INTRODUCTION

The majority of current criticism on Leslie Marmon Silko's *Almanac of the Dead* fails to contextualize her immense, intricate text within an applicable interdisciplinary framework. While some specificity is required to focus inquiry on the nearly 800 page epic work to a topic that can be adequately addressed, nonetheless, within a focused subject of examination, an interdisciplinary methodology is still feasible. Thus, this thesis asserts that not only does an interdisciplinary analysis of *Almanac* that addresses social, political, economic, geographical, historical, and environmental issues provide a more complete reading of the text, also such an analysis enacts the type of collective, holistic conceptualizing that Silko champions in *Almanac*. Silko crafts *Almanac*’s synthesis of social, political, economic, geographical, historical, and environmental issues in a non-linear, trans-temporal, spiral structure, which interconnects both seemingly disparate narratives and diverse, relevant real-world issues. Therefore, responsible research on *Almanac* demands the adoption of an equally interdisciplinary reading to adequately address any topic of inquiry on the text. This thesis attempts to redirect the trajectory of current *Almanac* criticism by gleaming important elements from recent scholarship, but, more importantly, also critiquing, expanding, and reassembling this research within an original, interdisciplinary theoretical framework. As such, the aim of this introduction is threefold: first, to overview the main goals of this project and preview
the specific directions of inquiry; second, to introduce the primary theoretical paradigms that this project will be implementing; and, third, to briefly overview select applicable critical publications concerning Almanac.

This thesis investigates how technological and scientific innovations take form in Silko's Almanac by focusing on two central, interrelated areas of scientific privatization: Sero's Alternative Earth units and Trigg's Bio-Materials, etc. Moreover, the conclusion of this essay investigates Silko's Five Hundred Year Map as a model for the manipulation and rearticulation of these dominant techno-scientific innovations in counter-hegemonic terms. Throughout analyses of each of these examples, this thesis is interested in researching how the scientific and technological innovations Silko envisions function in an international space of global networks that surpasses territorial-based sovereign entities (i.e. the State). Moreover, this project asserts that Silko reconciles the false division that separates international spaces, such as science and technology markets, from the place-specific, local impacts of these technologies on those who are disadvantaged in the interdependent, hegemonic third-world/first-world economical, political, and social structures. Silko demonstrates that global economic spatial connections are not only intimately related to place-specific social struggles, but also that in many instances, inequity is both disguised and augmented by the veil of social uniformity that transnational spaces cast. More concretely, this project asserts that Silko illustrates how the global economics of such technologies as black-market organ harvesting and free-market biosphere research operate in not only the same international de-territorialized space, regardless of legality, but also implement the same hegemonic social assumptions that
value subaltern groups such as the poor, homeless, and/or indigenous as the international proletariat class whose labor and life is exploited in this global market for science and technology. Because this project is interested in the social consequences of Silko’s vision of science and technology, this thesis chooses to recognize the unity of subaltern peoples into pan-American networks composed of disparate disadvantaged groups, rather than to represent and pigeon-hole this group as being exclusively Native American or indigenous peoples. Therefore, this thesis adopts an inclusive definition of the term “subaltern”, such as Gayatri Spivak describes as “the bottom layer of society” (230). In contemporary terms, subaltern also denotes those peoples who are “cut off from lines of access to the centre” (Spivak 231). Importantly, it is exactly those (capitalist) “lines of access” that the conclusion of this thesis investigates as being appropriated and subverted by counter-hegemonic, subaltern networks of resistance in Almanac. Moreover, this subaltern group is sometimes referred to in terms of its proletarian qualities. As the second chapter of this thesis details, this concept of proletariat expands Marx definition to include the lumpenproletariat (or so-called ‘dangerous classes’) and their under- or un-paid labor as part of this movement. While indigenous and Native people represent a portion of the populations revolting in Almanac, adoption of the term subaltern and an expanded definition of proletariat also allow the homeless, African-American, Hispanic, and other populations to be included in this inclusive, interdisciplinary analysis.
This thesis implements an interdisciplinary framework to investigate how technological and scientific innovations take form and are manipulated in Silko's Almanac within a context of social, political, economic, geographical, historical, and environmental factors. For example, research on science and technology will focus on issues of international, de-territorialized capitalist markets; pan-American spaces of social reconfigurations; a historical precedence of de-settling political and ethnic boundaries; and indigenous traditions of environmental reverence in spite of European domination. While past works such as Rebecca Tillet's "Reality consumed by reality: the ecological cost of 'development'" in Leslie Marmon Silko's Almanac of the Dead" have discussed Silko's elaboration of technology in Almanac, she has primarily done so within a limited theoretical framework, which adopts one disciplinary perspective of analysis instead of performing an interdisciplinary inquiry. While critics such as Tillet's findings are specifically addressed and evaluated within this thesis, these researchers all similarly limit their findings to discipline-specific expectations. While this thesis is indebted to previous critics' works, this project is, nonetheless, critical of the underpinning assumptions that these conclusions are based on, and, thus, often debuts the validity of previous critics' findings.

On a more specific level, this thesis is not only interested in the forms of technoscientific innovation in Almanac, but also, in its conclusion, this thesis is particularly interested in identifying dominant power structure and theorizing the possibility of subaltern manipulations of technoscientific market networks. These technoscientific market spaces may be subverted to serve as organizational channels for global subaltern
networks and, thus, tools of counter-hegemonic empowerment. For example, systems of trade radiating out of Tucson toward Mexico and South America (such as the explosive organization of Trigg's transnational Bio-Materials Inc. which is explored in the next chapter) are adopted by revolutionaries who subvert this oppressive global network to support an international, black-market economy that smuggles arms to revolutionaries. Moreover, this fictional underground weapons trade parallels similar real-world historical international routes of arms smuggling which, as the concluding chapter will investigate, were originally established by the Ysqui to support local indigenous revolts. Silko investigates other sciences and technologies in order to deconstruct the wide-reaching influence of dominant culture's technological and scientific innovations in order to identify dominant products, markets, tools, ideologies, and power dynamics that can be subverted for revolutionary purposes.

Through her work, Silko makes apparent the underlying processes which allow for concrete manifestations of contemporary technological and scientific 'developments'. Silko's methodology serves to undercut the authority of this Euro-American knowledge/power system and allow for the conceptualization of counter-hegemonic revolt which rejects or subverts these dominant power structures for revolutionary purposes. Thus, Silko's endeavor to problematize Western rationality and to historicize European modes of understanding frames these concepts as relatively recent post-contact introductions into the Americas. Therefore, just as Almanac's structure breaks traditional Western chronological and linear rationality and instead, according to Silko, progresses as a spiral, the structure of this project similarly requires the space to circle back on
previous ideas and explore the intersecting, sometimes contradictory, lines of inquiry in
the space of interactions which exists in disregard to the divisions of traditional discipline
research (Cotrell 122). In Almanac Silko writes that events do not "run in a line for the
horizon but circle and spiral instead like the red-tailed hawk", and that "we don’t believe
in boundaries. Borders. Nothing like that" (224, 216). On the most abstract, overarching
levels, this thesis depends upon transcending borders in order to conduct an
interdisciplinary study that illustrates the arbitrariness of divisions that separate, for
example, local and global struggles, political boundaries, or social classes. Due to the
interconnectedness of these unbounded issues, they must be re-visited in a variety of
disciplines and theoretical contexts, which may lead in different directions and illuminate
alternate perspectives, in order for a more holistic conclusion on the role of science and
technology in Almanac to be formulated. Therefore, before specific instances of science
and technology that Silko elaborates, such as Alternative Earth units and Bio-Materials,
Inc., can be individually investigated, it is essential to determine and elaborate the larger
theoretical paradigms which this project will repeatedly invoke to gain a better
understanding of Silko’s visions.

While this thesis implements the work of numerous interrelated theorists,
including Foucault and Hardt and Negri, the writings of the following three groups of
critics seem to most broadly impact the direction of this thesis:

Deleuze and Guattari

Due in part to the non-linear, spiral structure of both Almanac and this project, the
theoretical writings of Gilles Deleuze and Felix Guattari are important to this inquiry.
Deleuze and Guattari's theories explore and enact a non-linear, "schizophrenic" inquiry that has several "points of entry" (Plateaus 5), which is mirrored in the structure of Almanac. Furthermore, in Anti-Oedipus, Deleuze and Guattari introduce their concepts of de- and re-territorialization, which is central to this thesis' discussion of economic, political, social, and identity boundaries in a culture of post-modernity. Moreover, Deleuze and Guattari's theory articulated in A Thousand Plateaus provides a notable critique and historicization of modes of scientific thought.

Deleuze and Guattari assert that de- and re-territorialization exist as often symbiotic forces, whereby the process of deterritorialization undoes previously existing power structures, and reterritorialization introduces new power structures. As Deleuze and Guattari explain, in capitalism "what they de-territorialized with one hand, they re-territorialize with the other" (Anti-Oedipus 257). At least two examples of the multiple ways that Deleuze and Guattari elaborate their conceptions of de- and re-territorialization are relevant to a reading of Silke's vision of science and technology. In the first case, Deleuze and Guattari identify that capitalism is predicated on forces of de- and re-territorialization that disassemble previous power structures to create a space of deterritorialization, which then allows these spaces to be reterritorialized by capitalist structures. This type of de- and re-territorialization can be identified as influential in articulating the type of international economic spaces in which Almanac's science and technology markets function.

Another level of de- and re-territorialization that Deleuze and Guattari identify operates on the level of texts, where, for example, the book is recognized as an entity
which can reflect degrees of re- and de-territorialization. Specifically, Deleuze and Guattari write that “in a book, as in all things, there are lines of articulation or segmentarity, strata and territories, but also lines of flight, movements of deterritorialization and destratification” (Plateaus 3). This elaboration of de- and re-territorialization has relevancy in providing a structure which allows for entrance into Silko’s Almanac on its own spiral, non-linear, non-Western rationality-oriented terms. As Deleuze and Guattari state “there is no difference between what a book talks about and how it is made. Therefore a book also has no object. As an assemblage, a book has only itself, in connection with other assemblages and in relation to other bodies without organs... We will ask what it functions with, in connection with what other things it does or does not transmit intensifies, in which other multiplicities its own are inserted and metamorphosed, and with what bodies without organs it makes its own converges” (Plateaus 4). As a spind-structured text, Almanac demands that associations be made between narrative actions existing in various time, periods and physical locations. Importantly, Silko uses the text to reflect real-world events, such as this paper explores with Alternative Earth units and Bio-Materials Inc., thus, in Deleuze an Guattari’s terms, such connections converge the text “with other assemblages” in the real-world.

Moreover, the type of de- re-territorialized spaces in which Silko’s fictional and real-world networks of science and technology function are physically represented in the Five Hundred Year Map, which is examined in the conclusion of this thesis. In part, Silko’s Five Hundred Year Map visually represents the processes of assemblage and connection that occur in the narrative’s and real-world’s relative de- and re-territorialized
space, such as connections that disregard geo-political boundaries and bond areas of conflict that provide Bio-Materials, Inc. with bodies for organ harvesting and an international market for organ sales. Understood in Deleuze and Guattari’s terms, the Five Hundred Year Map takes into account “synergistic deterritorializations” and “complementary rewritings” where maps should be made of these things organic, ecological, and technological maps one can lay out on the plain of consistency” (Plateaus 61).

Also explored in this thesis’s conclusion are Deleuze and Guattari’s relevant statements on science. Deleuze and Guattari repeatedly invoke their concepts of deterritorialization as they identify and evaluate the function of different types of sciences: the nomad science and the state/royal science. Deleuze and Guattari write, “the two kinds of science have different modes of formalization, and state science continually imposes its form of sovereignty on the inventions of nomad science. State science retains from nomad science only what it can appropriate; it turns the rest into strictly limited formulas... or else simply represses and ban[s] it” (Plateaus 362). Thus, in terms of this statement, at least three implications of nomad and state/royal science can be understood in terms of Silko’s vision in Almanac. First, it must be investigated to what degree scientific and technological ventures such as Alternative Earth units and Bio-Materials, Inc. are, on one hand, invested in state/royal science which is understood as a re-territorialised space of “technologies” and “applied sciences”; yet, on the other hand, existing in a space of international markets defined by a move towards de-territorialization defined by nomadic science notions of “becoming, heterogeneity,
infinitesimal, passage to the limit, continuous variation" (Plateaux 363). Second, the space of nomadic science as an alternate, possibly counter-hegemonic, paradigm must be explored in relation to Sisifo’s potential rearticulations of techno-scientific innovations. Relatedly, the implications of these science and technology markets in international, non-sovereign space can be implicated in the type of place-based, counter-hegemonic revolts organized in Almanac. Deleuze and Guattari see such social actions as intricately implicated in the negotiation between nomadic and state/royal science. As they explain, it becomes impossible to understand the relations between science and technology, science and practice, because nomad science is not simply a science of technology, but a field in which the problem of these relations is brought out and resolved in an entirely different way than from the point of the royal sciences" (Plateaux 367). In other words, perhaps the type of network of subaltera resistance that Sisifo envision in Almanac and represents in the 500 Year Map, similar to the nomadic science organization, is arranged in reaction and resistance to the sovereign State which uphold the state/royal science structures and will "repress the nomad and minor sciences" (368).

Few critics have implemented Deleuze and Guattari’s theory into a critical reading of Almanac. Critic Alex Hunt acknowledges Deleuze and Guattari’s general theories and adopts select terminology, but does not focus on how a more nuanced reading of Deleuze and Guattari can impact interpretations of Almanac. Hunt states that “Sisifo deterritorializes the imperial center and assertively maps another America, the presence and power of which reveal the dominant culture as a temporary imposition on a
thoroughly indigenous terrain" (273). Hunt neglects to take the next step and contextualize the cartographic deterritorialization within a context of how these flows of de- and re-territorializations percolate into all levels of society, from global space to local place. Moreover, he does not mention how this remapping may partially represent a movement towards what Deleuze and Guattari term nomadic science. Thus, this thesis attempts to further Deleuze and Guattari's theoretical relevance to critical inquiry on Almanac.

Marxism

*Almanac of the Dead* enacts a damning critique of capitalism, yet also rejects the unquestioning acceptance of Marxism as a replacement paradigm; thus, it is essential to explore *Almanac*'s conflicted investment in Marxist thought. This thesis pursues this goal in two ways: by footnoting, overviewing, and critiquing critical works on *Almanac* which address Marxism; and by analyzing Marxism as a theoretical paradigm and, specifically, Marx's conception of "vampire capitalists" which Silko adopts/adapts in her elaboration of science and technology (*Almanac* 312). This thesis does not attempt to explore the full implications of Marxism in Silko's text, but rather to recognize aspects of the text which may be impacted by the work of Karl Marx or institutionalized Marxism.

Most importantly, Marxist theory provides this paper with another type of theory that destabilizes predominant capitalist thought in a way that is similarly challenged in Silko's work. However, this project is most interesting in investigating two aspects of Marxism in Silko's work.
In one aspect, Silko strives to envision what, in Marxist terms, might be understood as an alliance of the global proletariat or a vision of how disparate, subaltern groups of people such as the poor, homeless, indigenous, activist, and others might unite to implement global movements of change. As chapter two of this thesis explores it, mere depth, Silko's formation of a proletariat class includes an inclusive network which unites those excluded subaltern groups that Marx refers to as the lumpenproletariat into an articulation of proletariat revolt that partially originates in the so-called third-world. Importantly, this thesis sees the function of global science and technology markets as intrinsically interconnected to local impacts and injustices which demand such global alliance and action. For example, Bio-Materials, Inc. both prospers from and reinforces the local Mexican economic divides that lead to class conflicts which result in human casualties and marketable organs. While this thesis chooses to implement Marxism as a relevant, productive theoretical paradigm for understanding the type of social activism Silko envisions and alludes to in the language of Almanac, it is important to at least briefly address the discord among critics concerning the appropriateness and benefits of Marxism.

In "The Silko Road from Chiapas or Why Native Americans Cannot be Marxists?", Tamar M. Teale critiques that "in an indigenous people's experience, the values expressed in Marxism are closely related to those of industrial capitalism. Both capitalism and Marxism require the exploitation of natural resources and industrial development of the earth, and thus, both conflict with the Native American lifeway" (157). Although this is a potentially valid critique of possible limitations to Marxism's
application to Native Americans' struggles. In this article, Teale leaves her assertions underdeveloped. Particularly she does not qualify the debatable statement that "Silko has two camps: those who industriously develop the earth, i.e. the capitalists and the Marxists, and those who take nothing from the earth, the indigenous peoples of the Americas" (158). In relation to this thesis' central investigation of science and technology, such statements seemed problematical in implying that the industrial nature of the scientific and technological innovations are fundamentally predicated on political and economic systems that are incompatible with Native Americans' "lifeway". Thus, one must wonder how science and technology would materialize in non-capitalist, non-Marxist societies. While there are several ways to address this question (which this thesis's conclusion with undertake) including introducing the idea of different types of sciences that Delleuze and Gustave Habermas, it is also important to realize that Teale's assertion that Native Americans "take nothing from the earth" seems to overlook what Almanac critic Christopher Norden notes as Native Americans' "sustainable use" (103). In other words, Teale neglects a more nuanced reading of the interdependent relationship between Native peoples and Earth, which is developed in Almanac and critics such as Susan Berry Brill, de Ramirez and Edith M. Baker identify in Silko's recognition of an "interdependent...web of life" (213). In terms of the focus of this thesis, the desirability or applicability of Marxism as a structure for Native American societies themselves is less central to this investigation than is noting both how Marxism serves as a general, amenable template for a (inclusively defined) proletariat revolt that is impacted by scientific and technological innovations, and how relationships to Marxism are
linguistically and thematically alluded to in the science and technology elements of *Almanac*.

In contrast to Teale’s critique of Marxism in *Almanac*, in “The Other Proletarians: Native American Literature and Class Struggle” Ten Libretti argues that Native American literature is too often studied “in isolation from proletarian or working-class literature despite the fact that much Native American literature develops an anti-capitalist perspective and treats issues of work and alienation in its broader analysis of colonization and genocide” (164). It is exactly such a “broader analysis” that this thesis attempts to provide by investigating Silko’s vision of science and technology within a Marxist framework of class divisions and economic structures. Similarly, Libretti encourages *Almanac* to be read within a framework of Marxist thought as he states, “*Almanac of the Dead* is perhaps the perfect example of a contemporary novel rethinking class struggle and reconceptualizing class, in short rethinking Marxism and the American Marxist literary tradition” (173). Thus, Libretti addresses criticisms such as Teale as he critiques the flaws of “Native American political activists and theorists…who have vehemently rejected Marxism wholesale as inherently antagonistic to Native American culture and political traditions because of what they see as Marxism’s commitment to a narrative of industrial and technological development” (172). While on one hand, the science and technology industry Silko creates is undoubtedly invested in a “narrative of industrial and technological development”, on the other hand, it is, in part, in response to these forces of uneven, international “development” that pan-American proletarian revolt emerges. Thus, the reconciliation of such seemingly different perspectives on Marxism
seems to support critic Deborah Horvitz’s claim in “Freud, Marx and Chiapas in Leslie Marmon Silko’s *Almanac of the Dead*” of Silko’s overall purpose in *Almanac*, as she writes, “Silko invites readers to explore, even play with multiplicities, meanings, reading, interpretations of repetitions in order to stress an important aspect of American Indian literary theory: opposing ideas can and must exist simultaneously side by side” (51).

In addition to the previous theme of global proletarian class which is inverted in Marxist theory, in another aspect, Silko also uses specific language which seems to invite a Marxist reading, such as her use of the specific term “vampire capitalist” (312). While a few critics have identified this occurrence, critics have not yet fully investigated how the “vampire capitalist” impacts the development of scientific and technological products and markets, as well as the implications of these actions on social, political, and environmental structures. Critics such as Bridget O’Meara analyze scenes in *Almanac* by implementing Marxist framework, which recognizes the “parasitic or vampire-like relation of dead capital to living labor (as to living nature) that Marx and Engels describe is recognizable (in different ways) at all levels and in every social, ecological, and spiritual feature of *Almanac of the Dead*” (67). However, O’Meara qualifies that there are “tensions around Marxist theory and its uneasy alliance with nationalist and ethnicity-based decolonization movement” (71). While O’Meara recognizes the Marxist relationship between capital and labor that Silko may be invoking, as well as the fact that Silko does not unquestioningly adopt Marxism as a replacement to capitalism, nonetheless, O’Meara’s work is not focused on a specific investigation of how such Marxist terms are related to the industries of science and technology in *Almanac* and the
real-world. Working within this critical tradition, this thesis sets out to specifically elaborate the implications of the "vampire capitalist" in Almanac, and specifically Bio-Materials, Inc., as well as its real-world counterparts. Moreover, articulating the pan-American network of the subaltern as the global proletariat class impacted by the international market of science and technology allows for a more inclusive organization of global laborers.  

**Harvey and Neoliberalism**

The principles of social, economic, and governmental structures David Harvey presents in his work *A Brief History of Neoliberalism* provide one example of an overarching theoretical framework which can provide a structure which is particularly conducive to exploring the distinct role Alternative Earth units and Bio-Materials, Inc. as private, entrepreneurial science and technology ventures which function in de-territorialized international space, yet have place-specific, local implications. Specifically, the neoliberal privatization and global expansion of science and medical markets can be viewed as a fundamental prerequisite to the network of independently invested organ harvesting, blood-plasma, and biosphere technologies Silko envisions, and whose consequences Silko elaborates through her investigations of the resulting impact on local social organization and global hegemony. Thus, to fully understand the integrative nature of the neoliberal argument, not only must the imperatives of privatization in a neoliberal global organization be explored, but also must we recognize the interconnected, consequential interdisciplinary themes of social, political, economic, geographical, historical, and environmental ramifications. Specifically, the
respective implications of the growth of science and technology markets under a neoliberal regime must acknowledge a fundamental connection to the growth of an international subaltern class; expanding de-territorialized international economic markets; resulting destabilization of national political and economic borders; historical precedence of hegemonic control in the Americas; and economic markets' medication on environmental exploitation and commodification.

This analysis draws on Harvey's definition of neoliberalism as a "theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade... [where] state intervention in the market must be kept to a minimum" (Neoliberalism 2). In Almanac, Bio-Materials, Inc. and Alternative Earth units technologies both depend on private investment and open markets, however, without the government's regulation markets or the distribution of the wealth, neoliberal thinking depends on the "assumption that individual freedoms are guaranteed by freedom of the market and of trade" (Neoliberalism 7). In reality, the "individual freedoms" which are "guaranteed" in neoliberal are dependent upon the economic and social power of the individual. Similarly, as Serlo's visions of the rich, elite inhabitants of Alternative Earth units and Trigg's sale of black-market organs to the highest bidder demonstrate, under a neoliberal organization individual freedoms are afforded to the wealthy who can purchase them. Consequently, Harvey asserts that neoliberalization is a "political project to re-establish the conditions for capital accumulation and to restore the power of economic
elites” (Neoliberalism 19). Therefore, social and economic implications interconnect with the agenda of the neoliberal movement to establish a sovereignty-free space of privatized global market functions, such as Almanac’s market for science and technology.

While Laura Shacksford does not specifically cite Harvey in her critical work “Counter-Networks in a Network Society,” Leslie Marmos Silkos's Almanac of the Homeless, Shacksford’s work is closely related to the neoliberal themes of international and sovereign space, as well as Deleuze and Guattari’s conceptions of de- and re-territorialization, and, as such, implicated in the investigations of this thesis. Shacksford identifies Silko’s use of post-modernity’s “space of flow” to redefine boarders set by modernity’s “space of places.” While neoliberal international markets are thoroughly invested in such “spaces of flow” or deterritorialized international spaces, Silko’s efforts to rearticulate social and political space manipulated these spaces for counter-hegemonic articulations. Specifically, while global capitalism’s “space of flow” de-settled the borders defined by modernity’s “space of places” in order to transcend territory-based institutions (i.e. laws of specific nations), Silko manipulates this process to construct trans-national subaltern networks. Thus, this thesis fuses theoretical ideas, like Harvey’s conception of neoliberalism, with supportive critical materials, like Shacksford’s, to investigate both the work of science and technology markets in the non-sovereign, international “space of flow” and the complimentary place-based subaltern reactions that subvert this market space to create their own pan-American subaltern networks.
While the broad organization of this paper attempts to investigate science and technology in a way which transcends boundaries and borders of both disciplinary inquiry, divisionary causal logic, and exclusionary conceptualization of space and place, for the ease of the reader, some organizational division is necessary. It is important to qualify that. for example, the division of the aforementioned three theories into distinct categories unfortunately glosses over their intrinsically interconnected nature. For example, Harvey’s work is often interpreted in a vein of Marxism. Similarly, Deleuze and Guattari are directly grappling with Marx’s work in both *Anti-Oedipus* and *A Thousand Plateaus*. Therefore, while divisional subheads, chapters, or sections are indicated in this thesis, it is essential that the reader expect connected, re-occurring themes and theoretical paradigms which circle through this project. Consequentially, at times, this thesis provides uneven application of the theoretical paradigms and interdisciplinary investigations depending on the nature of the specific science or technology investigated. The goal is not to force a rational state/royal science investigation of science and technology in *Almanac*, but rather to allow for a more nomadic, rhizomal inquiry to establish connections between applicable theories and social, political, economic, geographical, historical, and environmental implications of Silko’s vision of science and technology.

Chapter one undertakes a reading of Silko’s *Alternative Earth units* and its relation to the real-world Biosphere 2 project to investigate both biosphere technology
and Almanac’s investment in local/global space and place, as well as the power dynamics that define these fused levels under a neoliberal regime.

Chapter two looks specifically at Trigg’s Bio-Materials, Inc. and the real-world biomaterials TechnoService Complex Inc. to investigate how these markets are implicated in the exploitations of global vampire capitalism and its investment in biopower, necropower, and a neoliberal organization.

The conclusion of this thesis investigates Silko’s Five Hundred Year map as a model for the manipulation of dominant techno-scientific innovations (such as biospheres and the biomedical industry) through appropriations, subversions, and recombinations. In addition, the conclusion explores what Deleuze and Guattari term the royal/state and nomad sciences, in order to hypothesize how a subaltern, counter-hegemonic paradigm might reciprocally impact the revolutionary rearticulation of techno-scientific innovations as tools of revolt.

1 In line with Deleuze and Guattari’s term “real-life” to describe the “world”, this thesis adopts the term real-world or real-life to mean everyday, material-world occurrences. Often the term real-world or real-life is used to mark an occurrence that is discussed in comparison to Silko’s fictional or fictional space of Almanac.

4 This definition of subaltern includes nuanced differences from a more culture-specific conception of the South Asian/Indian subaltern such as that Ranjit Guha develops.

Chapter two provides a more detailed definition of how this thesis promotes an inclusive, expanded definition of labor.

6 The first chapter of this thesis provides a more detailed definition of neoliberalism and its application to specific technologies.

7 Shackelford’s work is described in more detail in chapter one.