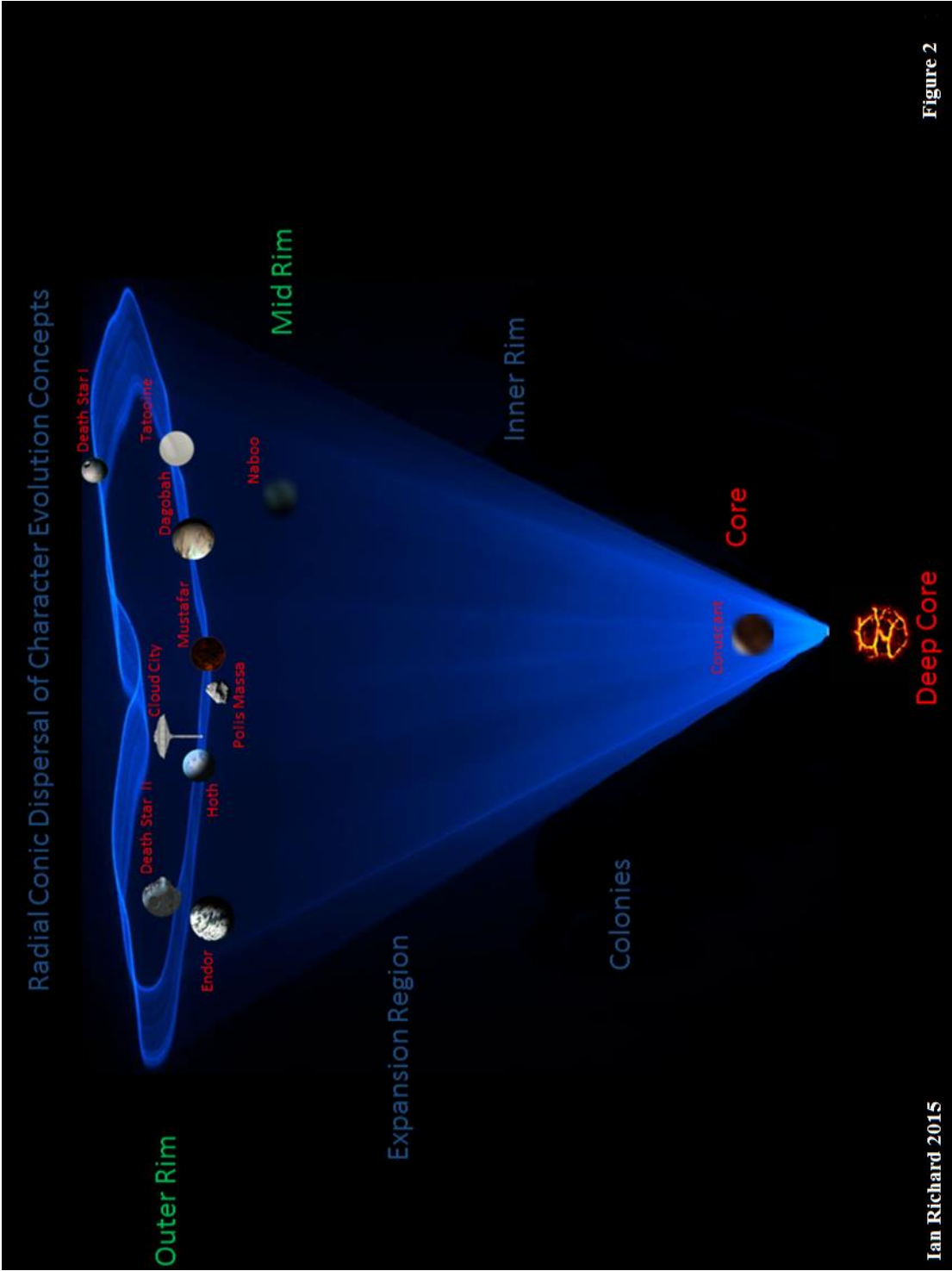
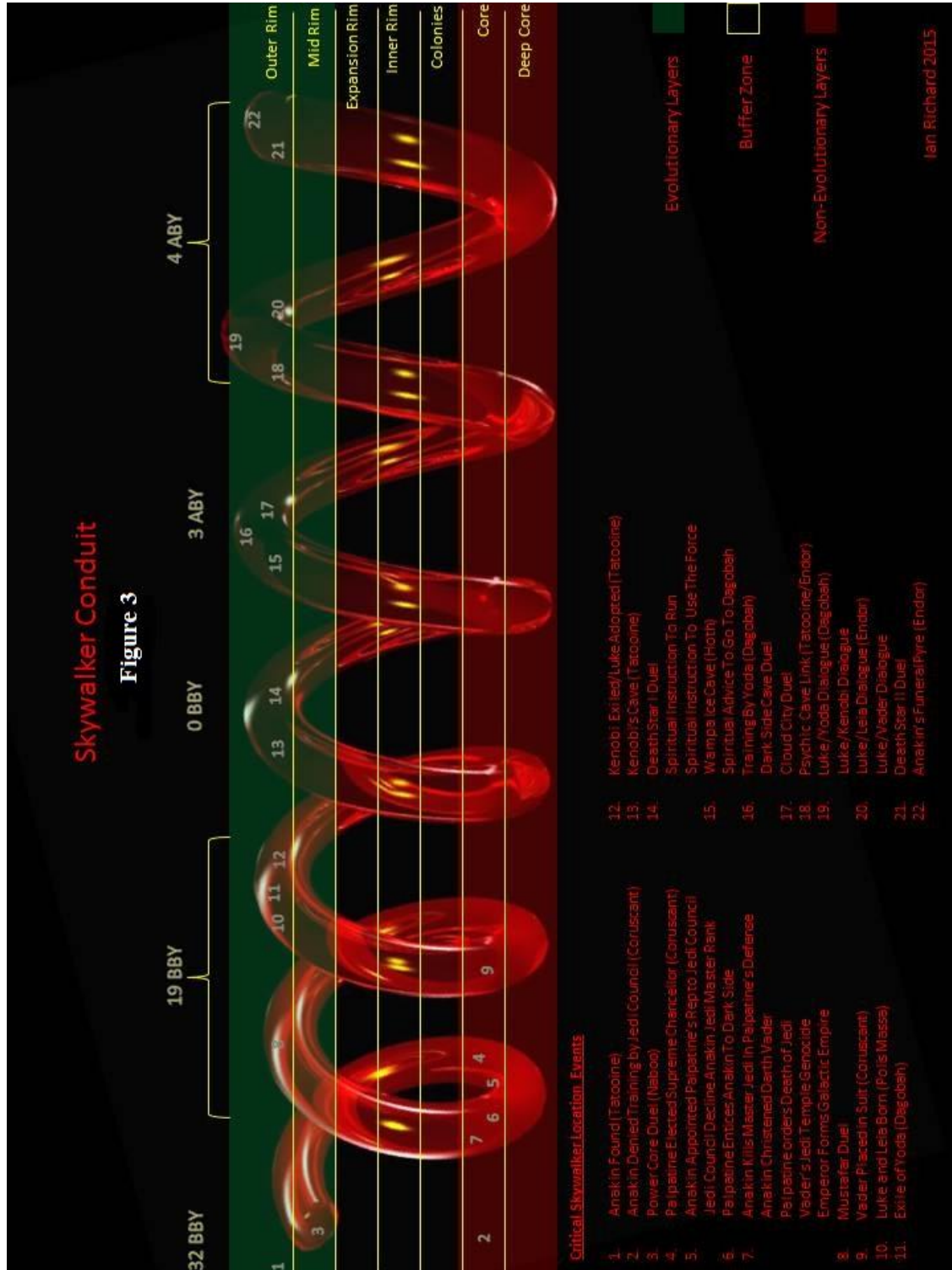


Figure 2

Skywalker Conduit

Figure 3



Chapter 5 – H. G. Wells

Wells's *The Time Machine* (1895) and *A Story of the Days to Come* (1897) continue the evolution of Subterranea, unearthing startling transformative processes and radical deviations. *The Time Machine* represents arguably the apex of Wells's work: "If Wells had died in 1895 this one volume would have ensured him a place in literature" (Sherborne 106). The lauded *The Time Machine* emerges as "the most fully realized of any post-Darwinian vision of the evolutionary imagination" (Page 155). However, the "lesser" *A Story of the Days to Come* represents a mandatory component through which to analyze *The Time Machine*. *A Story of the Days to Come* introduces the core subterranean concepts, conditions, and processes found within *The Time Machine*. Illustrating the connection between the two texts, *A Story of the Days to Come* "seems to derive from the abandoned draft of *The Time Machine*" (Sherborne 136). Collectively, the two texts showcase critical time periods along the subterranean timeline. Illustrating 19th-century London in the early pages of *The Time Machine*, the subterranean storyline then showcases a 22nd-century London within *A Story of the Days to Come*. The "missing" or intervening centuries represent a critical analysis medium. Subsequently, these missing centuries emerge and are identified throughout the analysis as the "intervening years..

This analysis has three distinct sections; the first accomplishes two distinct goals. These include the identification and legitimization of a precise geospatial area identified within the Wells texts. Additionally, Neptunist strategies and processes within and against this identified area result from key historical artifacts and features located within it. Consequently, a definitive subterranean Vulcanic/Plutonic core emerges, as well as a natural Neptunist target.

The second section details the Neptunist campaign within and against the identified Vulcanic/Plutonic stronghold. Additionally, this section highlights the resulting effects and

modification upon and of the core. Furthermore, this section shows Vulcanic/Plutonic responses and posturing to the Neptunist campaign. Historical analysis, textual descriptions, and visual imagery represent the various mediums illustrating the Neptunist campaign within the Wells texts.

The final section details the effects of the campaign upon character evolution opportunities. Character evolution becomes increasingly more difficult and elusive relative to diminishing Vulcanism/Plutonism. Ultimately, complete absence of subterranean character evolution opportunities transpires, a result of complete Neptunist domination.

The texts illustrate decreasing character evolution opportunities to the point of elimination, their primary reason for selection within this thesis. The texts showcase a linear “cause and effect” pattern within the Neptunist campaign against drastically weakening Vulcanism/Plutonism. As illustrated in the introduction, this campaign extends back into Earth’s genesis and culminates in universal Neptunist victory illustrated within *The Time Machine’s* final pages. These alpha and omega points bookend a Neptunist campaign that incorporates a series of interrelated operations and procedures, battles within a much larger conflict. Ironically, the term “campaign” derives from the annual Roman war operations location of Campania. Symbolically, Campania houses the Mt. Vesuvius volcano, in addition to the historical Greek sanctuary to Poseidon—Neptune. These mythological, historical, and military associations with the Roman Empire form the crux of the Wells analysis.

Political, economic, social, and environmental objectives comprise Neptunism’s campaign against Vulcanism/Plutonism. These objectives use the components of strategy, goals, scope, coordination, resources, and operations. Visual analysis effectively illustrates multiple concepts and components. Consequently, detailed maps and figures showcase the processes and

constructs illustrated within the Wells texts that lead to character evolution diminishment and absence.

Despite impending Neptunist domination, *The Time Machine*'s 1895 England showcases “stable” coexisting paradigms. England, supplied with basic water and wind power a century earlier, uses technological manifestations of “cooperating” fire-based Vulcanism/Plutonism and water-based Neptunism illustrated in innovative 19th-century steam engine design, the singularities of fire, water, and pressure transformed into a product far superior to any constituent part.

Living within London, the Time Traveller assuredly recognizes the contemporaneous parameters of the London Tube or Underground (see figure 1), a revolutionary feature fusing two pivotal subterranean concepts. First, it places the revolutionary steam engine into a physical, subterranean construct. Additionally, the Circle Line (see figure 1) demarcates the final epicenter or core of Vulcanism/Plutonism. Subsequently, this area becomes the premier target within Neptunism's final campaign as illustrated within *A Story of the Days to Come* and *The Time Machine*.

Revolutionary technology dominated 19th-century Victorian England, the epicenter of the second Industrial Revolution. Symbolically, the world's first underground railway was constructed in 1863 between the London stations of Paddington and Farringdon; the locomotives running through these subterranean tunnels were powered by steam. This revolutionary steam technology utilized basic water transformed within a complex engine construct through Vulcanic/Plutonic processes, showcasing a progressive, linear relationship of the two paradigms resulting in maximization or “self-actualization” of potentiality. During this time period, the Time Traveller transports himself into the future, simultaneously creating a distinct “marker” by

which all subsequent time periods within *A Story of the Days to Come* and *The Time Machine* may be compared. Based upon the progressive evolutionary technology witnessed in 1895, futurity should showcase continued, linear progression when compared against the 1895 “marker”; it does not.

The Circle Line manifests as an integral component of the 1895 marker. The centrally located Circle Line, with the exception of a minor deviation on its eastern side, seemingly traces the ghost outline of the London Wall feature (see figure 2).

The London Wall represents a “subterranean” feature; the estimated date range of AD 190 to AD 225 emerging as the only certainty. This enigmatic wall introduces pivotal defensive concepts upon Wells’s landscape. Together, the Circle Line and London Wall form a multi-layered, protective construct (see figure 3), vehemently symbolic land. Within this subterranean core reside five pivotal features which create an identifiable Vulcanic/Plutonic stronghold, each intricately interwoven with the others to result in a literal and figurative multilayered subterranean core. A Neptunist target manifests from this dense Vulcanic/Plutonic concentration.

The London Mithraeum gives insight into processes and environments of the “intervening years,” simultaneously highlighting and extending the Roman “core” concept. The London Mithraeum, or Temple of Mithras, was found below ground in 1954. Illustrations portray Mithras as emerging from rock, a dagger in one hand and a fire torch in the other. This subterranean identity personage resides within caverns, features peppered with classic alchemic imagery, housing clandestine events and processes. Importantly, circle features frequently characterize these caverns. Symbolically, the London Mithraeum lies within and below the concentric onion-skin matrix created by the Circle Line and London Wall. Additional layers or subterranean provenance emerge through the location’s association with a mystery or “hidden”

religion. Furthermore, the London Mithraeum doubles as the original location where the Bank of England stood prior to the 1954 archaeological find. Consequently, the location emerges as one of two locations housing multiple “feature levels” within the core.

The Bank of England literally and figuratively represents gold, the apex of character and material transformation. Custodian to the official gold reserves of the United Kingdom and various other foreign countries, the Bank of England houses 4,600 tons of gold deep within its subterranean vault. Detailed in the Tolkien chapter, gold lies at the core of character evolution concepts. Consequently, relocation of the Bank of England to the center of the London Wall feature reflects two distinct concepts. First, gold concepts reside at Vulcanic/Plutonic cores or centers. Secondly, mirroring the upcoming Museum of London feature, the relocation showcases defensive posturing by Vulcanism/Plutonism to counter Neptunist advances.

The Bank of England works in tandem with the London Metal Exchange (LME) feature. The LME’s subterranean association emerges through the futures exchange of base or “impure” metals, mandatory materials for the “transformation” of gold and characters into functional, self-actualized entities. The Bank of England and the LME represent necessary components within the subterranean transformation process. The concept of “futures exchange” figuratively doubles for the subterranean concept of potential self-actualization. The corroded seat—or throne—of yellow metal in AD 802,701 within *The Time Machine* showcases a radical deviation from the evolutionary concepts housed within the Bank of England and the LME.

The London Stone introduces numerous subterranean concepts and characteristics. During the Middle Ages the stone resided on the boundary of the Circle Line (see figure 3) but currently resides within the Museum of London, the second feature illustrating multiple “feature levels” within a single location. The London Stone represents an oolite, a rock formed from

spherical grains composed of concentric layers. The stone's concentric layers figuratively add additional subterranean levels to the location.

A variety of historic and symbolic uses engulf the London Stone. These range from the stone once being a Roman central milestone dictating all other imperial measurements to the lithic object becoming the "heart" of medieval London. Mirroring the function of the Arkenstone or "Heart of the Mountain" in Smaug's gold hoard within *The Hobbit*, the London Stone illustrates another subterranean concept located within, and protected by, Wells's core.

The documentation of London's entire history through artifacts constitutes the mission of the Museum of London. Consequently, the feature figuratively represents a repository or cache of subterranean knowledge or truth, a necessary component within character evolution. Like the Bank of England, the Museum of London showcases the dynamic evolution of Vulcanic/Plutonic posturing during the "intervening years," culminating with the 20th-century placement of the London Stone within it.

Kensington Palace (see figure 2) housed the original London Museum in 1912. In 1914 the museum relocated to Lancaster House. During World War II, the collection figuratively entered Subterranea via the tube stations at Dover Street and Piccadilly Circus for protection. In 1976 the London Museum entered the protective confines of the "core" as the Museum of London. The figurative address for subterranean truth became 150 London Wall, an address overtly advertising the museum's protected status within the core. Later, the museum added the London Stone to its protected collection. This 20th-century maneuvering or posturing, and final location within the core, illustrates Vulcanic/Plutonic responsiveness to Neptunist campaigns against the stronghold.

Summarily, these five interrelated features located within the core represent the: 1) alchemical “golden form”, 2) necessary impurities to attain functionality, 3) evolutionary character concepts, 4) hidden classic subterranean Vulcanic/Plutonic concepts, and 5) literal and/or figurative subterranean epicenter. Combined, they constitute a core—and target—of immense symbolism, all contained within parameters defined by the single feature of the London Wall.

The above features are augmented by three additional points of interest found within the larger, external primary layer of the Circle Line. These include the Natural History Museum, Buckingham Palace, and Cleopatra’s Needle (see figure 2).

The Natural History Museum, discussed at length in the next section, represents a critical feature within the storyline of *The Time Machine*. Buckingham Palace illustrates a feature with long associations to knighthood, coronations, and protocol. Consequently, the feature figuratively represents “crown” or apex concepts. Illustrated within *The Hobbit* analysis, the status and hierarchy enveloping “crowns” symbolize the culmination of evolutionary components within the self-actualization process. Additionally, the feature became the principal royal residence under Queen Victoria, a monarch overseeing England’s ascension to industrial greatness— steam engines and subterranean trains symbolic byproducts. Buckingham Palace represents concepts inherently antagonistic to Neptunism.

The final selected feature within the outer layer, the obelisk Cleopatra’s Needle, literally houses a myriad artifacts representative of subterranean concepts found within the Wells texts. Carved from Vulcanic igneous rock around 1450 BCE, the feature originated in the city of Heliopolis, the “Eye of the Sun” or “City of the Sun.” Vulcanic/Plutonic concepts riddle the obelisk’s hieroglyphs. Erected in London during 1878 upon the symbolic “crown” territory of

Victoria Embankment, the obelisk lies adjacent to the “Golden Jubilee” bridges. Relevant to the Wells analysis, a time capsule containing distinct items was concealed in the obelisk during installation. A box of cigars and several tobacco pipes were included; more relevant was the absence of matches with which to light them. An included piece of hydraulic equipment foreshadows a future connection with applied science and engineering based on liquids or fluids—water. A bronze miniature model within the obelisk foretells the strategic placement of the time machine within a bronze monument in AD 802,701. Finally, a written account of the obelisk’s strange 3,300-year journey—a “time trek”—from Heliopolis to London lies within Cleopatra’s Needle.

Cleopatra’s Needle creates a “marker,” litmus to contrast the 19th and 8,028th centuries via the comparable Neptunist sphinx awaiting the Time Traveller. Shrouded in rain and columns of hail, Neptune’s monument looms large, a distinctive figure resembling an open-winged sphinx. Sightless, eroded, and weatherworn, the sphinx represents multiple animals—a monstrous amalgamation of distinct paradigms. The bronze foundation lies thick with green stagnant scum. The bright, dynamic hopes that surrounded Cleopatra’s Needle sharply contrast with this feature. Neptune’s edifice evokes a sensation of fear based on the understanding that a “lesser being [is] faced with the awesome power of those further along the evolutionary chain” (Page 158). Cleopatra’s Needle represents a multifaceted feature within Subterranea’s protected core; the obelisk also represents the most vulnerable feature within the core.

The above three features, in combination with the earlier five “core” features, represent a selection of humankind’s apex achievements, artifacts, locations, and titles. Importantly, all reside within the relatively small geospatial confines of the Volcanic/Plutonic core, a quantifiable area with discernable coordinates and boundaries. This area represents the remaining

totality of Volcanic/Plutonic Subterranea within the storylines of both selected Wells texts. Illustrating this concentration, the Time Traveller reveals “a certain feeling you may understand [that] tethered me in a circle of a few miles round the point of my arrival” (Wells, *Time* 33). This evolutionary circle of fire not only tethers the Time Traveller within its confines, but Denton as well.

The parameters and features now identified, the analysis shifts to constructs and processes within and against them. The above Volcanic/Plutonic subterranean parameters can be located via planar, two-dimensional longitude (X) and latitude (Y) coordinates. Within traditional subterranean constructs depth (Z) creates a three-dimensional matrix affecting character progression and subterranean stressor complexity; the deeper a character journeys, the more numerous and complex the obstacles. Depth influences virtually every construct and process within the Wells texts. Despite this overt presence, depth merely exaggerates historical or contemporaneous concepts or characteristics—knowns.

The additional variable of time (“n”) within *The Time Machine* shields the upcoming constructs and processes from character awareness and preparation; they are unknown and unforeseeable. Character inability to plan for or predict upcoming subterranean construct and process stressors represents the mathematical “Chaos Theory,” a concept depicting long-term prediction as impossible.

Time has a unique effect within *The Time Machine*. Despite illustrating the smallest Volcanic/Plutonic geospatial parameters of any analyzed text, *The Time Machine* projects an unrivalled feeling of grandeur and expansiveness. This grandeur stems directly from the variable of time. Time satisfies the veritable action of vertically “penetrating” into Subterranea. This feat manifests “as the [time] machine’s dials spin faster, the effects of temporal condensation

increasingly resemble rapid cutting” (Williams 25). This digging or cutting through time transports the Time Traveller beyond the “intervening years” into AD 802,701. Ironically, had the alchemist stopped within the 22nd century, his original X, Y surface coordinates bury him at the lowest level of a massive, urban subterranean construct, a feature illustrated in *A Story of the Days to Come*.

The 22nd century within *A Story of the Days to Come* depicts the ongoing conflict between Neptunist processes and Plutonic geospatiality. The English population of the “intervening years” now lies concentrated in four monstrous cities. Illustrating a change in power within the conflict, these “few swollen towns...visibly replac[e] the ancient order” (Wells, *Three* 146); Neptunism continues to systematically usurp Vulcanism/Plutonism. Eadhamite, the new and cheap substitute for rubber, floods the landscape. A new “Subterranea” emerges upon the bedrock of Eadhamite. Classic Subterranea now lies quarantined from humankind.

The Eadhamite manifests quasi layering and stratification via the public ways with longitudinal divisions; Neptunism has initiated the construction of a layered onion-skin construct. This lateral proto-Subterranea contains no depth, the subterranean characteristic inherently involved with every character evolution process. Subterranean character evolution begins to vanish.

Seemingly by oversight, Neptunism allows a design plan counterproductive to eliminating character evolution—the abolishment of legislation against tall buildings. This legislative oversight results in an “evolutionary loophole” for character evolution to transpire. Distinct psycho-social constructs where the affluent and prosperous live upon the upper city levels and the industrial or “impure” live within the lower ground floor and basement levels emerge. Depth, the temporarily eliminated character evolution trait, emerges within the

Neptunist dominated cityscape. Citizens place glass-like material over the entire urban structure. Consequently, the encased vertical and stratified structure now mirrors classic Subterranea, a construct where evolutionary concepts lie within its bowels.

Denton embarks upon his subterranean quest upon the upper levels of the city. The early stages of this quest revolve around finding a lost love, a personage located within the familiar subterranean construct of a maze. Importantly, this maze resides upon the upper levels; no evolutionary concepts reside within it. Sheer human mass comprises the maze walls, features traditionally composed of granite. Denton navigates east, west, north, and south. Importantly, vertical descent remains off-limits at this stage of his journey. The maze erodes Denton's will through incessant tides of non-evolutionary drudgery. At this juncture the subterranean trait of luck emerges within the storyline, thereby allowing Denton to locate his lost love. Reunited, Denton descends to traditional ground level where he follows the faint Vulcanic/Plutonic vestiges associated with a Roman road exiting London (see figure 3). Ironically, upon choosing to follow the predetermined route constructed by the Roman road, Denton eliminates future choices. The road forces Denton along a predetermined path—destiny. As detailed within earlier chapters, particularly *Star Wars*, destiny and evolution represent antithetical concepts. The road—a labyrinth feature—demands character confrontation and conflict emerges as the road terminates within the “mingled waters...in rectangular channels” (152). Neptunism completely dominates the landscape.

Denton searches for evolutionary concepts within this radical environment. Seemingly aware of the evolutionary concepts below, Denton attempts to access forbidden and quarantined Vulcanic/Plutonic Subterranea through a “fitful” attack upon the ground with a spade. Denton's placement and actions within the unique marshland of proximate Neptunism and

Vulcanism/Plutonism elicit comparisons with Luke's experiences upon Dagobah in *The Empire Strikes Back*.

Realizing the potential threat, Neptunism retaliates with a massive assault, seemingly mirroring the duel between Darth Vader and Luke in *The Empire Strikes Back*. The sun, the primordial genesis of all Vulcanic/Plutonic subterranean concepts, symbolically disappears and leaves Denton in absolute and strange darkness. Vader figuratively emerges from the darkness. Wells describes a sword being drawn. The attack includes marching thunder, lightning, rain, roaring, and curtains of hissing hail. Neptunism engulfs Denton in noisy spouts of water, forming pools, and running rivulets. This brutal and overwhelming attack upon an untrained—yet dangerous—Denton mirrors the Force-laden attack by Darth Vader upon Luke on Cloud City. Luke and Denton represent characters that voluntarily and prematurely enter into overtly hostile Neptunist environments due to following destiny concepts along their evolutionary journeys.

In addition to *Star Wars*, *The Time Machine* and *Journey to the Center of the Earth* emerge as complementary storylines to the above scene. The 22nd-century Neptunist attack upon Denton figuratively emerges again in *The Time Machine* as the Time Traveller approaches and stops in AD 802,701. The Time Traveller's tunnel becomes "misty," "flowing" and "melted," and upon stopping, he steps into a world of thunder and pitiless, hissing hail. The cloud, directly over the time machine and from which the beating hail stones rain down, emerges as a strategic and orchestrated event; "wet to the skin" emerges as the Time Traveller's first sensation in AD 802,701.

The above-mentioned temporary attack upon the sun figuratively culminates upon the final pages of *The Time Machine*. Consequently, the two Wells texts showcase the demise of the symbolic subterranean stellar entity, a feature repeatedly used and referenced within each of the

selected works within this thesis. This demise began with the 2013 initiative mentioned in *A Story of the Days to Come* that banned fires not completely consuming their own smoke. The “beginning of the end” for the most primordial subterranean concept commences. Water, a devolutionary and stagnant medium, fills the ever-increasing vacancies.

Following this strategic 21st-century assault upon fire, the 22nd-century feature Cloacae Maximae furthers Neptunism upon the subterranean timeline. This unique feature emerges within the pages of *A Story of the Days to Come*:

[It] worked by the sea-water that was destined finally to flush the city drains This water was brought close to the eastward edge of the city by a huge canal, and then raised by an enormous battery of pumps into reservoirs at a level of four hundred feet above the sea, from which it spread by a billion arterial branches over the city. Thence it poured down, cleansing, sluicing, working machinery of all sorts, through an infinite variety of capillary channels into the great drains. (174)

The Neptunist Cloacae Maximae looms over its historical Vulcanic/Plutonic 19th-century counterpart, a large-scale system of subterranean sewer lines running alongside the Circle Line within the Thames’ northern embankment. This historical subterranean pathway runs underneath Cleopatra’s Needle (see figure 2). The function and placement of the Cloacae Maximae illustrates a strategic assault at the weakest point along the perimeter of the Vulcanic/Plutonic core. The combined significance of the Thames, Subterranea, and Neptunism evolves along the subterranean timeline, radically culminating in *The Time Machine*. Prior to the Time Traveller’s AD 802,701 arrival, the Thames River emerges as a distinct “marker” quantifying Neptunist advances during the vast interim of time. *The Time Machine* repeatedly references and alludes to the Thames, a river feature now radically—and symbolically—“shifted” from its 22nd-century

location within *A Story of the Days to Come*. The shift represents a new “perspective,” one diametrically opposed to the fire-based industry, processes, and growth of the Time Traveller’s Victorian era. The Thames of AD 802,701 “lay like a band of burnished steel” (25), imagery evocative of a brandished Neptunist sword.

The Time Traveller enters a construct absent of all character evolution processes and opportunities. Of extreme relevance to this analysis, this devolutionary construct reflects the medium through which the Time Traveller enters it—destiny. The time tunnel represents the most exaggerated form of destiny within this thesis. The granite labyrinthine tunnels through which Liedenbrock and Bilbo traverse Subterranea, as well as the harsh fabricated tunnels leading Luke and Denton through their respective constructs, pale in comparison to the extremes located in the labyrinthine tunnel of time. Time tunnels eliminate all character influence, options, and choice within any of the potential time periods—other than the one the character hails from. As detailed earlier, destiny concepts definitively eradicate character evolution. When the Time Traveller sits inside the time machine and pulls the lever, character evolution opportunities—no matter in which time period—will inevitably be nonexistent or devolutionary.

Despite travelling through the vastness of time, the geospatial parameters in *The Time Machine* are exceedingly small (see figure 4). The entire narrative transpires through incrementally longer excursions from the Time Traveller’s house, or “arrival spot,” towards the pivotal Natural History Museum. As detailed later, increasing Neptunism has raised sea levels. Hence, an AD 802,701 journey to the Natural History Museum from the Time Traveller’s house requires a less direct approach than its 1895 counterpart (see figure 4). These excursions reveal deep circular wells or ventilating shafts dominating the landscape narrative, features sealed and protected by Eadhamite during the “intervening years.” These features now lie exposed from

millennia of erosion and weathering, environmental indicators of the Neptunist campaign. Historical manholes, tube stations, and tunnels emerge as access points leading into the underworld, a domain now completely occupied by Neptunism; the traditional barrier between Subterranea and the surface lies perforated. The enigmatic confines of the once-private world lie exposed, the identity of Subterranea long since compromised. This new environment resonates with the Time Traveller, who “feel[s] the hollowness of the ground beneath [his] feet” (Wells, *Time* 50). Within the hollow world reside a subterranean alpha-predator—Morlocks, unique Neptunist creatures destined to challenge the fully actualized alchemist.

The Morlocks indirectly pull the Time Traveller down to their level by stealing the time machine. Not realizing his machine lies in a nearby bronze statue, the Time Traveller descends underground to locate the vehicle. This subterranean descent and journey represents the destiny-laden concepts of the time tunnel as: “[t]his adventure below ground is symbolic of a devolutionary trajectory” (Page 166). This devolutionary trajectory forms the basis for the upcoming “mirror image” quest, subterranean experience characterized by concepts and features counterintuitive to established subterranean traits. The Morlocks represent the classic labyrinthine alpha-predator; the Time Traveller fully comprehends their function: “before, I had felt as a man might feel who had fallen into a pit: my concern was with the pit and how to get out of it. Now I felt like a beast in a trap, whose enemy would come upon him soon” (Wells, *Time* 48). The Morlocks represent exaggerated manifestations of Neptunist concepts, illustrated by Wells’s strategic word selection to characterize them. Words such as “drown,” “sea anemones,” “fish,” “pallid,” “preserved,” and “rain” illustrate the devolutionary traits and concepts surrounding the Morlocks. Ironically, these references evoke images of the fish within

Liedenbrock Sea, as well as Gollum. Each example illustrates devolutionary concepts attached to a Neptunist creature.

The “mirror-image” quest of the Time Traveller showcases his attempt at mere survival within a Neptunist dominated construct, a concept that sharply contrasts with traditional subterranean quest highlighting potential self-actualization within a Vulcanic/Plutonic dominated construct. Symbolically, the primary goal of the Time Traveller within the future revolves around his attempt to “devolve” or go back in time whence he came. This again illustrates the devolutionary ramifications of the time tunnel, a destiny-laden labyrinth feature.

Devolutionary “mirror” aspects emerge when the Time Traveller descends into a well shaft and erringly misinterprets a faint throb and hum for Plutonic machinery. This misperception remains until the alchemist locates and views a vast, open arched cavern through the light of a single self-lit match. This meagre conflagration illuminates the vast reach of Neptunism: “Great shapes like big machines rose out of the dimness, and cast grotesque black shadows, in which dim spectral Morlocks sheltered from the glare[,] ... obscene figures lurking in the shadows” (45-46). Where an ancient vibrant fire-god once forged and transformed, cold behemoths now blasphemously offered shelter from a single paltry match to Neptunist creatures. Water-powered constructs such as the Cloacae Maximae had prevailed; fire had never returned. Simple hydraulic machines, foreshadowed by items placed within Cleopatra’s Needle, produced the “familiar” throb and hum through intake of air. The entire process transpires completely devoid of fire.

Two classic Vulcanic/Plutonic symbols bookend the Time Traveller’s subterranean trek through the Morlock underworld. First, the Time Traveller sees a visible star from the bottom of the well shaft during initial descent, one of many examples illustrating “his propensity to gaze up

at the stars for inspiration” (Sherborne 105). Within the distant and isolated world, stellar imagery repeatedly supplies the Time Traveller with strength and comfort. Secondly, the Time Traveller’s struggles with Morlocks en route to the surface highlight the significance of matches, diminutive sources of subterranean fire. These highly effective Vulcanic/Plutonic artifacts hold the key to survival and escape from the future world; now depleted, they must be replaced.

The Time Traveller’s quest for fire to survive figuratively illustrates the one undertaken by early hominids, thereby completing an evolutionary circle spanning millennia. The Palace of Green Porcelain, the most complex geospatial construct within *The Time Machine*, houses the sought-after artifact. The arrival of the Time Traveller at the palace, better known to the Time Traveller as the British Museum of Natural History, introduces three critical indicators of Neptunist domination, as well as Vulcanic/Plutonic defensive posturing. First, the structure lies “very high upon a turfy down” (Wells, *Time* 53), defensive positioning mimicking the vertical ascension of Vulcanic/Plutonic concepts within *Star Wars*. Residing above the Neptunist landscape, this structure—temporarily—protects the last vestiges of Vulcanism/Plutonism.

Secondly, the Time Traveller looks toward Battersea and Wandsworth before entering the museum; a “large estuary” or “arm of the sea” covers the area (see figure 4). This observation quantifies Neptunism’s encroachment upon the Vulcanic/Plutonic stronghold created by, and housed within, the ancient Circle Line.

A final indicator overshadows the previous two indicators. Standing at the museum door, the Time Traveller describes looking northeastward at Wandsworth and Battersea, locations definitively south by southwest of the museum in 1895 (see figure 4). This shift illustrates massive axial tilt; the Neptunist campaign now reaches a cosmic level, the extent of which

materializes in the last pages of *The Time Machine*. The Time Traveller enters the Palace of Green Porcelain.

By definition, museums house and protect items of value to humans. Consequently, the Palace of Green Porcelain represents the last repository of humankind's treasures. This role suggests totality; subterranean fire lies somewhere within. These traits, coupled with the museum's elevation, form a figurative core within the feature. Despite the protective nature and elevation of the museum, the structure exhibits the early signs of Neptunist advances; rain water leaks through the roof to the lower levels. In response, classic Vulcanic/Plutonic artifacts and displays migrate upward. A 2015 floor plan of the Natural History Museum (see figure 5) illustrates this phenomenon as volcanic artifacts and displays reside high within the northeast wing. This strategic maneuvering reflects similar defensive posturing of the London Museum artifacts into the confines of the ancient London Wall.

A classic evolutionary maze, constructed by hallways running transversely and parallel with each other, quickly materializes. Following a "baited" trail constructed of Plutonic machinery displays, the alchemist descends into the museum's lower levels. The Time Traveller enters a "pit," the doorstep to the Morlock underworld. Deeper within the pit, the ground becomes uneven and disappears into darkness; the massive subterranean system created by the nearby Circle Line's South Kensington Underground station lies beyond. Realizing his mistake, the Time Traveller quickly ascends back through the museum.

Vertical ascent produces immediate results. The alchemist finds and "devolves" a machine signal-box. Having torn off the machine's lever to create a club, the most primitive of human technologies, the Time Traveller possesses a weapon with which to battle the Morlocks. Ascending higher, the Time Traveller ultimately enters the last remaining Vulcanic/Plutonic

“core”: “going up a broad staircase, we came to what may once have been a gallery of technical chemistry.... This gallery was well preserved. I went eagerly to every unbroken case. And at last, in one of the really air-tight cases, I found a box of matches” (57). The air-tight cases illustrate strategic use of hermetic seals, protective features used by Verne in *Journey to the Center of the Earth*, which protect the last semblance of Volcanic/Plutonic truth. Alchemic fire fuses with the esoteric subterranean trait of chance or luck, the last example of each upon the timeline, when the alchemist finds a “far unlikelier substance, and that was camphor ... sealed [in a] jar, that by chance, I suppose, had been really hermetically-sealed” (57). With the meagre evolutionary artifacts in hand, the Time Traveller exits the Palace of Green Porcelain and enters a forested battlefield.

The forest lies strategically between the museum and the captured time machine. Within and around the forest, the last remaining Volcanic/Plutonic processes and potency will transpire. Despite the symbolic nature of this last stand within the forest, the feature lies completely under Neptunist domination due to its low elevation, a concept illustrated within and by the Palace of Green Porcelain. An elevated hill deep within the forest emerges as a potential geospatial refuge for the Time Traveller. The alchemist lights a symbolic “illumination fire” with the matches from the Volcanic/Plutonic core; the conflagration is meant to guide him through the darkness of Neptunist forest to the relative safety of the hill. The forest journey evokes introspection regarding fire—evolution—within a completely fireless world: “I don't know if you have ever thought what a rare thing flame must be in the absence of man and in a temperate climate.... The art of fire-making had been forgotten on the earth. The red tongues that went licking up my heap of wood were an altogether new and strange thing” (59-60). The fire quickly becomes unstable and unpredictable, results attributed to devolutionary Neptunist construct surrounding it.

Ironically, this temporary and forced amalgamation of Vulcanism/Plutonism and Neptunism creates for the last time a construct where fire—truth—lies at the center of a construct housing the conflicting and coexisting paradigms. Wells allows the alchemist an opportunity to see a star within the chaos. Instead of inspiration, the action merely reflects the last remaining target for Neptunism. The Time Traveller witnesses the result of pure Neptunism encountering pure Vulcanism/Plutonism upon a battlefield as moaning helpless Morlocks die in agony, bewilderment, and misery amidst fire, heat, and smoke. This brutal surface engagement temporarily showcases interactions once completely contained within classic Subterranea. From the small hillock in AD 802,701, the alchemist watches the last gruesome vestiges of human evolution die.

From the elevated hill the alchemist locates the white Sphinx housing the time machine. The journey towards the Sphinx illustrates a symbolic, linear “fire-walk” as the Time Traveller must cross pulsating, hot, blackened, and smoking earth. This fire-walk illustrates the “mirror-image” concept of the quest. As the alchemist represents a fully actualized character, the fire-walk emerges as a nontraditional rite of passage. Traditional fire-walks test strength, courage, or faith, concepts already exhibited by the Time Traveller numerous times. Symbolically, the Time Traveller’s fire-walk represents passage into a previous life, not a new one as typified by fire-walks. The fire-influenced earth and rock upon which the Time Traveller walks represent the last meagre strip of Vulcanic/Plutonic concepts in humankind’s history. Once extinguished, no trace of transformative and evolutionary concepts will remain.

The alchemist exits the fire-walk pathway and encounters a unique elevated construct. The time machine rests upon a raised platform within the white Sphinx. Neptunism, mimicking the protection of elevated constructs used by the Time Traveller, has recreated a “safe” confine.

This last trap sprung, Morlocks quickly converge upon the alchemist who unknowingly sends the time machine further into the future.

The latter portions of the Time Traveller's futuristic journey illustrate absolute Neptunist domination. Of paramount importance, the sun's role emerges as nothing more than a skeletal trophy of an ancient conflict; the genesis point of Subterranea and evolution lies dead. Desolation, death, stagnation, and deprivation abound on both macro and micro levels. Symbolically, the black Dead Sea emerges as the last image or feature discussed in humankind's futurity. This "black," "dead" water feature represents the antithetical conclusion or climax to genesis concepts created through illuminating, evolutionary fire.

The last pages of *The Time Machine* Wells reference the crucial moment when Zeus (Jupiter), Poseidon (Neptune) and Hades (Pluto) draw lots for their geospatial kingdoms. Wells's primary purpose stems from the need to showcase the connection and resolution between classic subterranean concepts and modern science fiction and fantasy works. Poignantly, Wells states that nothing "in earth or sky or sea" (70) moves. The descriptor "in earth" in the 1895 Heinemann first edition, as opposed to "on earth," refers to Subterranea. "In sky" illustrates Neptunist usurpation of the heavens, as illustrated by the cosmic status illustrated in the last pages of *The Time Machine*.

From the shores of this future sea, the Time Traveller notices "from the edge of the sea came a ripple and whisper" (70). Whether this constitutes a figurative nod to human origins within and from the primordial seas, or a foreshadowing of Neptunist spawning, remains "subterranean."

The 22nd century, illustrated within *A Story of the Days to Come*, harbors the last vestiges of character evolution opportunities within the selected subterranean science fiction and fantasy

works. Subsequently, character evolution opportunities decreased to the point of eradication, as illustrated within *The Time Machine*. Ever-increasing Neptunism, at the expense of Vulcanism/Plutonism, represents the cause.

The two Wells texts possess multiple similarities. Character evolution—or devolution—occurs through Wells’s alteration of established subterranean constructs and processes. Additionally, identical geospatial parameters allow for a unique analysis opportunity to illustrate decreasing character evolution opportunities along the subterranean timeline. Each character achieves his desired outcome by locating and using specific technology strategically positioned within confines created by the historic Circle Line route; Denton finds and uses hydraulic presses and the Time Traveller finds and uses both matches and the time machine. Denton’s character evolution occurs through remnants of hidden and dying Vulcanic/Plutonic processes within dominant Neptunism. Neptunism eventually destroys all semblance of Vulcanism/Plutonism, processes illustrated within *The Time Machine*; the two texts effortlessly illustrate a single storyline.

Despite these similarities, these two characters illustrate two distinct character transformations. The Time Traveller’s devolution distinguishes his character from all other reviewed literary characters; he represents a fully self-actualized character attempting to devolve through backward or reverse linear progression along the evolutionary timeline. In relation to constructs, Denton descends into a Vulcanic/Plutonic core whereas the Time Traveller ascends into a Vulcanic/Plutonic core.

Mwres represents a personification of Neptunist processes in the 22nd century; Denton needs Mwres to self-actualize. Denton evolves relative to his placement and link to Mwres, “one of the officials under the Wind Vane and Waterfall Trust, the great company that owned every

wind wheel and waterfall in the world, and which pumped all the water and supplied all the electric energy that people in these latter days required” (Wells, *Three* 131-32). Relative to *The Time Machine*, Mwres highlights and exaggerates the extreme isolation of the Time Traveller, a character devoid of any evolutionary counterpart. Mwres’s closest counterpart within *The Time Machine* emerges as the Morlock. This forced comparison showcases the major distinction within the two texts. The absence or removal of the Morlocks would not decrease or alter the evolutionary opportunities for the Time Traveller, as there simply are no evolutionary opportunities within the AD 802,701. However, the absence or removal of Mwres eliminates Denton’s entrance into evolutionary Subterranea.

Mwres orchestrates Denton’s plummet from the privileged upper levels to the base or “impure” lower levels of Subterranea as a Labour Company serf. Instead of eliminating Denton, Mwres unknowingly places him in the only 22nd-century location capable of strengthening or evolving characters. As illustrated in *The Hobbit* analysis, impure environments contain unique concepts perfectly suited for character transformation. Hidden within this perimeter realm lie smoldering evolutionary embers; their impending extinction does not negate their transformative capacities within this overlooked, psycho-social construct.

The search for food, the most elemental of needs, drives Denton into this complex construct. Consequently, the entire spectrum of hierarchical needs exists within the Labour Company. Ironically, technology emerges as the crux of character evolution and Denton assumes his position at a machine work station. The machine, intricately associated with the traits of pressure and heat, resides within a complex, evolutionary maze. This multi-room construct figuratively creates natural lava-tubes and caverns where the machines produce “paste,” a product indistinguishable from the highly symbolic lava paste in *Journey to the Center of the*

Earth. This paste represents a product formed through intense pressure and heat amidst conflicting paradigms. Consequently, paste emerges as apex indicator of, and within, evolutionary subterranean environments. The environmental condition of solitude completes the requirements for Denton's evolution. This isolation, however, showcases the distinctions between the subterranean constructs of *A Story of the Days to Come* and *The Time Machine*. Though overtly present within *The Time Machine*, isolation transpires within a homeostatic construct, thereby highlighting the significance of conflicting paradigms.

Denton's character evolution requires a more complex press. Denton's transition into a more complex environment illustrates classic Vulcanism/Plutonism, character evolution through gradual, progressive, linear processes. In contrast with the previous, isolated press, the new press resides within a psycho-social environment demanding interaction with workers from whom Denton is "to learn a wider lesson" (180). The assignment requires Denton to learn the "impure" concepts of base pugilism in order to survive and evolve. Denton's "golden form" emerges through repetitive hammerings—beatings. *The Hobbit* analysis showcased the relevance and delivery of impurities within psycho-social mediums. As with the trait of isolation, impurities harbor no character evolution potential within *The Time Machine*, as the characteristics exists within a non-evolutionary homeostatic environment. Within *The Time Machine*, base pugilism merely allows survival.

Denton's character evolution process evolves—deforms—him. "Twisted," "broadened," "puffy," "one-sided," and "blood-stained," a new character emerges. Subterranea acknowledges the alchemist's regal accomplishments: "He could feel the skin of his brow and chin and head lifting themselves to noble bruises, felt the throb and pain of each aspiring contusion" (184). These temporary extrinsic sensations form the bedrock from which permanent intrinsic

transformation manifest: “his blood seemed changed to some sort of fluid fire” (193). Character self-actualization occurs for the last time within Subterranea. *A Story of the Days to Come* closes with a final warning regarding future character evolution inopportunity: “The Thames had flowed down from the Cotswolds to the sea. But the men had been but the shapes of men, creatures of darkness and ignorance, victims of beasts and floods” (208-9). These “creatures of darkness and ignorance, victims of beasts and floods” populate the watery construct into which the Time Traveller enters.

The Time Machine seemingly possesses the core components of a traditional evolutionary subterranean quest: “In a condensed, ironic fashion it has many of the features of the epic. As a scientist and an explorer, the time traveller embodies the ascendant forces of his era. His journey dramatizes the assumptions and implications of his civilization, while affording opportunities for heroic battle against other-worldly foes” (Sherborne 103). Despite containing exotic underworld constructs, hideous monsters, and technological artifacts, *The Time Machine* emerges as a novel completely devoid of character evolution. *The Time Machine* illustrates the simple, animalistic attempt of basic survival by a complex character; evolution and/or self-actualization reflect nonexistent goals. *The Time Machine* emphasizes variables and constructs attributable to the absence of character transformation. One word effectively encapsulates the totality of this endeavor—homeostasis.

The Greek-term “homeostasis” translates as “similarity standing still.” This definition seemingly describes the features of The Liedenbrock Sea, Gollum’s Lake, or Skywalker’s Tatooine within earlier chapters. However, these “stagnant” features are countered within their respective texts by massive conflicting processes and features. Consequently, character evolution opportunities exist within each respective text. Contrastingly, *The Time Machine* possesses no

countering environments or constructs to interact with its homeostatic constructs and features. Homeostasis describes both sum and constituent parts within *The Time Machine*.

Subterranean homeostasis occurs when a single paradigm, either Vulcanism/Plutonism or Neptunism, regulates all constructs and processes. The result, stable or constant conditions, eliminates all chance for character evolution or self-actualization. Correlation exists between homeostasis and character evolution. As homeostasis increases, character evolution opportunities decrease. Increased conflict results in increased evolutionary opportunities. In essence, subterranean evolution opportunities within the selected Wells texts constitute a study in risk to reward ratios. Though desirable within some contexts, homeostasis emerges as a figurative and literal death sentence to subterranean science fiction and fantasy characters.

Within the Verne, Tolkien, and Lucas works, conflict-laden environments harbor massive transformative and evolutionary potential. Within *A Story of the Days to Come*, the faint vestiges of Vulcanism/Plutonism provide sufficient counteraction to dominant Neptunism to enable transformative opportunities for Denton. Contrastingly, *The Time Machine's* complete lack of character evolution opportunities directly corresponds with the complete lack of Vulcanism/Plutonism.

Intolerance produces homeostasis. Though combative and antagonistic, Vulcanism/Plutonism never demands complete domination within the selected texts. Within the works of Verne, Tolkien, and Lucas, Plutonic/Vulcanic Subterranea never mandates or pursues Neptunist eradication; Neptunism mandates eradication of Vulcanism/Plutonism as witnessed in *A Story of the Days to Come* and *The Time Machine*.

The final pages of *The Time Machine* detail the terminus point of human, character, and Vulcanic/Plutonic evolution; nothing remains beyond this point. In contrast to AD 802,701

which contained museum artifacts of Vulcanism/Plutonism, this futuristic focal point exudes absolutism, a radical trait illustrated by Wernerian Neptunism in *Journey to the Center of the Earth*. Absolutism increased along the subterranean timeline, climaxing in extreme darkness and cold now surrounding the Time Traveller. Within the coldness and darkness, the Time Traveller observes two features—a sea and a star—from the shores of a “terminal beach”, where a once fecund planet revolves slowly around a dying sun” (Page 169).

The “endless sea” and “dying sun” visually illustrate two opposing paradigms travelling in diametric trajectories. The barren and ever-increasing sea, Neptunism, sharply contrasts with the dying Vulcanic/Plutonic sun, a feature now representing the alpha and omega of Subterranea and the subterranean process. The dying evolutionary feature succinctly illustrates “cosmic truth—humanity’s insignificance against the vastness of the stellar universe. [This last subterranean truth] brings home the Darwinian reality” (Page 167) and significance of the primordial conflict between Plutonism/Vulcanism and Neptunism.

Upon returning to Victorian England, the Time Traveller requests a specific and significant item—matches. Upon obtaining these symbolic items, the alchemist climbs into the time machine and vanishes. Whether the lone alchemist turns the tides of the Neptunist campaign remains subterranean, but Wells alludes to such an attempt. *The Time Machine’s* epilogue offers several tantalizing outcomes. Many of these outcomes suggest a lonely demise within unique Neptunist constructs such as “the abysses of the Cretaceous Seas,” “wandering on some plesiosaurus-haunted Oolitic coral reef,” or “beside the lonely saline lakes of the Triassic Age” (Wells, *Time* 75). Whatever the outcome, the alchemist’s attempts figuratively resound upon the timeline, simultaneously echoing “Wells’s own faith in the human capacity to alter one’s

environment and one's own physical state" (Page 154), a belief that illustrates the worth and use of a specialized niche where science fiction and fantasy characters may evolve—Subterranea.

Works Cited

Page, Michael R. *The Literary Imagination from Erasmus Darwin to H. G. Wells: Science, Evolution, and Ecology*. Farnham, England: Ashgate, 2012. Print.

Sherborne, Michael. *H. G. Wells: Another Kind of Life*. London: Peter Owen, 2011. Print.

Wells, H. G. *The Time Machine*. New York: Dover, 1995. Print.

---. *Three More Novels of the Future*. Garden City, N.Y: Doubleday, 1981. Print.

Williams, Keith. *H. G. Wells, Modernity and the Movies*. Liverpool: Liverpool University Press, 2007. Print.

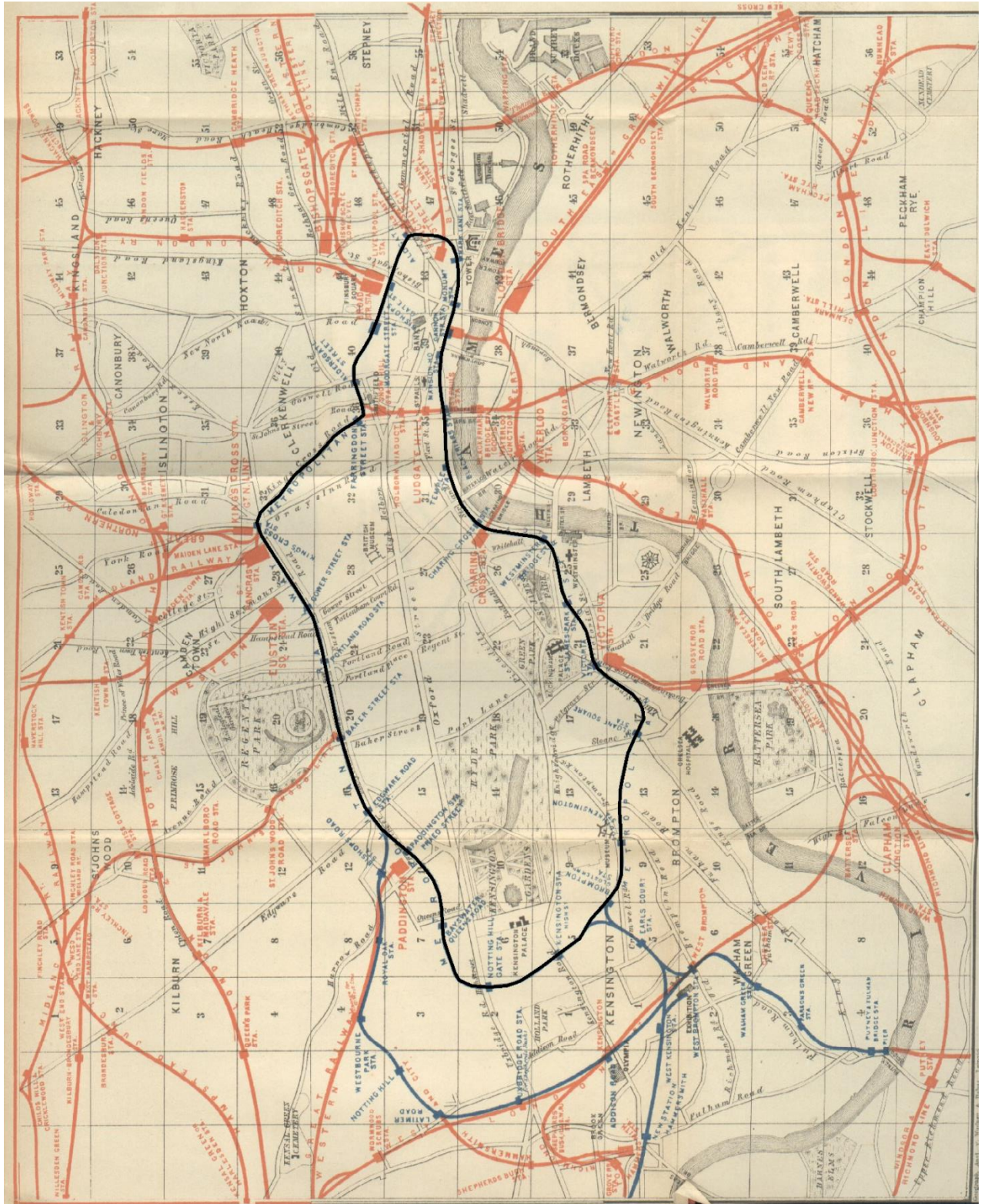
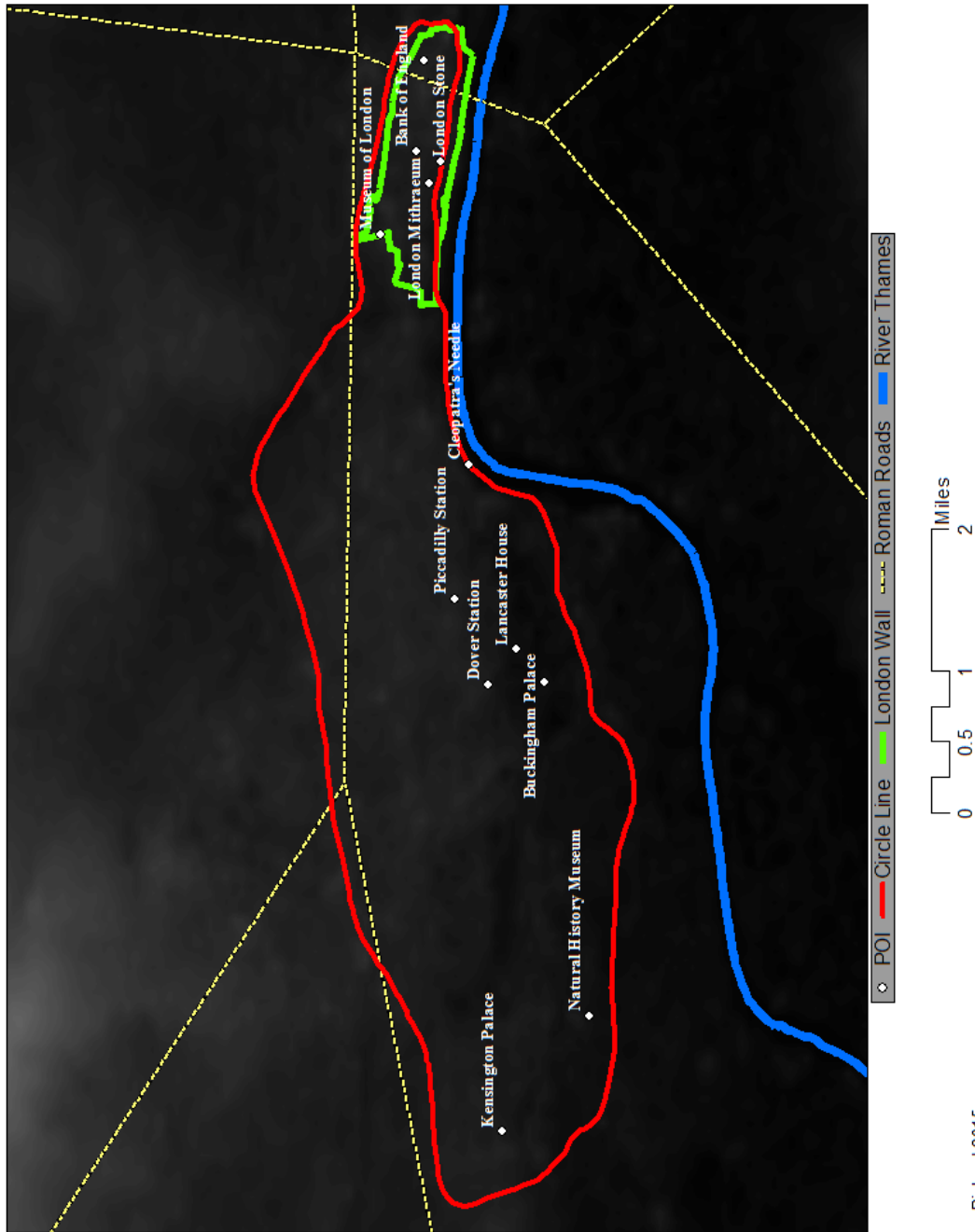
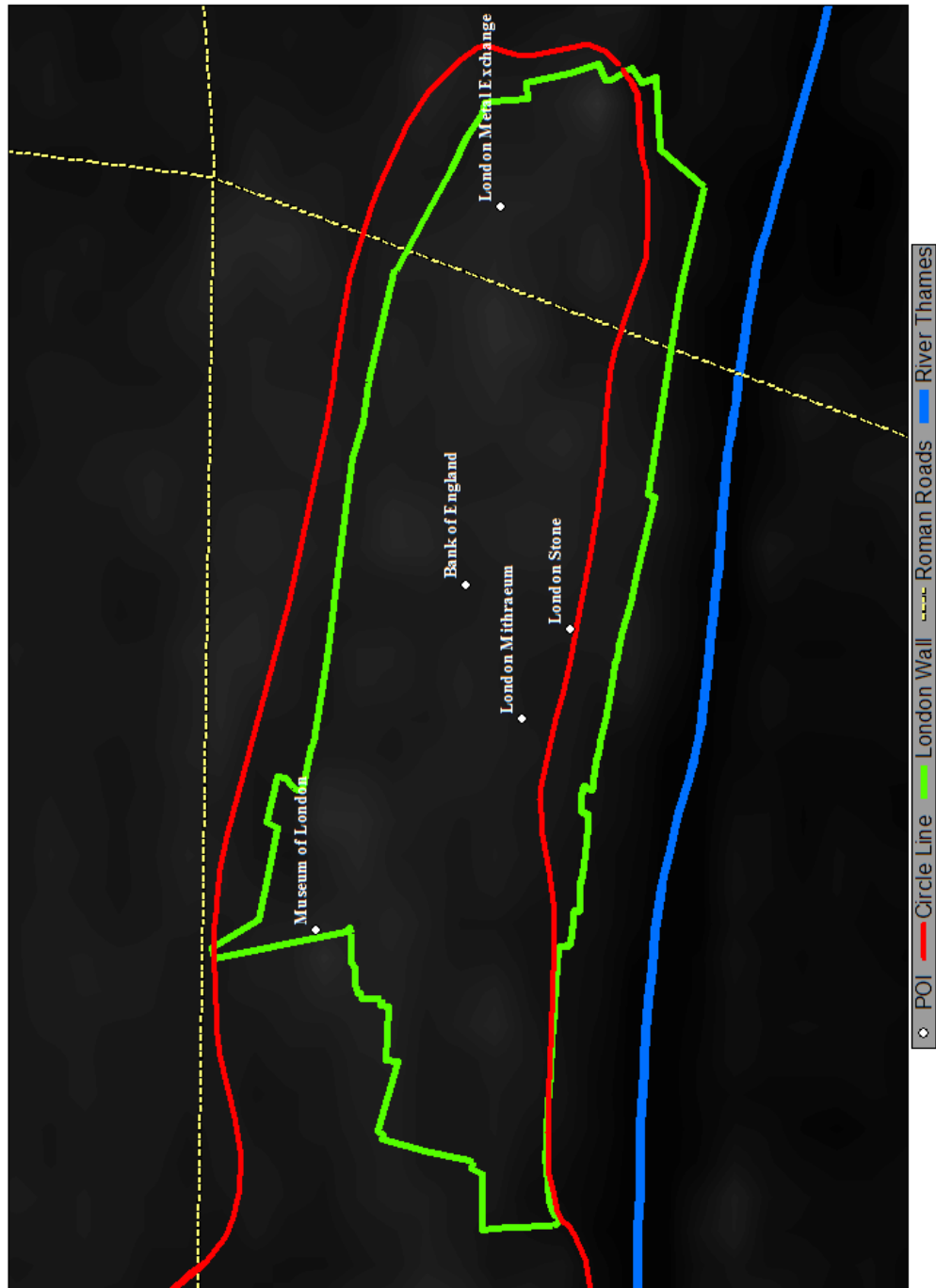


Figure 1



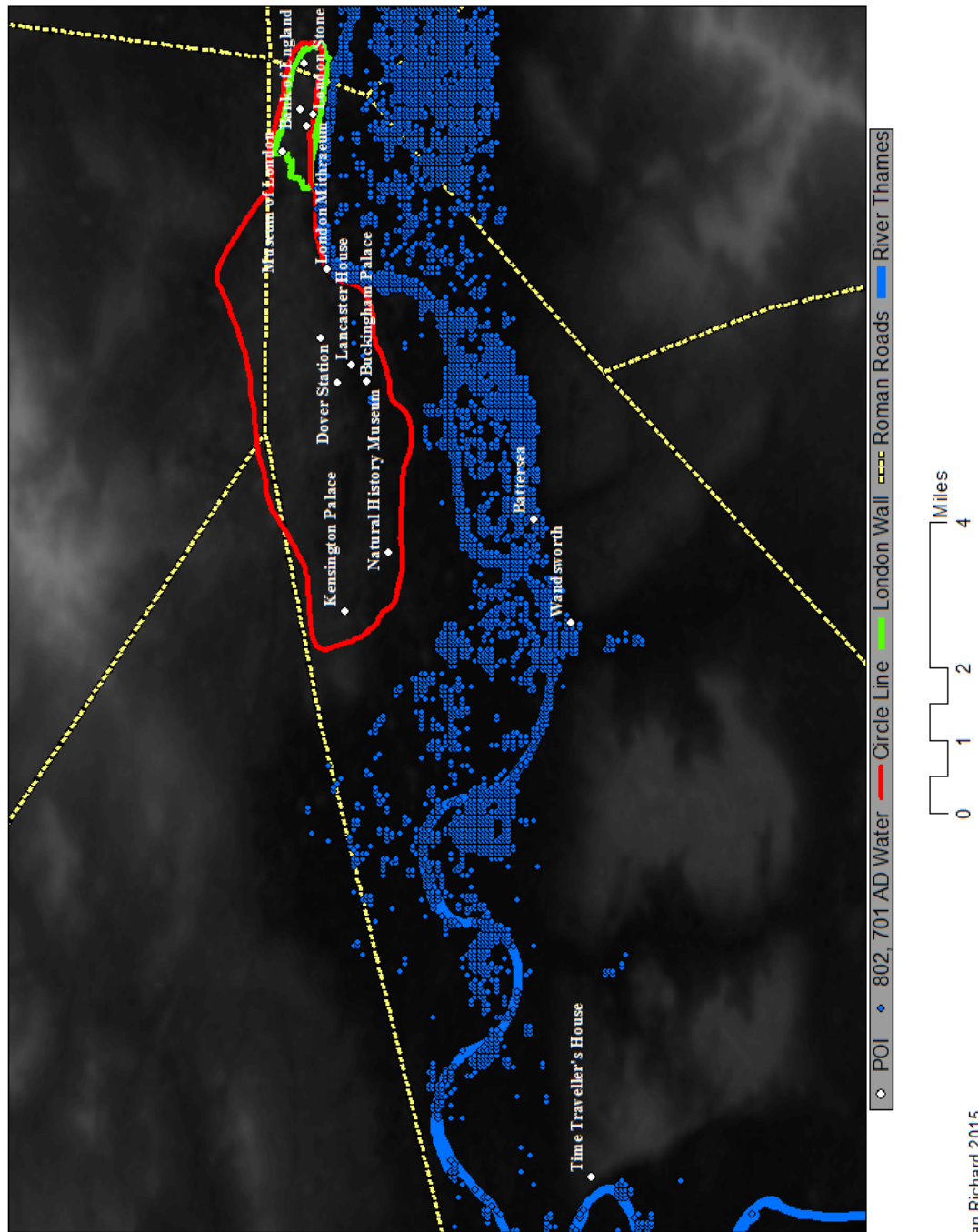
Cartographer: Ian Richard 2015

Figure 2



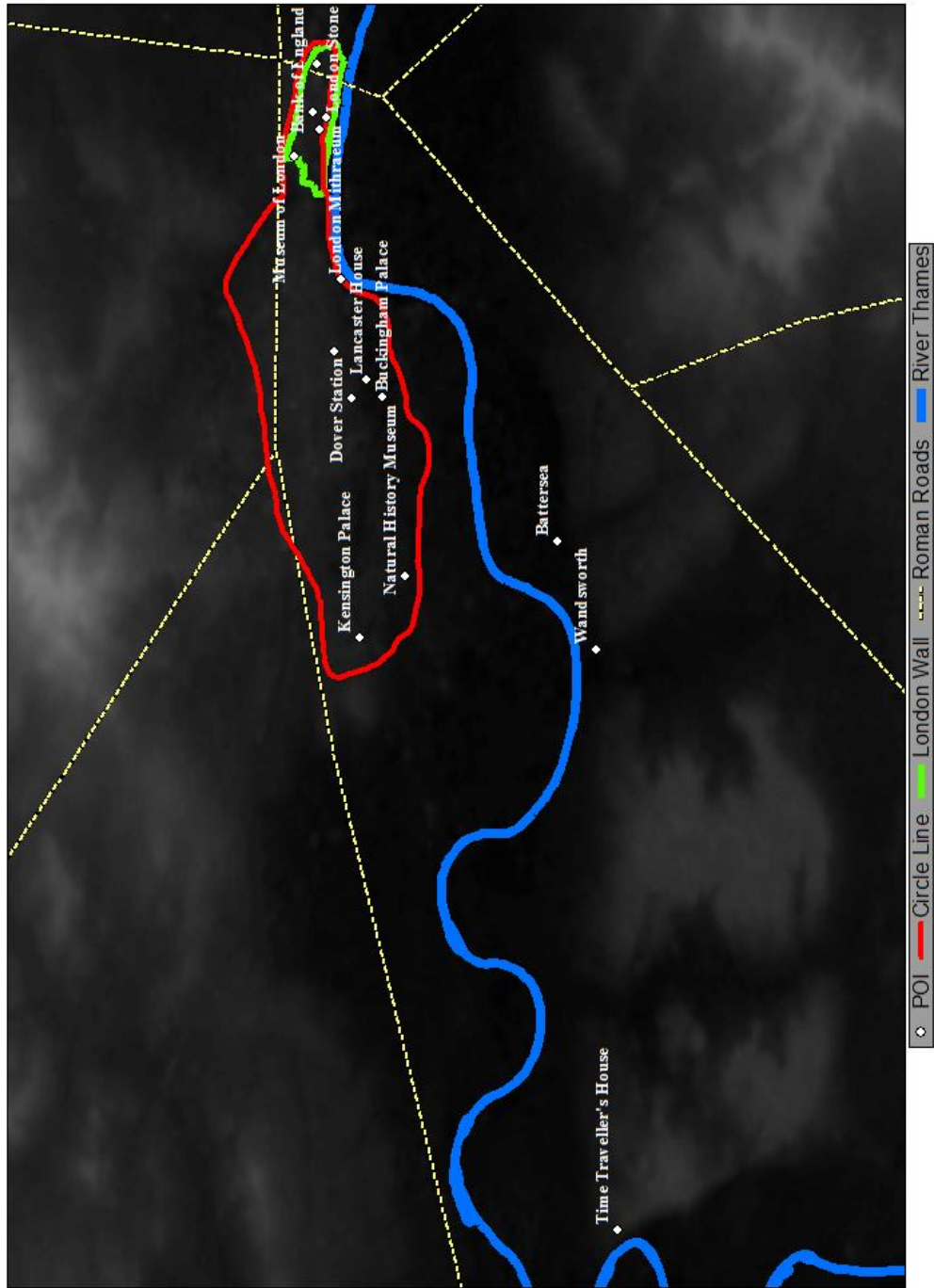
Cartographer: Ian Richard 2015

Figure 3



Cartographer: Ian Richard 2015

Figure 4



Cartographer: Ian Richard 2015

Figure 5

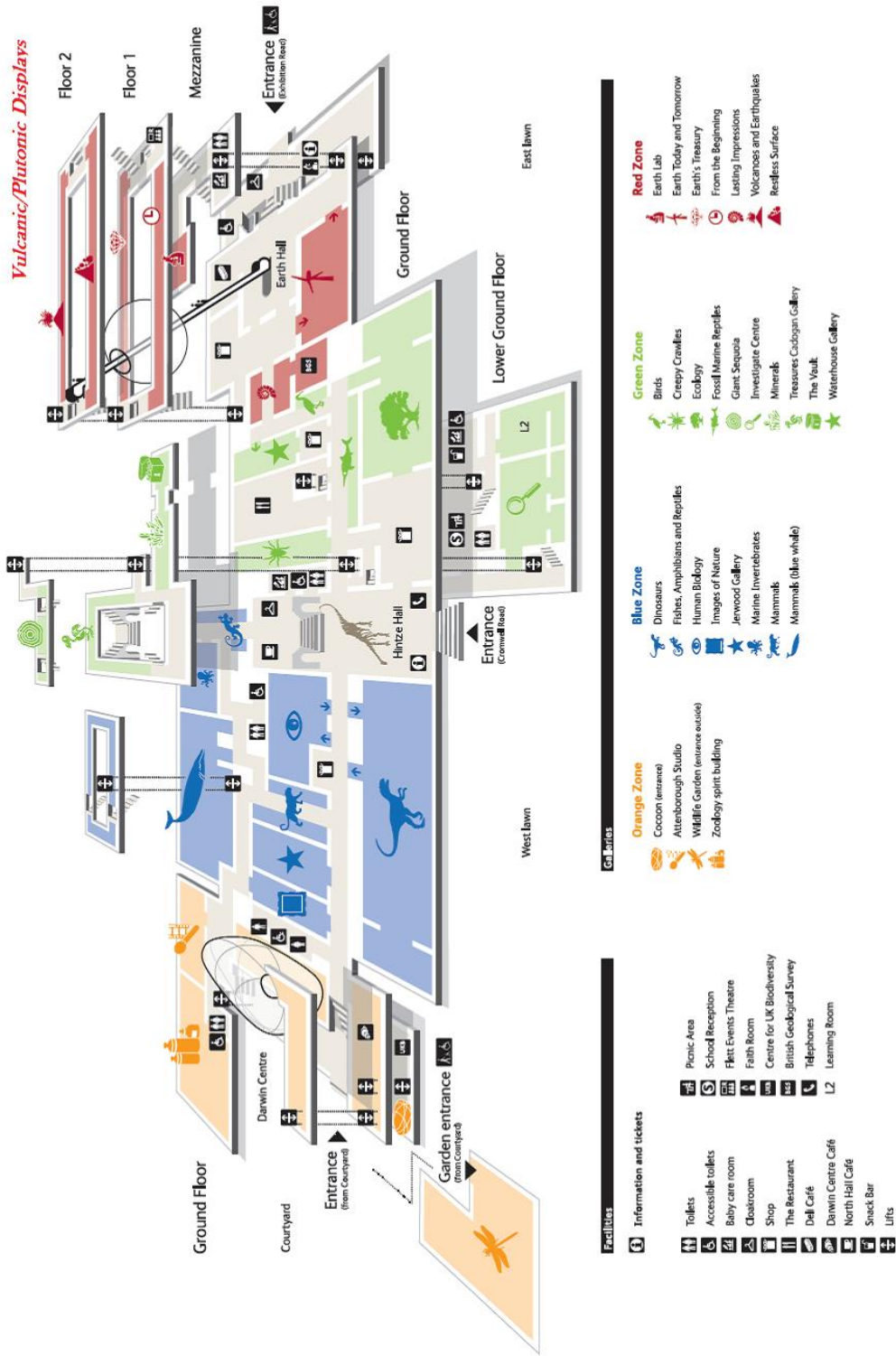


Figure 6

Chapter 6 - Ascent

Evolutionary life arises from and within non-living matter through the process of abiogenesis. Symbolic of character evolution from and within the harsh subterranean confines of rock and lava, this process requires the two variables of energy (process) and a medium (construct). The literal process upon Earth transpires through energy provided by the Sun—fire—and the medium of primordial tidal and/or inland pools—water. The figurative process within Earth—Subterranea—transpires through fire-based Vulcanism/Plutonism and water-based Neptunism; both processes evolve life. Importantly, evolutionary Vulcanism and Neptunism exist billions of years before their names fuse with Greek and Roman myth. Ultimately, upon evolving within and from conflict-ridden microcosms of fire and water, humans reenter another protective, evolutionary confine—Subterranea. Within caves and tunnels, humans continue their evolutionary journey. Gradually, reliance upon this protective geospatial niche lessens with the establishment of surface civilizations. However, human association with Subterranea continues through concepts such as religion and myth. Despite representation through these formats, Subterranea's human evolution potential requires a unique medium—science fiction and fantasy.

Current “off-earth” endeavors showcase the continued human evolutionary journey. This symbolic star-laden quest highlights the nearby landscapes of Mars and Earth's moon, features providing potential opportunities seemingly derived from a Verne text. Fire and water form the basis for opportunities upon these two features. Research highlights the presence of water within the Moon's interior volcanic matrix, as well as beneath the Martian South Pole and temperate latitudes. Solar rays provide a potential source of power at each location. Coexisting and conflicting paradigms again provide opportunities for the human evolutionary quest. Solar energy introduces the problem of radiation. The solution lies within familiar Subterranea. Cave

and tunnel features upon each landscape provide logical locales for human occupation; human evolution mandates entrance into the protective confines of Subterranea yet again.

Subterranea bridges humankind's evolutionary origins with its evolutionary destinations. Despite this complex function, simplicity traditionally typifies the subterranean subgenre within dominant cultural discourse and the majority of subterranean works. This simplistic view omits the library of artistic works showcasing Subterranea's complexity and worth. Variables contributing to this perception of Subterranea include the relative proximity and historical association with humankind, traits distinguishing Subterranea from other classic geospatial locales such as submarine or interplanetary. The inability to breathe and move effectively positions submarine environments as foreign and hostile. Interplanetary locations further this concept as humans have reached none but a few nearby cosmic locales. Contrastingly, prehistoric human use of caves and tunnels showcases a familiar and longstanding association with Subterranea based upon reward and protection.

Subterranea's unique history with humankind forms the crux of its perceived docility; shelters, burials, vaults, mines, and myth constitute the core. However, these superficial penetrations over the millennia terminate glaringly short of the massive, volatile evolutionary world residing below. Despite its seeming "open-door" relationship with humankind, Subterranea's innermost secrets—its core—remain as assessable as the surface of the sun. Consequently, a literal and absolute limit to human penetration and understanding of Subterranea exists. Access to the volatile and complex evolutionary concepts hidden below requires penetration through six distinct subterranean science fiction and fantasy works.

Jules Verne's *Journey to the Center of the Earth* (1864), J. R. R. Tolkien's *The Hobbit* (1937), George Lucas's *Star Wars* series of *A New Hope* (1977), *The Empire Strikes Back*

(1980), *Return of the Jedi* (1983), *The Phantom Menace* (1999), *Attack of the Clones* (2002), and *Revenge of the Sith* (2005), and H. G. Wells's *A Story of the Days to Come* (1897) and *The Time Machine* (1895) constitute the works analyzed within this thesis, each work illustrating a distinct evolutionary stage upon the "subterranean timeline." Six distinct characters highlight this timeline: Professor Liedenbrock, Bilbo Baggins, Anakin Skywalker, Luke Skywalker, Denton, and the Time Traveller. Some of these characters evolve while others fall short. This concluding chapter juxtaposes these characters and their experiences to create a unique analysis format that assesses their similarities and distinctions relative to self-actualization concepts. Historical context and closing abstracts bookend this character analysis. Consequently, three distinct subterranean "layers" manifest.

The historical context layer showcases influential surface concepts, features, and paradigms that influence and affect subterranean concepts within each work. Social, theological, and/or academic paradigms, as well as authors' personal experiences, form this analysis. The character analysis layer showcases major evolution concepts, with particular emphasis upon subterranean constructs and processes. Through creative and abstract closing statements, the final layer discusses each artist as a literal and figurative extension of his respective subterranean work. Consequently, these three layers provide a means to exit from Subterranea—and this thesis—with a complete understanding of this unique and specialized geospatial niche of incredible artistic value. Of paramount importance, the paradigms of Vulcanism/Plutonism and Neptunism are shown to permeate every constituent subterranean concept, construct, and process—literal and figurative.

Distinct cultural, academic, technological, and religious paradigms envelop modern science fiction and fantasy writers. These paradigms penetrate into and within subterranean

narrative constructs, directly influencing character evolution. The earliest work, *Journey to the Center of the Earth*, introduces several key concepts upon the subterranean timeline, becoming the default litmus for the subsequent works. Verne's novel, more than any other select work, uses traditional subterranean identity and concepts directly related to basic geology—rock, dirt, and lava. Hence, modern cultural perceptions typically envelop *Journey to the Center of the Earth* within a cocoon of simplicity and innocence. However, the novel quickly becomes unorthodox when compared with its contemporaneous historical context. Liedenbrock's adherence to the outdated paradigm of Neptunism overtly violates dominant Vulcanic/Plutonic paradigms established through scientific debate of the previous two centuries. Liedenbrock's emphatic and passionate embrace of Neptunism, a disproven school of thought based around rapid, water-based catastrophism, constitutes rebellion against Verne's contemporaneous scientific paradigms. With the exception of Liedenbrock's unorthodox paradigm association, *Journey to the Center of the Earth* represents a perfectly constructed evolutionary subterranean world dominated by coexisting, evolutionary Vulcanism/Plutonism and Neptunism. Liedenbrock's occupation as a mineralogist naturally positions his character to embrace the evolutionary Vulcanic/Plutonic concepts adhered to by his and Verne's dominant scientific circles. Verne's decision to give the professor stagnant, devolutionary Neptunist beliefs constitutes nothing less than a statement of discordance with contemporaneous "surface" paradigms, one emphatically registered as an evolutionary milepost along the subterranean timeline. This statement of discordance, though unique at the time, appears within the influenced and forthcoming select subterranean works.

Wells's *A Story of the Days to Come* and *The Time Machine* firmly pull subterranean science fiction and fantasy into the future, a temporal trajectory seemingly at odds with the

historical paradigm association illustrated in *Journey to the Center of the Earth*; it is not. Wells validates Liedenbrock's adherence to a historical, subordinate paradigm through two different methods. First, Wells illustrates that a stagnant, devolutionary climax forms via the new, homeostatic Neptunist trajectory that has usurped a historic, evolutionary environment created from coexisting evolutionary paradigms. *The Time Machine* showcases the benefits and evolutionary nature of "looking backwards" to historical environments and paradigms. Secondly, Denton's quest for, and use of, Vulcanic/Plutonic concepts within the 22nd century, illustrated within *A Story of the Days to Come*, represents blatant adherence to a historical and subordinate paradigm, relative to the narrative framework.

Rapidity and social apathy dominate the historical constructs in which Wells writes *A Story of the Days to Come* and *The Time Machine*. Blatantly devolutionary, these concepts disappear within the more dominant enthusiasm embracing new technologies and processes such as industrialization, electricity, steam power, and subterranean trains. As with *Journey to the Center of the Earth*, Wells's texts showcase character discordancy with dominant, contemporaneous "surface" paradigms, justified via the devolutionary trajectory fueled by Victorian-era social and technological paradigms; Verne's discordancy with surface paradigms remains, and is legitimized, within Wells's texts, works that transform Verne's elemental dirt, rock, and lava into complex psycho-social concepts. Despite the similarities, a major distinction between the texts of Verne and Wells exists—character evolution. Liedenbrock, repellent of evolutionary concepts within a perfectly postured Subterranea, radically contrasts with Denton, a character seeking evolutionary concepts within a virtually homeostatic Neptunist environment. This pivotal subterranean distinction highlights evolutionary concepts found within a subterranean feature known to both authors—the Channel Tunnel.

The Channel Tunnel literally connects the homelands of Verne and Wells and figuratively illustrates the evolutionary progression from traditional geology concepts to unorthodox psycho-social concepts found within each respective subterranean work. This evolution manifests through the opposition and support surrounding the tunnel, a feature dominated by conflict, mistrust, hope, confusion, technology, fear, wealth, anger, opportunity, and adherence.

The year 1802 signifies the genesis of Channel Tunnel discussions; the first half of the century showcases elemental, physical fears such as air and light deprivation dominating these discussions. These primal concepts assuredly influence Verne. Born in 1828, Verne assimilates and projects these concerns upon Liedenbrock, a character paralyzed by elemental physical deprivation fears. The first science-based approach to the Channel Tunnel emerges through Aimé Thome de Gamond in 1856, a mere eight years prior to Verne's publication. Gamond's proposal fuses hard science, engineering, and technology, consequently addressing these fears. By 1864 hard science and engineering concepts represent dominant discourse surrounding tunnel construction. Despite his predisposition towards scientific concepts, Verne maintains primal, deprivation fears within his novel. Consequently, a unique fusion of hard-science concepts and traditional fear-laden deprivation manifests. The classic, science-based, fear-laden, non-evolutionary trek within *Journey to the Center of the Earth* represents this fusion. Additionally, a unique parallelism manifests. Liedenbrock's adherence to the subordinate, historical paradigm of Neptunism below the surface mirrors Verne's personal adherence to subordinate, historical paradigms of elemental fear upon the surface.

Channel Tunnel events succeeding the publication of *Journey to the Center of the Earth* further evolve character evolution concepts. Conflicts of opinion, notably those between

commercial and military personages, dominate tunnel discourse: “every commercial authority of weight in this kingdom is agreed as to the loss inflicted ... by the absence of a Tunnel between Dover and Calais; while, on the other hand, many of our most eminent military and naval authorities are opposed to it, as likely to expose the country to invasion” (Gladstone 7-8). Conflict, mistrust, hope, confusion, wealth, anger, opportunity, and adherence emerge to create an increasingly complex Subterranea. Commercial interests symbolize subterranean potential; military interests symbolize subterranean risks. Fear of penetration into territorial rights by unknown or foreign concepts forms the foundation of military or defensive concerns, based upon the actual or perceived open access to foreign paradigms threatening an established “surface” identity. This risk-to-reward conundrum forms the basis of subterranean quests housing self-actualized “golden forms.”

Channel Tunnel shafts penetrated to miniscule depths at Sangatte, France in 1877. In England, devolutionary Neptunist flooding thwarted early attempts at St. Margaret’s Bay. However, successful penetration to 800 feet occurred at Shakespeare Cliff in 1880 (see figures 1 and 2). Illustrative of subterranean Vulcanism/Plutonism and Neptunism, conflict soon ensues, illustrated by Lieutenant General Sir Garnet Wolseley’s 1882 statement that linkage with Europe would be "calamitous for England." Wolseley’s concern highlights a primary characteristic of subterranean science fiction and fantasy—exposure to foreign or feared paradigms. In response, tunnel advocates suggest defenses ironically revolving around flooding (Neptunism) and smoke (Vulcanism). Ultimately, construction of the Channel Tunnel ceases. Fear, failure, and deficiency prevail. Within the vacated tunnels, these unique psycho-social concepts harbor massive evolutionary potential. Wells articulates the extent and intensity of these concepts: “[I]nner Britain ... holds tenaciously to its positions of advantage, from which it is difficult to dislodge it

without upsetting the whole empire, and it insists upon treating the rest of the four hundred millions who constitute that empire as outsiders, foreigners, subject races and suspected persons It is still so entirely insular that it shudders at the thought of the Channel Tunnel” (Wells, *War and the Future* 238). Within this psycho-social construct, Wells writes and publishes *A Story of the Days to Come* and *The Time Machine*. Within their respective texts, Denton and the Time Traveller represent adherence to subordinate, historical Vulcanic/Plutonic concepts. Wells’s psycho-social concepts, directly reflective of those within the abandoned shafts of the Channel Tunnel, dominate the construct through which each of these characters navigates.

Wells’s novels are finite; Denton self-actualizes, and the Time Traveller returns to the safe confines of history. Subterranean concepts are infinite, illustrated by continuous xenophobic fears, social failures and personal deficiencies erupting from its depths. Without a narrative outlet, these subterranean concepts materialize upon the surface as World War I.

In October 1911, J. R. R. Tolkien began studies at Oxford University 141 miles from the vacated Shakespeare Cliff tunnel shaft. In July 1916, he fought at the brutal Battle of the Somme, 100 miles from the vacated Sangatte tunnel shafts; Subterranea pulls Tolkien ever closer. Over 1,000,000 men were either wounded or killed at the Battle of the Somme, one of the bloodiest engagements in human history. This battle highlights the horrific fusion of subterranean technology, science, and psycho-social concepts released upon the surface. Subsequent to the war, Tolkien wrote the unique subterranean fantasy *The Hobbit*, a novel essentially travelling back in time, a temporal trajectory eerily reminiscent of the Time Traveller’s ultimate goal within *The Time Machine*.

Tolkien retreats from contemporaneous and future-oriented paradigms through *The Hobbit*, a novel distinguishing itself from the other select works in a multitude of ways.

Superficially, *The Hobbit* illustrates Verne's traditional and elemental subterranean concepts, illustrated through Middle-earth's fear and deprivation-riddled caves and tunnels. Additionally, Wells's abstract, evolutionary psycho-social themes continually emerge through Bilbo's various and complex interpersonal relationships and social interactions. The similarities cease at this juncture. *The Hobbit* represents the only narrative temporally set around technology predating the author's contemporaneous period. Tolkien's "historic technology" constitutes a spoke within a complex wheel driven by medieval theology and hierarchy. Tolkien's medieval foundation represents "a particularly interesting set of SFs [scholarly fantasies] emerg[ing] from the human sciences (especially history)" (Stableford 842). "Looking back" towards the Middle Ages does not negate Tolkien's ability to "look forward" or use revolutionary concepts within his subterranean work.

Paradigm alignment—or lack thereof—further distinguishes *The Hobbit*; Bilbo represents the only character not aligned with a paradigm during his subterranean quest. Liedenbrock, Denton, and the Time Traveller vehemently associate with a subordinate, historic paradigm within their respective narratives. Lucas's characters of Luke Skywalker and Anakin Skywalker further illustrate this concept. Anakin adheres to subordinate Sith paradigms within a Jedi-dominated construct, while Luke adheres to subordinate Jedi paradigms within a Sith-dominated construct. Only Bilbo Baggins evolves within Subterranea without distinct paradigm association.

Further illustrating *The Hobbit's* revolutionary concepts, Tolkien fuses biological, moral, and evolutionary concepts into a radically progressive and unique construct displaying various evolutionary tunnels or branches. These branches provide two distinct functions. First, they creatively "flesh out" Middle-earth Subterranea with variegated evolutionary lifeforms. Secondly, they provide variegated hurdles along Bilbo's evolutionary journey.

Regular teas and comfy fires constitute Bilbo's pre-quest—pre-subterranean—life. Bilbo represents a mesophilic lifeform, an individual living within a discernably neutral or moderate environment. Dragons, trolls, elves, goblins, dwarves, spiders, and wolves represent subterranean stressors for Bilbo. These creatures exhibit distinct behavioral, structural, and social characteristics distinguishing each from the other and Bilbo. Each creature flourishes within a unique, extreme environment—a subterranean layer. Tolkien's creatures are extremophiles, lifeforms or characters thriving in unique, extreme subterranean niches. Consequently, each layer or creature demands adaptive behavior from Bilbo. Biology, in the form of layered extremophiles fused with moral concepts, creates a variegated range of evolutionary experiences for Bilbo. This myriad of supporting characters sharply contrasts with Lucas's meagre cast.

Luke, Anakin/Vader, Yoda, Kenobi, Jinn, Maul, Leia, and the Emperor form the evolutionary pool from which Skywalker evolution emerges within the *Star Wars* series. The diverse geospatial maneuvering of this small character group belies Lucas's primary evolutionary medium—foreign landscapes scattered throughout a galactic construct. Continually moving and rearranging, this group of characters traverses the *Star Wars* galaxy, identifying evolutionary concepts through symbolic locations they temporarily inhabit or visit. Whereas Tolkien's evolutionary concepts center around unique lifeforms and their inherent characteristics, evolutionary concepts within *Star Wars* revolve around unique locations and their inherent characteristics; this approach reflects the dominant paradigm in which *Star Wars* was written—the Cold War, a polarizing, dualistic global conflict.

Lucas began writing *Star Wars* in 1973. Contemporaneous science, academics, technology, and theology on both Cold War “sides” reflect the conflict-laden dualism of the

1960s and early 1970s. Not immune, Lucas's *Star Wars* becomes another extension of this dominant cultural paradigm.

Two core Cold War characteristics influence *Star Wars*. Exotic, foreign geography constitutes the primary characteristic. The second characteristic, the Space Race, perpetuates the first variable. The space race officially spanned from 1955 to 1972. This galactic, spatial competition between the Soviet Union and the United States mirrors the massive geopolitical processes upon Earth. A simple world map illustrating country alignments during the Cold War showcases the strategic importance of periphery, "non-core" locations. Cold War "cores," like Lucas's galactic Deep Core within *Star Wars*, reflect paradigm genesis and strongholds. During the Cold War, two distinct cores or paradigms, what Kenobi refers to as a "point of view," exist. The United States and Union of Soviet Socialist Republics (USSR or Soviet) each form a respective core. Subsequently, outward concentric patterning mirroring the galactic radial conic dispersion illustrated within the *Star Wars* chapter transpires. Successive geospatial layers form around each respective Cold War core via the North Atlantic Treaty Organization (NATO) and Warsaw Pact countries. Further concentric layers manifest through locations denoted as U.S. allies and Soviet allies. The outermost layers—the Outer Rim—manifest through exotic geographic locations housing radically distorted and contested core concepts. Sterile, homeostatic, administrative core locations such as Washington, D.C., Coruscant, and Moscow house no character evolutionary concepts; these locations illustrate dominance by a single paradigm. As distance from these core locations increases, complex evolutionary opportunities increasingly manifest. Examples include the evolutionary conflict within the steaming jungles of Vietnam and Dagobah, where clashing paradigms force dramatic population and character alignment. Evolutionary potential resides within the mined substrates of Afghanistan, Mustafar,

Iraq, and Cloud City. Upon the small, isolated landscapes of Madagascar and Polis Massa, distinct concepts are birthed. The thick foliage of Columbian, Endoran, and Brazilian forests camouflages unique evolutionary stressors. Scorching, windswept deserts in Namibia, on Tatooine, and in Tanzania seemingly contrast the frozen, barren landscapes of Mongolia, Hoth, and Korea. All of these highly contested and exotic locales harbor unique evolutionary concepts directly related to their unique geography and geospatial positioning.

Despite their peripheral positioning, these exotic fringe landscapes exist within a construct thoroughly dominated by catastrophic, offensive weaponry. This strike may occur from the relatively familiar locations of Plokstine, Lithuania, or Colorado Springs, Colorado, or the more exotic locations of Death Star I or Death Star II. Ultimately, *Star Wars* and Cold War concepts mimic each other to such a degree that a symbolic fusion transpires in the early 1980s; *Star Wars* becomes the unofficial namesake for the proposed U.S. space-based Strategic Defense Initiative in the Cold War's waning years. *Star Wars* becomes assimilated by the dominant cultural paradigm responsible for directly influencing it.

The unique paradigms influencing the works of Verne, Wells, Tolkien, and Lucas seep into every layer of the authors' subterranean narratives; the paradigms of Vulcanism/Plutonism and Neptunism dominate all. Vulcanism/Plutonism and Neptunism form the crux of literal and figurative subterranean features, processes, and concepts within each work. The symbolic conflict between the two is Subterranea.

Subterranea translates as "under earth"; depth inherently forms the crux of this specialized geospatial niche. The lithosphere, asthenosphere, mantle, outer core, and inner core represent distinct layers or zones reflecting variegated depth. Science, the primary discipline governing Subterranea, falls prey to its mysteries, illustrated by the simple distinction between

magma and lava. Molten or semi-molten rock found beneath the surface of the Earth constitutes magma. This same molten or semi-molten rock, once expelled from the mysterious regions unto the Earth's crust, "transforms" into lava. Like subterranean characters, this viscous material illustrates the esoteric regions of the world below. Adding to the mystique, magma has only been encountered in situ three times in recorded history; lava represents a relatively common occurrence. This powerful and esoteric geospatial niche lures the select characters into its realms.

A mythic battleground through which subterranean characters encounter and navigate symbolic manifestations of "fire" and "water" awaits entrance. Character descent illustrates the evolutionary trait of depth or elevation, a critical concept within the ongoing conflict between Vulcanism/Plutonism and Neptunism. Stratified layers form the ubiquitous onion-skin construct, a layered concentric fortress mandating penetration and navigation by characters seeking self-actualization via access to the core or "truth." Onion-skin constructs contain labyrinths and/or mazes, features connecting the surface to each respective core. Depending on character behavior and alignment, these features either restrict or enable core access. Though seemingly subjective, objective or physical truth resides within Subterranea. The alchemist personage, the element gold, and the medium of fire constitute examples.

During subterranean journeys, characters encounter recognizable Vulcanic/Plutonic and Neptunist concepts. These concepts range from the relatively familiar and benign such as natural volcanism within *Journey to the Center of the Earth* to the exotic and dynamic as illustrated within the figurative cores of the Wells texts. Both examples manifest from temperature and stratification concepts, two variables affecting character evolution.

Characters entering Subterranea benefit from an increasing geothermal gradient, a basic thermodynamic concept detailing energy exchange via thermal contact between Subterranea and

characters. This heat transfer prepares characters for upcoming evolutionary processes and events; characters become malleable and subsequently maximize their evolutionary capacity through no additional effort. Subterranea represents an evolutionary “pressure cooker,” a feature exaggerating transformative conditions and processes.

Ubiquitous subterranean heat and fire contrast a limited water supply. Research in 2014 reveals a subterranean water “pool” three times the volume of Earth’s combined surface oceans residing within the symbolically titled “transition zone.” The pool’s size positions it as the possible genesis of Earth's water, the medium through which abiogenesis transpired. This Neptunist feature supplies the Hansbach, Liedenbrock Sea, Gollum’s Lake, Mirkwood River, Long Lake, the Thames River, and Dagobah’s swamps. Neptunism coexists alongside Vulcanism/Plutonism.

Subterranea exerts tremendous pressure upon Vulcanic/Plutonic and Neptunist features. Subsequently, the primary Vulcanism/Plutonism subsystem increases at the expense of a low-pressure, secondary Neptunism subsystem—displacement. Water is subordinate within the Vulcanism/Plutonism versus Neptunism conflict. Traditional volcanic eruptions illustrate this concept as steam or water vapor, the most common volcanic gas, spews from Subterranea’s confines.

Subterranean volume displacement represents a conflict-laden process initiated by the introduction of new variables—characters—into the finite parameters of Subterranea. Water and fire battle to establish footholds within this finite construct. As illustrated, water’s expulsion typifies the traditional sequence of events during these conflicts. New mass—a character—delimits this contested environment; expulsion of either Vulcanic/Plutonic or Neptunist mediums is mandated. As Vulcanism/Plutonism constitutes the primary subsystem, Neptunism manifests

as the projected displaced medium. Attempting to counteract this mandated expulsion, Neptunism addresses the cause—science fiction and fantasy characters.

In addition to aggravating the Vulcanism/Plutonism and Neptunism conflict, introduction into Subterranea highlights a state of incomplete character evolution. Entering Subterranea, characters showcase no subterranean symmetry, arrangement, principle, method, or morality. Science fiction and fantasy characters entering Subterranea are “irregular shapes,” their volume symbolically determined by the quantity of water they displace. Reconfirming earlier statements, characters manifest as natural subterranean rivals to Neptunism as their presence targets volume occupied by the subordinate paradigm. Consequently, conflict-induced evolution or expulsion ensues. Bilbo Baggins represents the former and Liedenbrock, a Neptunist extension expelled by Vulcanism/Plutonism, represents the latter. One last outcome remains—death, a result vehemently contested by the Time Traveller.

Combative Vulcanism/Plutonism and Neptunism produce a unique evolutionary environment. As the secondary subsystem or paradigm, Neptunism uses a myriad of unique strategies to counter potential character adherence to the primary subsystem of Vulcanism/Plutonism. Illustrated within the texts, seduction, death, and/or devolution constitute primary tactics. Withstanding initial death or expulsion, characters encounter numerous Neptunist-based obstacles and stressors. Ironically, these obstacles and stressors form the evolutionary experiences through which characters evolve and are able to maintain a sustained subterranean presence, becoming Vulcanic/Plutonic extensions during the process. The processes of character evolution, expulsion, or death form the distinct narrative backbone of each subterranean work.

Professor Liedenbrock enters a traditional subterranean construct of coexisting Vulcanism/Plutonism and Neptunism. Despite the professor's inability to capitalize upon the evolutionary concepts within this world, Tolkien does capitalize. Tolkien transforms Verne's physical geology into abstract morality. Consequently, where Liedenbrock aimlessly meanders through lava tubes, tunnels, and caverns, Bilbo Baggins strategically penetrates medieval moral and theological codes. Tolkien figuratively relinquishes Subterranea to Lucas, who pulls the moral and impurity-laden construct out of the Middle Ages and scatters it amongst an interstellar framework resplendent with code-governed knights seemingly from Middle-earth. Lucas's detonation and scattering of Tolkien's neatly packaged Middle-earth core distinguishes the two storylines. Whereas a mere 600 miles separate the doorsteps of Bilbo and Smaug, Luke and Anakin's evolutionary journey spirals throughout a galaxy. These extensive, spiraling parameters manifest a unique representative concept—the conduit, an abstract feature showcasing Skywalker evolution. Anakin/Vader, the crux within Lucas's galactic and evolutionary framework, extends a distinctive footprint well beyond the confines of the *Star Wars* universe.

Anakin constitutes the only character directly responsible for creating and/or modifying a subterranean construct; the remaining characters navigate through stable, unalterable constructs governed by established subterranean processes and concepts. Anakin's actions, in combination with the subsequent subterranean rearrangement from them, violate traditional subterranean science fiction and fantasy protocol. Detailed in the introduction, literary characters address personal deficiencies exposed within extreme environments through one of two coping mechanisms, either character evolution or environmental mastery. Subterranea, given its inherent characteristics, removes the option of environmental mastery. Subterranea vehemently and inherently resists change. Illustrating his unique influence over Subterranea, a Neptunist-seduced

Vulcanic Vader forcibly places Subterranea into an unbalanced holding pattern as he awaits Luke's arrival upon the storyline; no other character wields this power.

Vader's massive influence extends into Wells's texts, an alternate ending to the *Star Wars* storyline illustrating failed or nonexistent attempts to balance Vader's personally constructed Subterranea. Denton and the Time Traveller navigate constructs representing various time periods along the subterranean timeline, now completely influenced by the Sith Lord's original Neptunist tendencies and trajectory. Denton evolves within the bowels of a vertical London construct perfectly mirroring Neptunist-dominated Coruscant. Coruscant's upper levels constitute the epicenter of Neptunist/Sith domination in the city as showcased by the unique signature buildings detailed in the *Star Wars* chapter. Consequently, any potential evolution will be located at the peripheries of these devolutionary upper levels. Evolution exists at the lower levels, overseen by Wells's Labour Company. The Labour Company, and its relative geospatial positioning, conceals any remaining Jedi/Vulcanic/Plutonic concepts from London/Coruscant's upper layers. *A Story of the Days to Come* illustrates an untrained Denton, seeking evolutionary concepts, evolving within the lower levels of a Neptunist/Sith-dominated construct. Eventually, London/Coruscant's last remaining pocket of truth succumbs to Neptunist inundation. Wells's *The Time Machine* illustrates this homeostatic Neptunist/Sith eventuality.

As illustrated above, the journeys of the select characters involve acquisition of evolutionary truth, a concept residing within a literal and/or figurative core. This core or core region lies within a concentrically layered construct protected by various subterranean stressors. Consequently, character acquisition of truth symbolizes successful penetration and accumulation of knowledge and experiences at and upon all layers. Linear labyrinth and/or maze features guide character penetration through these layers, stratified concepts/features connecting the non-

evolutionary surface to the evolutionary core. The stratified layers, inner core, and labyrinths/mazes all use a basic subterranean descent template within overarching Vulcanism/Plutonism and Neptunism—fire and water conflict. Water naturally follows a path of least resistance, illustrated by its inherent tendencies to descend through preexisting routes. These traits, as showcased by Anakin, demonstrate the seductive nature of subterranean Neptunism, a pathway of rapid, less-contested traversing through rock substrate (obstacles) via obstacle-free routes that seemingly descend into an evolutionary core. Illustrated by Gollum’s Lake, the Liedenbrock Sea, and the Coruscanti Imperial Palace, these lower homeostatic core features represent stagnant, devolutionary Neptunism. Contrastingly, personal routes formed through gradual and arduous experiences highlight the evolutionary potential residing within a Vulcanic/Plutonic core. Gradual penetration through chosen and contested—not predetermined and conflict-free—routes results in acquisition of truth and/or self-actualization.

Journey to the Center of the Earth illustrates truth strategically located at the center of a natural, concentric construct. In ascending order, this construct consists of a Plutonic/Vulcanic fire (core), a geyser, an island, a sea, a cavern, linear tunnels, surface, and Mt. Sneffels. Character acknowledgment of Vulcanism/Plutonism, the primary subsystem within this Subterranea, ultimately allows access to an evolutionary maze feature locked behind a boulder. Liedenbrock’s deference and adherence to Neptunism result in character non-evolution. This outcome represents the only example of character non-evolution within an evolutionary construct.

The Hobbit illustrates truth located at the epicenter of a fused natural and abstract construct reflecting Tolkien’s use of medieval theological and social paradigms. Tolkien strategically places Bilbo’s home at the antipode of his evolutionary capstone experience—

Smaug's hoard. Residing under the Lonely Mountain far in the East, this golden epicenter reflects moral and alchemical self-actualization concepts. As with Verne's Mt. Sneffels, Tolkien's Lonely Mountain exaggerates the depth Bilbo must traverse. Bilbo's trek towards the hoard penetrates various subterranean layers, distinct concepts reflective of the creatures inhabiting them. Two distinct linear features connect Bilbo's home with Smaug's hoard. A complex labyrinth leads into the Neptunist waters of Gollum's Lake and a complex maze terminates into the Volcanic/Plutonic fires of Smaug's lair.

Star Wars illustrates truth originally located within a galactic core region—the Deep Core. Lucas disperses this concentrated truth, a symbolic expounding of Tolkien's neatly packaged moralistic core, into the upper layers of a radically unique Subterranea. *Star Wars'* Subterranea requires exaggerated lateral movement by characters seeking evolutionary concepts; interplanetary character journeys satisfy traditional descent requirements. Upon accumulating scattered, segmented concepts from distinct landscapes, Skywalker evolution and self-actualization transpires, as does galactic balance.

Truth within *A Story of the Days to Come* and *The Time Machine* resides within identical and precise geospatial parameters. Five core features reside within historical confines delimited by the London Wall. Some, such as the London Stone, further extend concentric subterranean layering. An additional protective layer manifests through the subterranean Circle Line, a feature encompassing the evolutionary features of the Natural History Museum, Buckingham Palace, and Cleopatra's Needle. Importantly, the two Wells texts collectively showcase the eventual and complete loss of character evolutionary truth relative to Subterranea.

Within the five storylines, the alchemist personifies subterranean truth. Despite being flesh and bone, the alchemist personage constitutes a manifestation of literal and figurative

Subterranea. The alchemist bridges the realms of physical rock substrate and abstract character self-actualization. Historically, alchemists seek and represent esoteric paths linking base, impure materials with a specific apex product—gold. Illustrated within *The Hobbit* chapter, gold and its related processes illustrate the character evolution concepts of self-actualization. Each work contains an alchemical personage directly related to character evolution. Each alchemist illustrates proper subterranean navigation and processes to achieve self-actualization. Despite their esoteric nature, each alchemist produces a discernable footprint through which he is identified.

The solitary alchemist Saktussem within *Journey to the Center of the Earth* illustrates literal and figurative evolutionary concepts to Liedenbrock via his three-century-old pathway. Contrasting with Liedenbrock's Neptunist adherence and complete reliance upon Saktussem's established pathway, Saktussem reaches the core via fire-lit torches along a self-discovered pathway. Saktussem exemplifies subterranean evolution, not destiny-laden but a process demanding individual pathways within coexisting paradigms showcasing personal adherence and acknowledgment to Vulcanic/Plutonic dominance. Gandalf, a classic wizard, introduces evolutionary concepts—particularly impurities—to Bilbo. Gandalf's instruction proves vital to Bilbo's basic survival and his eventual self-actualization. Tolkien disperses the evolutionary concepts concentrated within Saktussem—a lone alchemist—into a group responsible for evolutionary Middle-earth secrets—the “great council of the white wizards, masters of lore and good magic” (Tolkien 243). Subsequently, Lucas scatters the evolutionary concepts of Tolkien's small council of wizards amongst the planets of the *Star Wars* galaxy, where light-Force Jedi model positive character evolution concepts and training. The association between “light” and “white” groups emerges through their respective “dark” counterparts. Within *The Hobbit*,

devolutionary or “dark” concepts manifest through the alchemical Necromancer; within *Star Wars*, they manifest through alchemical Sith personages. Luke’s and Anakin’s evolutionary paths directly represent and posture light and dark alchemical Force concepts against each other. Accordingly, the terms “sorcerer” and “wizard” reference Force-wielding individuals from both groups within the *Star Wars* storyline. Though referenced and represented within *The Hobbit*, these same white and dark alchemical concepts surrounding Bilbo’s evolution manifest more completely within Tolkien’s *The Lord of the Rings*.

Cursory analysis of *A Story of the Days to Come* and *The Time Machine* seemingly illustrates a divergence from the alchemist personage; detailed analysis showcases a definitive presence linked to complex psycho-social concepts within each novel. Within the bowels of 22nd-century London, Blunt performs the familiar evolutionary role by illustrating and teaching correct subterranean codes to Denton as a revered personage within the Labour Company. Mirroring the Saknussem/Liedenbrock and Gandalf /Bilbo relationships, Blunt constitutes the master alchemist; Denton emerges as the alchemical student. Blunt simultaneously manifests “before [Denton’s] face, and somewhat in the background” (Wells, *Three More Novels* 183) during instruction to his student; evolutionary concepts and experiences envelop Denton. Wells uses the alchemical term “spell” at ten separate occasions during Denton’s evolutionary training. Within the unique, urban alchemical laboratory, Denton self-actualizes under Blunt’s tutelage.

The alchemist, virtually nonexistent within *A Story of the Days to Come*, completely disappears shortly thereafter upon the subterranean timeline. The homeostatic Neptunist environment within *The Time Machine* illustrates total eradication of this evolutionary character—as well as of humanity itself. Symbolically, a lone alchemist—the Time Traveller—witnesses a devolutionary climax seemingly showcasing an inherent discordancy between the

two primary alchemical goals. *The Time Machine* showcases the Elixir of Life, one of the two goals. The magical concoction enabling eternal life accomplished as the Time Traveller stands in AD 802,701. The Elixir of Life represents massive quantitative accomplishment at a high cost—quantity without worth. This observable alchemic “success” pales in comparison with the glaring absence of the second primary alchemical goal—the Philosopher’s Stone, the transformation of base metals into gold. This process symbolizes the qualitative accomplishment of internal transformation; the virtues of transformation illustrate the worth and use of Subterranea within science fiction and fantasy. Consequently, the Time Traveller stands in a world thoroughly devoid of each. Having originated billions of years ago through abiogenesis, character/human evolution ceases at this distant terminus point upon the timeline.

The selected texts illustrate variegated subterranean constructs and character evolutions. Of these, Lucas’s *Star Wars* galaxy contains a framework representative of each author’s signature narrative medium. The harsh, elemental caves of Tatooine and Hoth exhibit the landscapes and deficiencies represented throughout Liedenbrock’s journey. The swamp-laden fantasy landscape of Dagobah represents the murky, concealed, moral complexities through which Bilbo Baggins delves en route to Smaug’s hoard. The Sith-directed persecution, posturing, and segregation within Coruscant’s unique urban construct mirror Wells’s evolutionary psychosocial concepts stemming from rapidity, technology, and engineering. Lucas, the architect of *Star Wars* itself, scatters his name and characters across the evolutionary galactic framework.

Despite the void created by the deaths of Verne, Wells, and Tolkien, all the select artists continue to exert tremendous influence upon contemporary subterranean science fiction and fantasy. Like the abstract, symbolic features within each of their works, the artists’ continued contributions to subterranean evolution manifest through unique and esoteric mediums. Verne

was born in 1828 in Nantes, a French port city that influences Verne's childhood and youth; Liedenbrock's Neptunism manifests from "familiar ground" for Verne. Verne passed away in 1905 and was buried in Amiens, France. A sculpture symbolically titled *Vers l'immortalité et l'éternelle jeunesse* ("Towards Immortality and Eternal Youth") was placed upon Verne's gravesite in 1907 (see figure 3). The title reflects concepts found within the alchemical quest for the Elixir of Life. Verne's actual death mask forms the face of the statue, a shrouded figure rising from Subterranea, symbolically breaking through Verne's tombstone from the depths below. Whether Verne is merely escaping from the restrictive confines of a shallow grave or returning from deeper, evolutionary journeys within Subterranea remains subterranean. Despite the uncertainty of the journey's route, dynamic concepts alluding to evolution posthumously envelop and fuse with the author and his subterranean character.

As detailed earlier, Tolkien's *The Hobbit* transforms Verne's traditional Subterranea into a complex, abstract environment. This evolution of a plot device and characters potentially transpires well before Tolkien synthesizes concepts influencing *The Hobbit*. Seventy-one miles north of Paris, the city of Amiens represents a strategic locale within a complex transport route; Amiens lies a mere eighteen miles from the Somme battlefield. In 1916 a young Tolkien possibly marched through this area, and by Verne's sculpture, en route to the massive devolutionary battle and experience awaiting him. Verne's gravesite sculpture showcases evolutionary potential within and from Subterranea, concepts directly reflected within Tolkien's forthcoming character of Bilbo Baggins. A "golden" bust of Tolkien resides in the chapel of Exeter College, Oxford University (see figure 4). Representing Tolkien's impurity-laden subterranean, bronze—an impure alloy maximizing the necessary characteristics of base metals to create a radically more functional and evolved product—forms the matrix of Tolkien's bust.

H. G. Wells's final years, 1937 until his death in 1946, transpired at 13 Hanover Terrace, Regent's Park, London. This final earthly residence lies less than half a mile from the protective confines of Subterranea's Circle Line illustrated within *A Story of the Days to Come* and *The Time Machine*. Like Verne, Wells seemingly addresses the non-evolutionary concepts represented within his two subterranean texts posthumously. Within the Vulcanic/Plutonic flames of Golders Green Crematorium, Wells's body transformed, his Vulcanic/Plutonic ashes subsequently scattered into the Neptunist waters at Old Harry Rocks (see figure 5). There, conflicting paradigms create an evolutionary resting place for all eternity.

Lucas's contributions to subterranean science fiction and fantasy are literally and figuratively a "work in progress." Symbolic of this ongoing evolutionary process, Lucas has rejected the mandatory self-approved application to Hollywood's version of "self-actualization"—the Hollywood Walk of Fame—on numerous occasions. Like Tolkien, this artistic self-actualization would place Lucas within and upon an impurity-laden bronze feature—a star, the universal genesis of all subterranean concepts and mediums.

Works Cited

Gladstone, W. E. *Channel Tunnel: Great Speech by the Right Hon. W. E. Gladstone*. London:

C. F. Roworth, 1888. Print.

Stableford, Brian. "Scholarly Fantasy." *The Encyclopedia of Fantasy*. Eds. John Clute and John

Grant. New York: St. Martin's Griffin, 1999: 842-43. Print.

Tolkien, J. R. R. *The Hobbit, or, There and Back Again*. Boston: Houghton Mifflin Harcourt,

2012. E-book.

Wells, H. G. *War and the Future: Italy, France, and Britain at War*. London: Cassell, 1917.

Print.

---. *Three More Novels of the Future*. Garden City, NY: Doubleday, 1981. Print.

Figures Cited

Figure 1 - Channel Tunnel. 2010. Flickr. Web. 17 July 2015. (British Side)

Figure 2 - "Thread: 1880 Channel Tunnel Attempt - REPORT 2/6/2009." Oblivion State Urban Exploration Forum RSS. N.p., n.d. Web. 17 July 2015. (British Side)

Figure 3 - "Jules Verne's Tomb." Atlas Obscura. N.p., n.d. Web. 17 July 2015.

Figure 4 - "University of Oxford - Tolkien Gateway." University of Oxford - Tolkien Gateway. N.p., n.d. Web. 17 July 2015.

Figure 5 - "Sunrise at Old Harry's Rocks." Flickr. Yahoo!, n.d. Web. 17 July 2015.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5