MEDIATING ENERGY: RHETORIC AND THE FUTURE OF ENERGY RESOURCES

by

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ABSTRACT

Discourse regarding the societal role of "energy" and the "energetic" has implications for environmental politics and the future of energy resources. This dissertation offers rhetorical analyses of three media case studies on energy resource futures. I argue that such energy resource texts constitute a politics of common sense around the necessitated expansion of energy production. This political position manifests discursively by emphasizing the central societal role of energy in building the mobile, modernist world. This central role emphasizes energy's mediating function as an immaterial force that enlivens modern society and the automobile human subject. My first chapter, along with outlining the three case studies and their political thread, elaborates on these articulations between energy and media, energy and modernity, movement, and mobility, and energy and rhetoric. The three analysis chapters offer close readings of media case studies in order to elaborate on rhetorical strategies that highlight these various articulations to energy resources. Chapter Two examines commercial advertising campaigns from three major oil companies: Brazil's national company, Petrobras; Royal Dutch Shell; and ExxonMobil. I examine how these campaigns associate movement, mobility, and energy as the purview and purpose of the oil company. Chapter Three turns to the pronuclear documentary, *Pandora's Promise*, as an exemplar case study for the relationship between modernization and theology in contemporary eco-modernist discourses. Chapter Four analyzes the relationship between the United Nations

and the television series *Revolution*. I argue that linking energy poverty campaigns with a dystopian narrative about the sudden loss of electricity has implications for how people understand the humanitarian role of energy access. The concluding chapter further examines these humanitarian implications. Universalizing discourses that link energy expansion to human progress has implications for critical cultural studies, rhetorical theory and criticism, and energy politics.

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In September 2014, in the midst of writing this dissertation, a blackout kept eighteen hundred Salt Lake City residents, including myself, without power for several hours. The experience brought into focus the relational dependencies, and constitutions, of energy in modernized lives. During the blackout I walked around my neighborhood, strolling along streets with lights on one side and complete darkness on the other. I have tried to write and think in this metaphorical space between: to understand the produced desires for modern industrial energy, while acknowledging the political ramifications of embracing that side as a humanitarian good uncritically examined.

First, I acknowledge the energy-intensive practices and environments that have in part constituted who I am and, as such, speak through the pages that follow. To the people who have influenced these pages, offering specific names also shades over the significant experiences left unsaid. This list is partial and limited. My acknowledgements do little justice to the gratitude I have for all that, and for all who, inspired along the way.

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CHAPTER ONE

INTRODUCTION: ENERGY RESOURCES AS THE ENERGETIC CAPACITIES OF THE MODERN WORLD

Questions regarding the political and economic futures of energy resources also raise theoretical concerns as to what it means to live in the world. To theorize life is also, often, to theorize "energy," or the energetic vitality of the planet. Alongside discourses on what it means to live energetically run parallel discursive arguments about the essential nature of the energy resources that make a vital world possible, specifically as they facilitate one's everyday experiences. For instance, in ExxonMobil's recent commercial, "Enabling Everyday Progress: Egg," the advertisement juxtaposes a woman boiling an egg with a montage of the corporation finding and exporting the energy required to transport the eggs, to heat the stove, and so on (ExxonMobil, 2014b). Here, ExxonMobil constructs its persona less around supplying oil and more around supplying the infrastructural capacity to convert that oil into the heated water that boils one's egg. Energy converts the world to meet one's specificities. The logic of energy resources focuses on such concentrations of power: of assembling the power of the environment by converting it into that which makes the world (and its human subjects) go.

Energy resources, therefore, are often attributed with mobilizing the action of the modern world. Rhetorical theorists interested in social action and change often theorize

such potentiality while ignoring energy resources. Theorizing energy resources and rhetoric together can draw out social logics and how they help legitimate future-oriented decisions, particularly as they manifest in arguments for expanded energy production. Past research has examined cases related to energy resource rhetoric (Cozen, 2010; Crable & Vibbert, 1983; Dionisopoulos & Crable, 1988; Endres, 2009a, 2013; Hearit, 1995; Kinsella, 2005; Kinsella, Kelly, & Kittle Autry, 2013; Livesey, 2002; Medhurst, 1987; Peeples, Bsumek, Schwarze, & Schneider, 2014; Sovacool, 2008; Todd & Wood, 2006). However, most theory in the rhetoric of energy resources focuses on how rhetorical concepts can help explain particular cases, such as corporate ventriloquism in coal campaigns, nuclear colonialism, technical communicative discourse, and the metaphorical trope of magical powers in nuclear energy issues, and didactic framing, capitalistic agency, and the press release genre in oil company discourse (Bsumek, Schneider, Schwarze, & Peeples, 2014; Endres, 2009b; Farrell & Goodnight, 1981; Mechling & Mechling, 1995; Plec & Pettenger, 2012; Smerecnik & Renegar, 2010; Wickman, 2014). I want to submit the question, what happens when we rhetorically examine discourse at the level of "energy"? Instead of simply exploring oil case studies, or nuclear case studies, or electric grid case studies, how might rhetoric theorize ways in which energy's function in society gets understood or conceptualized through discourse? Placing energy resource discourse in such a comparative perspective can help scholars understand the communicative elements that legitimate or silence discussions and future directions regarding energy resource politics and how energy functions in society.

I am arguing that, often, energy discourses—as a primary site of struggle in which grand narratives of modernity are sutured in attempts to build new unitary conceptions of

the world—constitute an understanding of the world in which expanding energy production is taken as a given. The contingent social logic (cf. Laclau & Mouffe, 2001, p. 142) of expanded energy production in effect encourages a continued acceleration of energy development and its attendant problems, particularly fossil fuels and their impacts on human health and climate chaos, even when such discourses are arguing against the continued expansion of fossil fuels per se. While I focus on a current hegemonic rhetoric, I invite others to consider alternative hegemonic articulations that account for global social justice imperatives while also opening up the possibility for energy futures that a) minimize expanded extractive practices; b) generate alternative social practices that allow for less energy consumption; and c) build logics for alternative energy resources that do not further legitimate all energy resources under an "all of the above" logic. Beyond anti-fossil fuel activism, which critiques but does not necessarily create, antagonizing the linkage between energy use and positive social practices may open challenges to consumptive logics and their legitimation of production practices.

In turning to how this politics of expanded production manifests discursively, I argue that energy resources are often conceptualized as the animating presence that ignites the modern world. I define "modern" as discursive elaborations (and their material effects) related to the promises of and commitments to human rights, universal reason, and technological pursuits (see Grigg, 2007, p. 314). In this dissertation's case studies, my analysis reveals how energy resources get framed as the constitutive mediator that enlivens the mobile world of modernization, or the large-scale development projects legitimated under modernity. In this framework energy resources are, in many ways, the rhetorical moment of a modernization project: the world has the capacity or potentiality

to do work, but it is not "doing work" until it is converted into energy resources and mobilized for something like electrification. Such work, in turn, mediates the capacities of the modernist subject, perpetually seeking emancipation from the constraints of the world in the service of greater freedom of movement. In that way, I argue that energy rhetoric points to a modernist, mobile ontology, what I am calling "rhetorical modernism." Rhetorical modernism asks: how is the (perpetual motion) narrative of modernity produced and reproduced through discourse? In sum, energy resources are attributed with mediating the energetic capacities of people and the world; in this framework, to support modernization projects around energy resources is to support human vitality and progress.

Articulating expanded productions of all of the above energy sources has implications for the terms of energy futures debates and what important questions are effaced or deemed illegitimate. This dissertation offers three sets of media texts that encourage an expansion of global energy consumption. Discourse legitimating expansions in energy production, whether from energy regimes resistant to fundamental change or from the United Nations, have implications for energy futures transitions.[1] Each case emphasizes energy resource production's centrality to modernization, or to large-scale development projects, as well as such projects' rhetorical promise of human progress. Via close reading, I examine these discursive justifications for expanding energy production and their rhetorical consequentiality. The three studies are particular cases and do not represent all discourses regarding energy futures. That said, the cases do exemplify various strategies regarding the naturalization and desire for expanded energy production. The first two case studies mobilize arguments for expanding particular forms of energy resources, while the third case study argues for the expansion of electricity

across the globe. Each situates energy sources in relation to a broader conception of energy, or in relation to master narratives involving global development, human progress, and so on.

In what follows, I explain the three case studies through the political and articulatory linkages that conjoin them under the same logic: *the* future of energy as one of expanding production. Articulation theory and a politics of common sense (cf. Angus, 1992) helps guide a general framework from which I analyze how the chapters' media case studies will conceptualize energy resources, articulations structuring the next three sections: between 1) media and energy; 2) modernism, mobility, and energy; and 3) rhetoric and energy. First I explore the relationship between energy and media to suggest that energy resources are conceived as mediators of an outside object world. I subsequently consider linkages between energy and movement, mobility, and modernization, or how the rhetorical construction of an unfettered modernist subject requires the mobilization of communication technologies and transportational networks, or "mobility systems," themselves requiring a steady flow of energy to enliven them (Urry, 2007). In turn, energy resources are discursively constructed as the mediator of modernization. Next I link contemporary rhetorical theory and energy resource texts, specifically in their emphases on (rhetorical and energetic) capacities and mediation that ignite this modernist ontology of movement. After offering these articulations, I explain the methodological framework through which I will analyze these media texts. I conclude by previewing the chapters, which reflect upon various themes, characteristics, and implications of energy discourse's "rhetorical modernism" or its promise of forward progress through energy resource expansion.

Energy Resource Futures and the Politics of Common Sense

Articulation theory points to the struggle over meaning, and hence not merely the breakdown of grand narratives but their re-creation as well. At a moment in which climate change threatens to unravel grand narratives of unlimited growth and a guiding productivist logic (cf. Smith, 1998), numerous energy discourses articulate anew a hegemonic universal (Laclau & Mouffe, 2001)—around global development, human progress, and the imperialist belief that westernized modernity is the aspiration of the whole world. Each of these grand narratives, particularly as they are articulated in energy resource discussions, is immersed in discursive struggles that both collapse and recover modernist mythologies. While I focus on three specific case studies instead of general public discourse, these cases illustrate rhetorical strategies that exemplify some of the circulating rhetoric regarding energy resource futures. The case studies in this dissertation a) call forth energy resources as a central component of reality; b) link energy resources to a series of discourses regarding modernization, mobility, and dynamic capacities; and c) cohere for audiences immersed in particular practices. In this section, first I describe the case studies and how they cohere together, and second I elaborate on the political implications of their shared, articulated themes.

Annually, the International Energy Agency (IEA) puts out a *World Energy Outlook* (WEO) report. The Agency began in 1974 to address how its OECD (Organisation for Economic Co-operation and Development) member countries would secure and stabilize oil futures. Since then the IEA has expanded its focus, with one such illustration in these annual reports and their coverage on oil, other energy sources, and various topical foci. The 2014 version highlighted its usual emphasis on energy futures

scenarios data, fossil energy and other forms of, and two topical sections: one on the role of nuclear energy, and the other on energy access and development in sub-Saharan Africa (IEA, 2014). As the foreword begins, "few propositions gain unanimity as readily as the case for rapidly developing sub-Saharan Africa's energy infrastructure; while few issues are so controversial between nations as the place nuclear power should take in future global energy supply" (IEA, 2014, p. 3). Aligning these seemingly disparate elements, within a report historically grounded in westernized oil politics, points toward a political, common sense logic of *the* future of energy resources in which various elements can and cannot be considered, or are or are not articulated. The expansion of "modern forms of energy" (p. 3), as articulated by the WEO report, is the grounds on which energy futures can currently be thought. While the report includes scenarios that project no policy intervention, scenarios that incorporate policies already proposed, and a scenario to meet emissions goals of four hundred fifty parts per million (450 ppm) of carbon in the atmosphere, the underlying assumption takes increased demand as a given.[2]

As laid out by the three areas in the *WEO 2014* report (oil, nuclear energy, and global electricity access), this dissertation aligns three seemingly disparate media case studies along the same unitary logic of equivalence. The first case study analyzes three oil company campaigns: an interactive magazine feature titled "Mobility" from Brazil's national oil company (NOC) Petrobras; select components from Royal Dutch Shell's campaign *Let's Go*; and commercials that preceded the "Egg" ad from ExxonMobil's *Energy Lives Here* campaign. These corporations discursively construct energy resources and the present and projected futures of transportation and electrification primarily powered by fossil fuels. Fossil fuels here are identified as the primary source of human

movement through a mobile, and mobilized, modern world. The second case study focuses on the film, *Pandora's Promise* (2013), a pronuclear documentary. In the face of inevitable, unintended consequences such as Japan's Fukushima Daiichi explosion and aftermath, nuclear energy stands in as the peril and promise of modernization. The film argues that nuclear energy is necessary because the rest of the world demands expanded energy production in order to unleash their energetic capacities, and because fossil fuels are no longer viable in the context of climate chaos; therefore, we must commit faith that nuclear energy's scientific and technical advances will see us through its promises more than its peril. The final case study offers a vision for what it would mean to not have access to energy and its affordances. *Revolution* (2012 – 2014) was a dystopian television series about the global, sudden loss of electricity. During the second season, the United Nations (UN) collaborated with the show to promote their campaigns such as Sustainable Energy for All. I analyze the stated comments from the series creators to foreground how the series encourages those invested in the show to reflect on their own dependencies on energy. This process of reflection supports viewing one's own practices as natural and unequivocal social goods.

Turning to these promotional campaigns for oil, nuclear energy, and electricity access—the latter case study's origins explicitly, though not exclusively, tied to sub-Saharan Africa[3]—I argue that a key political articulation in energy futures discourse is the linkage between energy production and human progress. Laclau and Mouffe (2001) speak of a "hegemonic universality," the political process in which "a *particular* social force assumes the representation of a *totality* that is radically incommensurable with it" (p. x, emphasis in original). Such universalities are constructed into a "partial fixation" in

which energy production acquires meaning through its articulation to the "nodal points" of human progress and vitality (p. 112). This political articulation produces, as Angus (1992) puts it, a politics of common sense that recovers a grand modernist narrative: that the future of energy is one of continuously expanded production. These case studies illustrate arguments that naturalize this necessitated expansion, a unitary logic of equivalence "making possible relations of representation strictly unthinkable" (Laclau & Mouffe, 2001, p. x). As such, discussions of energy futures scenarios debate at the level of how the world will expand production—via various sources, technologies, and policies—and not whether expanded production is indeed the answer to social justice, human betterment, and ecological sustenance. In sum, while the three case studies cover far-reaching categories of energy futures discussions, topically they all coalesce at the moment of the *WEO 2014* report and, thematically, at the moment of this partial fixture that assigns meaning to energy production, broadly conceived.

Along with the rhetorical act of articulating elements and their linkages, there is also the question of what it means to be articulate or for a particular discourse to cohere with (and [re]constitute) subject positions. Drawing from Stormer (2004), what are the historical practices that enable energy rhetorics to function, or to resonate—that is, to not just be articulated (or spoken) but to be understood as articulate (or coherent) (cf. Latour, 1999)? Contexts enable symbolic forms to be taken up as articulate. Making sense (being articulate) requires a context in which a text registers with the series of discourses and material infrastructures that precede it. For instance, scientific claims are articulate because of previous theories and the mobilization of various networks such as the laboratory. I argue that justifications for energy futures make sense (at least for particular

audiences) because of an immersive energy present, in which bodies constantly move in environments powered by energy resources. Texts speak forth energy futures that resonate for particular audiences by cohering with a present collection of hypermobile, energy-intensive practices. Bodies move in immersive contexts powered by energy resources. Discursive justifications for energy futures make sense because of this energy present and how one's bodily experience in its environment coheres with what is stated (and the historical practices that enable their statements). This articulation, in turn, mobilizes the fruition of particular energy futures.

When considering articulation in terms of the spatiotemporal contexts that make things understood as articulate or cohere together, the openness of the social field (cf. Laclau & Mouffe, 2001) is tempered by what Angus (1992) calls the a priori process of thematization. Angus (1992) builds articulation theory for critical communication studies that focus on how texts are situated within a constitutive social order, an order also constituted by these internally generative communicative practices. "The field of common sense" (p. 537) develops through the active linking of elements as well as through thematization, or the foregrounding and backgrounding of contexts. People take up this hegemonic logic around energy resource futures in part because it "makes sense" through their situated practices and experiences. This process of sense making is inherently political. DeLuca (1999b) emphasizes how the political struggle to fix meaning and context is "constructed, maintained, and transformed" through rhetoric (p. 44), which for Mumby (1992) includes "the specific communicative practices through which hegemonic meaning systems are maintained, reproduced, and transformed" (p. 574). What are the foregrounded contexts that assign meaning to energy resources? What

are the limits, or antagonisms, of the social order built around energy and its meaning structures? And how can the analysis of specific communicative practices point to a constitutive, and iteratively generated, social order?

The political struggle for sustainable energy futures must continue to antagonize the points of tension within the grand narratives recovered around the thematic, *energy-as-social-good*, in that this unitary rhetoric does produce power relations and subordinate positions and, as such, should not merely be taken as given. The political impetus found in mobility and spatial studies is instructive (Cresswell, 2010; Massey, 1994, 2005; Shome, 2003; Soja, 2010). This research considers how to think of organized movement in space as always a relational, political concern, and questions universalizing discourse around mobility as an unquestioned good. As Sheller (2008) states, "mobilities are never free and unfettered," but striated or marked, and that, "universalistic language," which legitimates future-oriented policy decisions, "often masks differential processes" (pp. 257-258). So too, energy resource expansion is always marked, while universal discourses of energy access and the electric sublime guide future-oriented political rhetoric, as seen with the United Nations' campaigns (chapter four), or desired for nuclear energy (chapter three) (Carey, 1989; Czitrom, 1982).

The next three sections in this introduction chapter expand upon the articulated moments that partially fix the meaning of energy resources and, as such, encourage a politics of common sense that assumes the necessity of expanding production. This articulation situates debate at the level of how humanity should expand production, whether by efficiencies in oil, nuclear as replacement to coal, or global campaigns to extend modern energy and, by extension, modern subjectivity. These articulations include

linking energy as mediation, energy as igniting the mobility of the modernist subject, and the dynamism of the world in process (i.e., its "energetic" quality) in terms of energy resources. Such unities are important to analyze in order to discover potential antagonisms, limits often unaddressed in political struggles today.[4]

Energy as Media(tion)

Linking media with energy highlights the mediating function of energy resources. The subtitle of this dissertation, *Mediating Energy*, follows four ways of linking energy to media: one, as the power source of media forms; two, as naming media forms as the justification for energy resources' expanded production; three, as the topic of media content; and four, as a medium that organizes social relations. The first three articulations in this section—energy's mediating function named in discourses such as media content—refer to the key elements by which this dissertation's case studies articulate the social role of energy resources. The fourth articulation between media and energy points to what is missing from this framework and suggests implications to such silences.

First, energy resources are the material circulation igniting communication and transportation. In other words, they are the power source for contemporary forms of mediation: cars, public transit, smartphones, iBeacons, and other systems of transportation and communication technologies. Energy mediates mobility systems at their point of consumption and animates these systems (Urry, 2007). While oil has powered the world of car and airplane transport, electric forms of mobility mean that energy resources for electrification (including those of transportation, such as electric cars) power contemporary forms of mediation. Natural gas, coal, nuclear, oil, renewables:

each in various capacities heats the generated steam that animates the electric grids, which animate the connective capacities of digital networks and infrastructures—such as with location-aware technologies—for the synchronized movements of people, goods, and ideas. This first articulation between media and energy is primarily a function of material practices: energy infuses media forms.

Second, since this material practice is built on contingent social logics,[5] linking media systems to energy highlights the discourse or topoi used for normalizing expanded energy production. To speak forth this linkage is a rhetorical, political move. Energy resources exist as a mediating, material presence in everyday practices, but such practices always have a discursive element. The first articulation's emphasis—on the materiality of mobility systems and mobile people, with energy resources as the dematerialized mediator that ignites these processes—is justified in its powering the social world, rhetorically grounding arguments for expanded production of energy resources. Conceiving energy resources as that which animates the mobility systems of communication technologies and transportation media names energy resources as the mediator of modernizing systems. Energy resources constitute the social but are named as an immaterial force, infusing things and people in the world with their vitality, yet distinct from this materiality or object world. Energy resources serve as ignition: of systems, and of the people that use these systems to move through the world. To name this mediating function as necessary highlights energy resources as a social good in that said resources animate and give meaning to the world.

Third, media *content* focused on the topic of energy resources are a key site for this naming of energy sources as the key driver or force of the modern world. In that way,

this dissertation emphasizes three media case studies about energy futures: recent oil company advertising campaigns, a pronuclear documentary, and a United Nations television collaboration, each aimed at mobilizing expanded energy production and access. I consider these cultural texts as themselves, amid a sea of intersecting and divergent articulations, constitutive of epistemological, ontological, and hence political ways of incorporating a sense of energy resources as they exist in the world and mediate one's sense of self. I argue that these narrative media case studies, as "specific communicative practices" that maintain and reproduce "hegemonic meaning systems" (Mumby, 1992, p. 574), point to how discourses are rendered articulate, or how they make sense or cohere for those in which a mediated, energy-intensive world and an automobile subjectivity resonates. Through Sloop's (2009) definition of rhetoric as a "mediating energy," outlined in the methodology section, I examine how media case studies are part of the flow of mediation in the rechanneling of meaning structures. Such media content, in other words, enters the flow of discourse defining automobile subjectivity ignited by, dependent upon, and in turn supportive of energy resource mobilization.

The fourth and final articulation between media and energy is how energy itself functions as a medium that "is both implicated within and *mediates* contemporary social relations of power" (Sharma, 2008, p. 462, emphasis in original). Noting what is emphasized and silenced by this dissertation's case studies helps critically examine the implications of these silences. Energy resource production places subjects in interdependent relationships between production and consumption. These textual case studies highlight the democratic claims of energy at points of consumption. Consider how

Cross' (2000) notion of the "myth of mobility" was predicated on a steady supply of oil; ways of life need their resource extractions. While the case studies reflect on these optimistic claims of energy as social organizer, they silence energy production's imperial and militaristic relations (Yergin, 1991), or the ways in which nation-states' democratic claims, grounded in the supply and circulation afforded by oil, are also predicated on authoritarian control in exporting countries (Mitchell, 2011). Similarly, they obfuscate the discourse surrounding labor relations around energy regimes. Here, the way Sharma (2008) describes taxicabs as media helps inform energy's social relations.[6] Sharma (2008) theorizes the taxicab as a medium to highlight the "environments in which social life unfolds" (p. 458) and the channels mediating the spatial and temporal relationships between subjects and capitalistic exchange. Therefore, the taxi is a medium that moves bodies, goods, and information, constituting the jet setter and the cab driver as productive subjects of capital circulation. I argue that the material circulation of energy resources—in the harvesting and moving around of energy—similarly mediates social relations. This power relationship form of mediation is minimized in the following case studies and is often ignored in discourse about energy futures, but is evident, for instance, in arguments against oil-based wars or activism against coal.

Energy Determinism and Rhetorical Modernism: Producing the Automobile Subject

Modernity's promises ground strategies of the energy resource rhetoric analyzed in the three case studies. In emphasizing the de-materialized mediating aspect of energy resources, my case studies situate energy resources as the grounding for what I term a

"rhetorical modernism," or the discursive promise of a modernizing world. Energy resources are conceived as the capacity of the modernist narrative, igniting its mobility systems and the mobile subjects enabled by such systems. This section highlights articulations between modernization and mobility, and movement and the modernist subject, as it exists in these case studies focused on energy resources. The result is an energy determinism in which energy resources are associated with the perpetual motion narrative of modernity. This section considers how discourses on energy resource production frame the automobility of the modernist subject, animated through energy resources and energy companies. Rhetorical modernism functions as the primary strategy in such energy rhetoric, in which the assembling of the mobile world under a project of modernization, ignited in and through the assembling or harvesting of energy resources, denotes the promise of this discourse.

Discourses on energy resource production tap into an understanding of the automobile modernist subject, a subject position defined in relation to the assembling of the world for the purposes of greater autonomous movement (see Featherstone, 2004). Such discourses frame this automobility as enabled, maintained, stabilized, and ignited by the presence of both energy resources and the (corporate) entities that supply these resources, and framed as the constitutive center of mediation and becoming. The rhetorical production of the modernist subject, in terms of energy resources, becomes an "automobile subject" invited to incorporate a) a sense of self as defined via movement; b) mobility systems as enablers of movement; and c) energy resources as the mediating power of that movement. Emphasizing energy resources, then, reinforces a commitment to the teleological promise of modernity, specifically around the quest for unfettered

motion as human progress (Rajan, 2006).

From this perspectival lens of energy rhetorics, mobility functions as modernism's ontology. Themes of movement and mobility are present in other discussions of modernity as well. Much research emphasizes the fundamental role of movement in what it means to be alive, such as research that focuses on how bodily, kinesthetic awareness builds from engagements with an active environment (Abram, 2010; Seamon, 1979; Sheets-Johnston, 2011; Tuan, 1977). To link movement to modernity's ontology of mobility, however, is to universalize the means of motion. While the embodied brain may be wired to adapt kinesthetically, the world(s) in which brains adapt, and the relations in which they engage, are both culturally situated and rhetorically produced. To move in a world of transportation and electrification, or of "mobility systems," is to move within a culturally bounded system of organized movement (Urry, 2007). The rhetorical promise of modernity situates particular forms of motion as tied to human progress. As Schivelbusch (1977/1986) addresses the lingering consequences of the railway, "the notion that communication, exchange, motion bring to humanity enlightenment and progress, and that isolation and disconnection are the obstacles to be overcome on this course, is as old as the modern age" (p. 197). The Enlightenment promise of forward progress is embodied in the modernist subject governed in line with a larger economy of motion, such as the railway system, in which building the modern world is understood as promising the removal of obstacles to unfettered motion (Cresswell, 2006; Ferguson, 2000; Lepecki, 2006).

Discursive emphases on energy production similarly reproduce the hypermobile and automobile subject as a universalized ontological condition. Modernization projects

involving energy production promise a causal energy determinism in which more energy means greater freedom of movement. The promise of mobility is the underlying social imaginary guiding the humanitarian discourse of energy resource futures, in which energy access is seen as the benevolent carrier of human progress. Mobile necessities, then, guide the Foucaultian table on which to discuss energy, or the logics of possibility in energy discourses (Foucault, 1966/1970). In parallel, energy rhetoric promises to ignite modernity's "general economy of mobility," hailing its subjects to constitute themselves as emblematic displays of this hypermobility (Lepecki, 2006, p. 16). It is through repeated cultural discursive practices that such subject positions are articulated, fashioned toward modernist projects that utilize particular habits for optimizing efficiency (Bennett, Dodsworth, Noble, Poovey, & Watkins, 2013, p. 5). One such project includes the ethos of perpetual economic growth in large-scale modernization projects, typically conflated with expanding energy use.

This perpetual motion narrative gets reproduced in "rhetorical modernism" discourse. I take the position that the contemporary moment features a "structure of feeling" (Williams, 1977) related to both modernism and postmodernism, or the discursive struggles between rearticulating and disarticulating master cultural narratives. In an endnote regarding his elaboration of articulation theory, DeLuca (1999a) conceived of postmodernism within Williams' phrase, whereby the subject is decentered, there is a dissolution of the grand narrative, there develops an awareness of limits, and where Nature no longer stands in as a grand referent (pp. 346–347). However, such a structure of feeling is contingent and enters into a field of articulations in which discourses also attempt to rearticulate (the fictions of) eternal truths and master mythologies—

articulations that continue to have rhetorical force (p. 341). A contemporary postmodern condition does not define a definitive rupture in which the promises of modernism are forever unraveled, but identifies a long progression in which such promises have been opened up to contestation and struggle (Hall, 1996). This postmodern condition is not just about challenges to grand narratives, but their recoveries as well. Postmodernism is not the end of modernism, but the (rhetorical) struggle over modernism. As illustrated in the case studies, energy resource discourses in particular rearticulate rhetorical modernism, in which discursive practices reinforce the promise of a forward moving teleology and universalize a human desire for hypermobility, even (and perhaps especially) in the face of its challenges.

Stabilizing rhetoric is particularly evident in energy resource rhetoric, in which the immanent presence of energy stabilizes the world that one a) controls; and b) desires to move through. Whether this desire or control is constantly undermined by the actual agency of objects and the environment is less a matter of an anti-humanism as it is a reinforcement of the mythology of the fiction of the autonomous human, or the automobile human. While producing the hybrids that undermine the logic of the "Modern subject" (Latour, 1991/1993), the process of modernization simultaneously reproduces a desire for modernist subjectivity. In this context energy resource production appears with its linear narratives of human progress, on the path of time's arrow. Discussions of the future of energy maintain this teleological progress narrative, where the enchantment of infrastructures are stabilized by energy resources (Harvey & Knox, 2012).[7] Ultimately, such discourses invite the reproduction of modern sensibilities through rhetorical practice. In discourse, harvesting and circulating energy stabilizes this unstable world and, in turn,

enables the energetic or dynamic capacities both of the world and of the subjects that move through that world.

In discourse such as found in the three case studies, energy resources function as the mediator enabling the energetic vitality of En/light/enment progress and the modern automobile subject. Automobile subjectivity is delicate, unstable, and must be continuously reproduced. Automobile subjectivity is a rhetorical process in which mediating background processes are incorporated into a sense of self through learned governance (Furness, 2010). Namely, discourses regarding networked infrastructures at least attempt to suggest that one's autonomy is defined in the middle space between one's movements and transportation and communication technologies. Burnett (2004) refers to this agentic middle space, between individual subjects and their media devices, as "incorporation." The rhetoric of autonomy and mobility here depend upon the naturalization of background processes and the belief that the incorporation of these background processes into one's ability to move is itself autonomous movement (Burnett, 2004; Furness, 2010; Thrift, 2004). I prefer Burnett's (2004) term of incorporation to McLuhan's (cf. Sloop, 2009) prosthetics or extensions, in that incorporation suggests a process in which the mediated world gets taken up as a part of one's agentic sense of self. Persuasive appeals for energy futures reinforce the mythology of the fiction of the automobile individual—if one that requires, desires, and fears the loss of the mobilized modern world. Discourses regarding energy resources sometimes highlight how losing energy would not simply induce fear around the loss of the object where the object is some detached entity, but fear of the loss of the self as incorporated with and defined through these dependencies. Energy resources, in turn, supply a rhetoric of stability, amid

constant chaotic flows (see Bencherki, 2012). The world of hybrid productions is not simply a simultaneous result of the modernist effort to deny them (Latour, 1991/1993). They also define a sense of autonomous movement as subjectivity when they are incorporated and controlled. The teleological promise of energy is that it offers that control, or channeling of energies, for the modernist subject on the move.

Energy Rhetoric: Energy and Rhetoric as Capacities

"Energy" therefore names a suturing logic of modernity, which in turn lends to a politics that justifies expanding energy production. In rhetorical theory, scholars often articulate the word "energy" to definitions of rhetoric. I want to suggest that if we link "energy *resources*" to rhetoric—in part by paying attention to when the term "energy" is associated with "rhetoric"—we can see how energy resources rhetorically name the capacities of the world, both in the empirical work or ignition of mobility systems and through associations of dynamism (and other synonyms) to the word "energy." Energy discourses such as the ones in the subsequent case studies are at least in part rhetorically persuasive through the meanings they place on energy resources: as doing work, housing a capacity for action,[8] and as the represented moment of the dynamic qualities of the object and human world.

Etymologically, "energy" denotes material work (*ergon*). In modern times, this work specifically refers to that work which ignites the communication and transportation infrastructures that move people, objects, and ideas. As "the capacity to work," energy resources are empirically observable in their effects, or the work they provoke to move the world. Representations of energy resources often highlight this work done in the

world: energy-as-gasoline does the work of a car's powerful engine; energy-as-nuclear holds the promise of an immensely concentrated form of power.[9] This represented work also manifests as the mobilization of the material, circulating infrastructures of the modern world. Energy resources, and the corporate entities that supply them, are framed as the constitutive center of mediating infrastructures and objects, as seen in the example of the ExxonMobil "Egg" commercial mentioned in the introduction (ExxonMobil, 2014b). Similarly in Chapter Four, when *Revolution* character Aaron Pittman reflects on the world he lost because of a global loss of electricity, he ponders the mobilizations of a standard breakfast, or the food miles of the sugar, butter, and so on to make a cookie. Such energy rhetorics frame energy resources as enabling the material world—the physical manifestations of the world's capacity to work—by working for the communication and transportation infrastructures that move the world.

Rhetorical theory tends to ignore how energy resources are discursively framed as the necessary "work" embedded in technological environments yet, in a similar vein, rhetorical theory has often attempted to conceptualize *rhetoric* as work. As numerous scholars have emphasized definitions of rhetoric around what rhetoric does (as opposed to what it is), this emphasis on the doing implies that rhetoric is empirically observable in the consequences invited by rhetorical discourse (Blair, 2001; Lucaites & Condit, 1999; Warnick, 1992). Asking what rhetoric can do—its capacities for action, in a dynamic world of change and contention—keeps rhetorical inquiry responsive to present conditions. Rhetoric, therefore, names the contingent processes of a world continuously made and the discursive mobilizations that act in an open-ended social field. Together, as rhetoric does work in the world, the rhetoric of energy resources emphasizes how energy

acts to move, shape, and form the social. In this formulation, energy resources are doing the work of the world's capacity, unleashing its potentiality.

While rhetorical theory tends to ignore energy resources, it does employ the language of energy. In that a definition of energy is "the capacity to work," many times we see the term energy used to describe rhetorical capacity, such as in Catherine Chaput's phrase "rhetorical energy" (Chaput, 2010). Others utilizing the language of energy to explain rhetorical theory include Edbauer (2005), Hawhee (2006), Kennedy (1992), and Meyer and Girke (2011). In trying to theorize this capacity of the world to unfold, disclose, and change—and rhetoric as that capacity—"energy" often connotes for such theorists the capacities and dynamism of rhetorical action. By turning to discourse on energy *resources*, I suggest, we can see how such resources are named as the source and ignition for energetic qualities, or rhetorically name the capacity for the vibrancy of the modern world and modernist subject.

Representations of energy resources give name to the energetic capacities of the world and human bodies, which in part note such representations' rhetorical efficacy. In asking how the energetic—as dynamism, vibrancy, and liveliness—is represented in energy resource rhetoric, I am also asking how the energetic is named via energy resources. Dynamism, vigor, and other synonyms of "energy" are all ideas that are given meaning through discourse. Energy resource rhetorics, then, associate these ideas of the energetic with a particular source: the realized capacities of energy resources. The subsequent case studies represent energy resources through such associated qualities. For instance, in Chapter Two, Petrobras' campaign includes a competition in which photographers were invited to "show us the energy around you." "Energy" here links

"energy resources" (or the work of Petrobras as the competition's sponsor) to any associations one might have with "the energy around you." The submitted photographs, therefore, often depicted lively moments of a body in motion: jumping, smiling, and so on. In *Pandora's Promise*, the smiling, staring faces of children of color in the Global South include a light bulb and a lamppost in the mise-en-scène. Here, along with a paternalistic sense of development, smiling children represent vitality, and electricity represents the source of such energetic qualities. Similarly, in the United Nations PSA that accompanies *Revolution*'s Season Two DVD, "United Nations: The Mission Continues," Nepalese villagers smile next to a light bulb as the narrator comments on how such artificial light causes these villagers to "smile from your mouth to the eye" (Warner Bros., 2014c). The wide, vibrant smile is directly associated with the supply of electric light.

A primary visual theme across each of these case studies is that of the aurora. Throughout ExxonMobil's "Energy Lives Here" campaign (Chapter Two), in One World imagery in *Pandora's Promise* (Chapter Three), and in the United Nations' PSA (Chapter Four), each example visually represents the idea of energy resources' ambient presence through the light displays of an aurora. In the aurora's immersive qualities, softly engulfing the modern world, it depicts energy as both all encompassing and the otherwise unseen pulse of the world on the move. In *Energy Lives Here* in particular, objects emanate with this vital force placed onto energy resources' circulating flow. Energy resources here visually represent the "rhetorical ecologies" of a modern, mobile world that unlocks one's energetic potential (Edbauer, 2005[10]). The aurora visually represents an otherwise indefinable quality of energy resources, or an energetic quality one is

invited to see in the work it does—the powering of mobility systems—and that work associated with vitality—the glow of the aurora, the lit face of the child next to a light bulb. These embracing qualities also suggest a spiritual component in which the divine associations of energy resources imbue the life world, a transcendental meaning to energy resources that will be explored in detail in chapter three and touched upon in chapter four.

Energy resources, in these cases, do not merely work but inspire and enliven. In each of these examples, energy resources are named as the source or "separate force that can enter and animate a physical body" (Bennett, 2010, p. xiii). To energy resource discourse, the "things"[11] of mobility systems have the capacity for work because of energy resources. However, in this framework, energy is not a thing with its own "vibrant materiality" but a de-materialized force that mediates[12] things and (human) bodies (Bennett, 2010). It is rhetorically constructed as an external entity that ignites and affects bodies. In such a framework, energy resources power the world, but their materiality is erased as if they were outside the world: as if their purpose were to keep enlivening the object world that really matters. In turn, a further level of mediation includes the object world empowering the human: the need to keep enlivening one's automobile subjectivity.

Reading Media Texts

The subsequent analysis chapters examine case studies that conceptualize energy resources as a stabilizing and numinous mediator through which humans mobilize the modern world. Such discourses resonate with hypermobile experiences that intersect in the mediating space of rhetoric: between bodies and bodily prosthetics, and the symbolic texts that attempt to frame these practices (Burnett, 2004; Sloop, 2009). My guiding

frameworks are: a) Sloop's (2009) rhetorical materialism; b) Ahmed's (2004) theory that discourse attributes people and objects as the source of one's feelings; and c) articulation theory as a politics of rhetorically constituted common sense (Angus, 1992; Laclau & Mouffe, 2001). I utilize these frames to ask how close reading can point to ways in which articulations are mobilized and, in turn, enter into the flow of understanding reality by naming associations to energy resources and leaving an impression (Ahmed, 2004; Sloop, 2009, p. 70).[13] The particular articulations, as elaborated in previous sections of this introduction, came about inductively from these case studies.

In analyzing these media texts, I primarily draw on Sloop's (2009) definition of rhetoric and Ahmed's (2004) theory of discourse as naming emotions. Symbolic narrative constructions are articulate or cohere towards a field of discourse already in process and are fragments within these larger articulations (Latour, 1999; McGee, 1990; Stormer, 2004). Cultural discourses are themselves material acts that circulate with bodily practices and experiences. Sloop (2009) defines this process as rhetorical materialism, in which talk of bodies and subjectivity—or of energy resources as the mediator for bodies and subjectivity—itself reshapes meaning. For Sloop (2009), rhetoric is "the energy or flow mediating between bodies, body prosthetics," also described as environments, "and 'semiotic conditions,'" and subjectivity is the effect of this rhetorical process (p. 70). Media texts are themselves a social practice or function as cultural performances, made articulate via how they map onto or circulate with bodily experiences (Labanyi, 2010; Sloop, 2009). I conceptualize media content as a part of the flow or circulation that attempts to rechannel or reinforce that flow in its particular symbolic mobilizations (Harold, 2004).

The bodily experiences of hypermobile subjects, and their automated repetition in mobile practices, are given voice in and through discursive texts (Ahmed, 2004; Bennett et al., 2013). According to Ahmed (2004), texts work by attributing others—objects, people, collectives—as sources of emotions. This framework considers how texts help circulate an economy of feelings that orients one to identify objects as causes of emotions.[14] Turning to energy resource texts, in this framework, interrogates the process of defining energy as the (re)source of various attributes and, in turn, of one's relationship to the energy object. One's experience or contact with energy resources, in discourse and in everyday experience, works to name the centrality, and justify the expansion, of energy resources. Ahmed (2004) borrows the word "impression" from David Hume to argue that a subject both takes an orientation towards objects (or forms an impression) and that objects impress upon us. First, texts work to build orientations to objects, and to form impressions on such things as energy resources. Second, the contact one has with others and objects, and the histories we bring into experiences, press upon us and influence our relationship with others. Each are part of the circulating flow of meaning and orientation toward something like energy's social role in our lives and, in turn, one's political leanings regarding energy futures.

A strategy among the energy resource texts analyzed here includes putting a name to the "energetic" qualities of mobile practices: namely, "energy resources," described in the previous section as work in the world, dynamic, and a numinous all-encompassing quality. These texts attempt to impress upon their audiences a sense of the central mediating function of energy resources; in turn, contact with energy resources in everyday experience includes these discursive elements and helps frame the meaning of

these experiences. Energy rhetoric as such mediates between the symbolic and mobile bodies' everyday experiences with the digital world.

This dissertation reads texts that align automobile subjects to a named source of energetic attributes: energy resources. These texts encourage audiences to think about energy resources in their lives and for that experiential basis to sway their stance on energy futures politics. That is a stated goal of *Pandora's Promise* director Robert Stone, who ends his DVD commentary by stating that he hopes the film "has left an impression" and, from there, one will be motivated to act (Robert Stone Productions, 2013a). In other words, Stone hopes the film offers an orientation toward nuclear energy politics, in which one is invited to support its expansion and to get others to support it as well. Further, energy as social practice, or one's everyday experience immersed in energy dependency, also leaves an impression. Feelings about one's social dependencies, and sense of self as an automobile subject, are attributed to energy-as-object through discourses that articulate energy resources to a series of linkages. I explicitly analyze impressions in one of my chapters: how *Revolution*'s dystopian narrative encourages particular ways for the show's actors and producers to read the UN collaboration. That is, the collaboration impresses ways to conceptualize energy futures upon those involved in *Revolution* in part through how the series, as a circulating discourse, has already named their fears and dependencies. Media content, in its rhetorical materialism, has the capacity to circulate and shift ontological meaning. This dissertation offers a close reading of three recent examples in media in order to examine some rhetorical strategies in the political struggle to shift and/or reinforce meaning around energy resource futures. Be it oil politics, nuclear energy politics, or electricity access politics—all three seen in the *World Energy*

Outlook 2014 and covered in the following cases—each reinforces an "all of the above" logic that naturalizes expanding energy production across sources.

Chapter Previews

In the first analysis (Chapter Two), I examine a recent genre of oil company advertising that elaborates on the relationship between movement and mobility. Campaigns from Petrobras, Royal Dutch Shell, and ExxonMobil emphasize the relationship between one's bodily movements and, in turn, the body's dependence on particular mobility and energy infrastructures. The campaigns rely upon a sense that movement is the modernist ontology, but they conceive of that movement through the corporations' stabilizing presence. This presence unleashes the qualities of energy resources that in turn naturalize the desire for and assumed inevitability of modernization projects across the globe, universalizing the global narrative of hypermobility further taken up in the next two cases.

Chapter Three analyzes a recent pronuclear documentary, *Pandora's Promise*. The film situates nuclear energy as both the only viable alternative to fossil fuels and as the next step on the linear narrative of technological progress. The film employs a faith-based strategy, modernization theology, to encourage one's commitment to this teleology of forward progress. This modernist promise remains a mobile ontology: that it is the electrified social practices of the modern world that are the undeniable social goods everyone wants. To meet these demands while avoiding climate chaos, the film attempts to build a pronuclear narrative as a long-term commitment to modernism, based off of a claim of energy determinism: that increased energy will enable a good quality of life, but

we must remain faithful to its promise.

In the last analysis chapter (Chapter Four), I further this thematic on energy access as an unequivocal social good. The chapter analyzes the television series *Revolution* (2012 – 2014) as well as materials from a collaboration that series creators had with members of the United Nations' energy access campaigns. The series invites audiences to experience the show's dystopian narrative from the perspective of immersion in the technological environment of intensive energy resource mobilization. This invited perspective, if taken up, influences the ways in which the collaboration gets incorporated into an understanding of energy futures. A lack of bodily capacity—the loss of the incorporated, mediated self—is then input onto the loss of energy, specifically electricity. This invited relationship both reproduces one's own automobile subjectivity as well as suggests that others are not fully modernist subjects.

In the concluding chapter (Chapter Five), I summarize themes explored in the preceding chapters. For instance, I return to the question of capacities and potential in understandings of energy resources. Mapped onto energy politics, theorizing the world as "energetic" encourages articulations in which the whole world demands the same social practices and energy expansions, and to not have these mediators is to lack. This "energetic determinism" suggests that energy resources cause quality of life, and that quality of life as energetic capacities are defined through energy resources. From such themes, I explore implications for critical cultural theory, rhetorical theory and criticism, and energy politics.

Notes

[1] As discussed later, Geels (2014) advocates for studies of the strategies, in part discursive, of incumbent energy systems. Geels includes nuclear energy among these "existing regimes." Nuclear energy, however, also positions itself as a (or the) solution for a post-carbon future. I have chosen a pronuclear case study to examine existing *discursive* regimes regarding expanding production and modernist teleological promises. However, I do not wish to so readily accept Geels' lumping of nuclear energy with other existing dominant regimes but to recognize the energy source's internal and external contradictions as interesting and worth exploring.

[2] See Shove and Walker (2014) on futures scenarios and their assumed demand projections.

[3] The PSA "United Nations: The mission continues" (Warner Bros., 2014c) a case study of a Nepalese village, attests that the collaboration was by no means exclusively focused on sub-Saharan Africa. That said, the work of the UN as it relates to the *Revolution* collaboration includes key figures involved with African politics. Bahareh Seyedi, an instrumental figure in the UN-*Revolution* collaboration, previously worked at the UN's Country Office in the West African country Burkina Faso. Derk Segaar, who offered stories influential in the series' creation of a warlord character, spoke from his experience in Sudan's Darfur region. Additionally, at the time of the collaboration the head of the Sustainable Energy for All initiative was Kandeh K. Yumkella, who is from Sierra Leone. While not directly involved in the collaboration, Yumkella's tenure further points towards the linkages between the UN's energy access focal points and involvement in sub-Saharan Africa.

[4] See the preface to Laclau & Mouffe (2001) for a critique of the Left and its "sacralization of consensus" (p. xv) in the fifteen years between their first and second editions.

[5] Laclau and Mouffe (2001) distinguish between articulation and mediation. Mediation assumes the joining of two self-contained entities, while articulation includes the contingent calling forth of elements as assumed, fixed entities (p. 94). I am pointing to how mediation is an articulated concept: namely, the production of the autonomous mobile subject calls forth a sense of the stable human subject, the stable mobility system, and the energy that flows (or mediates) between them. This articulation, of mediated entities, reproduces a sense of the self-contained subject moving through the built world. As Laclau and Mouffe (2001) put it later, this sense of autonomy is "the result of precise

articulatory practices constructing that autonomy. *Autonomy, far from being incompatible with hegemony, is a form of hegemonic construction*" (p. 140, emphasis in original).

[6] I elaborate on Sharma's emphases for two reasons. One, Sharma's explication of the power relations embedded in and through media channels reflects what I want to say about energy production in the conclusion. Two, Sharma's emphasis on the taxi—a shared mode of transport across classed subjectivities—points towards other articulations of media and energy. Such an emphasis on the spatial production of media covers a wide range of communication research, from mediatization to the mobility turn (Couldry & Hepp, 2013; Wiley & Packer, 2010).

[7] Latour (1991/1993) also situates his book by stating that researchers tend to study the magic of other cultures but not one's own. In energy rhetoric, energy resources are often positioned as the stabilizing magic through the reliquaries of mobile devices. Such theological themes will persist throughout the chapters.

[8] This sense of "housing" is to suggest that energy resources hold potential energy that, when converted to work, ignite the kinetic energy of the world.

[9] See Mitchell's (2011) description of fossil fuels as "great quantities of space and time… compressed into a concentrated form" (p. 15).

[10] Edbauer (2005) offers the term "rhetorical ecologies" that threads "energies" with similar concepts: "To say that we are connected is another way of saying that we are never outside the networked interconnection of forces, energies, rhetorics, moods, and experiences" (p. 10).

[11] Here I nod toward thing theory (Brown, 2004). Differentiated from "objects," a "thing" identifies objects as agentic. I want to suggest that, in energy rhetoric, energy resources are named as the source of the "thing's" ability to "do" or work energetically:

> You could imagine things…as what is excessive in objects, as what exceeds their mere materialization as objects or their mere utilization as objects—their force as a sensuous presence or as a metaphysical presence, the magic by which objects become values, fetishes, idols, and totems. (Brown, 2004, p. 5).

Energy resources represent or domesticate this "thingness" of objects by naming this presence. This capacity in turn ignites the automobile subject's ability to move through the world. In an essay on emotion, affect, and materiality titled "Doing things," Labanyi (2010) places emphasis on each word in the title: the capacity for doing work in the world (*doing* things) and the nonhuman as equally capable of such work (doing *things*). Labanyi (2010) also offers a useful overview of some research on affect theory. In reflecting on research that utilizes the language of energy, this dissertation recognizes much of this research as instructive. However, I am not positing a theory of affect so much as a theory of energy resources, in which such rhetorics represent or discursively domesticate the supposedly non-representable (affect) through naming energy resources as the source or grounding of the ineffable, the dynamic, the numinous: in short, the energetic.

[12] Research on mediation, be it in rhetoric, mobility studies, or media studies, often gives primacy to the processes of mediation, and Urry (2007) calls on research to start with mediators as constitutive (e.g., Couldry & McCarthy, 2004; Packer & Wiley, 2012). However, there remains a tension in such theorizing, in that it tends to dematerialize the mediators. One may start with something like energy, but that does not necessarily mean that energy remains the emphasis. Similarly, one may start with the heuristic of mobility producing the social, but such mediation may still be theorized as an outside entity that permeates the social world more than that social world itself. See Merriman (2012) for a useful discussion.

[13] As such, I primarily employ a textual reading of three case studies. While I am interested in questions of context—how social order guides the interpretation of texts, and how contexts are foregrounded and backgrounded (Angus, 1992)—I am not interested in drawing causal claims to how a majority of audiences responded to these texts. In that way, this dissertation does not offer audience analyses but suggests ways in which discourses might circulate among audiences. It is my contention that they do indeed circulate, and I offer examples in each case study. However, I am less interested in evidence that a majority of audiences have taken up a text in a particular way than to point to a) ways in which logics of energy can seep into (as well as extend from) naturalized understandings of energy in society, ways that do not necessarily have linear, direct correlates to audience interpretations; and b) how, particularly in chapters three and four (among nuclear scientists and through the UN, respectively), circulation in specific channels can trace the import of a text more than its overall popularity among a wider-reaching audience. Indeed, divergent attitudes towards *Pandora's Promise* reflect Ott's (2010) analysis of the film *V for Vendetta*; different texts resonate positively with some people's experiences and negatively with others. In sum, my reading of these media texts is not meant to suggest a singular way in which audiences take up these discourses. More so, I am interested in how various discursive strategies can function as the naturalized, resonating ambience in which audiences may incorporate such discourses into a universalized sense of self as it intersects with energy use.

[14] Ahmed's argument is not that objects (or people) are indeed the source of emotions but that they are named as such.

CHAPTER TWO

THE IMMUTABLE ENERGY MOBILE: OIL COMPANY ADVERTISEMENTS AND THE MOBILITY PARADIGM

"Mobility systems," the network of infrastructures that move people, goods, and ideas, continuously evolve (Urry, 2007). For instance, computerized cars and "mobility on demand" services involve location-aware technologies that connect road, car, driver, and on-demand customizations (de Sousa e Silva & Frith, 2012). These mobility systems shift and evolve regionally, as global urbanization and challenges of sustainability clash with the perpetual yet locally distinctive increases in demands placed on these systems. Amid a growing academic and business concern over "mobility," a catchall encompassing key social issues such as economic efficiency demands placed on infrastructures or arguments regarding the human right to movement, comes a perhaps unexpected voice: the oil company. Contemporary oil company advertising relies upon the circulating discourse of contemporary mobility systems by ostensibly offering the oil company as a stable presence amidst the flux of a chaotic world in constant motion. In the rhetoric of oil company advertising, containment and motion join together in the deployment of mobility systems for the harnessing of human movement. These advertisements tap into an understanding of human life as defined through movement. Movement, as quality of life, is championed yet channeled, ignited and realized through

the corporate entity and the energy resources these oil companies supply to mobility systems. In contemporary oil company advertisements, energy resources offer needed stability to the fluid mobility systems that power human life through movement.

The oil corporation functions in these advertising campaigns as an immutable entity, resolute and stable in a world of constant flux. To understand this stated relation between the flexible mobility system and the stable presence of the oil company, I argue that oil corporate advertising discourse positions the companies' supply of "energy" on two levels. One, energy resources supply the power that ignites and sustains the workings of mobility systems. Two, the concept of "energy" does not merely denote a resource base but also connotes an elusive quality of human vitality. First, autonomous human movement is increasingly understood through the enabling mechanisms of mobility systems in the form of transportation networks and communication channels. These systems include the smart phone that connects people, QR codes that link person to information, and deal notifications based on location-aware and proximity technologies that connect people to goods. Energy resources, such as oil, power these mobility systems. Second, energy resources, as support for mobility systems, in turn mediate the movement deemed essential to life, both as sustenance and as quality. In other words, movement does not merely denote the act of living but also connotes what it means to live well, and energy-hungry mobility systems enable a good quality of life by unleashing human motion. Oil company advertisements articulate energy resources with discourses regarding mobility systems as the enablers of such motion.

The campaigns position oil companies as what I will call *immutable energy mobiles*. I have previously examined how oil companies' advertising rhetoric employed

an affirmative discursive shift that defined them less as *oil* companies and more as *energy* companies (Cozen, 2010). Here I argue how they are now positioning themselves as *mobility* companies, more specifically as *immutable energy mobiles*. As Latour (1987) argued, "immutable mobiles" are networked, logistical systems that enable the transformations of any field bringing together objects and ideas "that can be mobilised, gathered, archived, coded, recalculated and displayed" (p. 227). Logistical infrastructures stabilize and combine to mobilize ideas, objects, and innovations. Such *mobiles*, as entities, enable the generative capacities of change and innovation. I use this idea of immutable and combinable mobiles to identify the argumentative framework through which oil companies situate themselves as mobility companies. By assembling resources (i.e., oil), these companies argue they are the underlying driver (i.e., energy) that mobilizes your (i.e., universalized viewer's) life of movement. The oil corporation offers its immutable systems to generate innovations not simply for advances in energy efficiencies, but also for making advances in mobility systems that enable human motion.

In this chapter, I argue that recent oil company advertisements highlight the primacy of movement to life in order to argue that the contemporary social issue of mobility, understood as infrastructural mobilizations, falls under its purview. The rhetoric of the immutable energy mobile, as seen in the following advertisements, places the human at the center of social concerns. The corporation mobilizes energy for your individual, autonomous movement, conjoining energy resources with human energy in motion. On the one hand, these campaigns highlight mobility as a system of stable organizational components that channel movements of people, goods, and ideas, maintained through the presence of energy resources. On the other hand, mobility as a

discursive heuristic employs associations with the moving body's dynamic or energetic potential. We all move. But, the argument follows, we move through a container: the mobility systems that are stabilized by the power sources provided by the immutable energy mobile. In sum, energy resources ignite mobility systems that then enable the energetic vitality of human motion. The immutable energy mobile is the stable presence that powers these mobility systems and in turn ignites human movement.

In sum, this chapter argues that contemporary oil company advertising campaigns employ a) a sense of the mobile body as dynamic; b) an understanding of autonomous movement as enacted through mobility systems; and c) energy resources as the stabilizing force powering these mobility systems and, in turn, powering dynamic human motion. In what follows, I analyze oil company advertising campaigns through this conception of the immutable energy mobile. First, I outline how contemporary discourses constitute an understanding of autonomous movement as enabled through mobility systems. Next, I turn to analyses of recent Petrobras, Shell, and ExxonMobil campaigns to illustrate this strategy of the immutable energy mobile. In conclusion, I consider the implications of this strategy—of tapping into the energetic dimensions of life and movement to declare the stable presence of the oil company—for understanding the social practices of energy resources (Shove and Walker, 2014).

Circulating Discourse: Mobility Systems and Human Movement

In this section, I claim that digitized networks or mobility systems are increasingly understood as enabling the dynamic qualities of a human body in motion. These associations between mobility and the moving, sensing body are often deployed in

advertisements emphasizing mobility as a concept and, as I will analyze in the next section, are explicitly adopted in oil company advertisements. *Energy* supplies both mobility systems and the movement that is essential for life. The oil company advertising rhetoric therefore suggests that oil companies supply the energy resources that power both mobile bodies (movement) and their enabling contexts (mobility systems). In drawing these parallels between energy, mobility systems, and human movement, the subsequent analysis of oil company rhetoric can best be conceived in the context of what I term a "mobility meme" (cf. Johnson, 2007). Circulating, parallel discourses regarding mobility systems also function as the rhetorical topoi used by oil companies. The proliferation of the term "mobility" in popular terminology suggests a larger discursive formation in which the mobilization of infrastructures, networks, ideas, and objects are all understood as enabling autonomous human movement; oil companies claim to empower such movement through their stable supply.

This discursive "mobility meme" disseminates in a series of articulated practices across numerous empirical texts. Mobility is a concept that has disseminated in academia,[15] business settings, and popular advertising discourse and, in this dissemination, reflects what Thrift (1994) labeled a mobility structure of feeling characterized by material shifts in light, power, and speed all revolving around transportation and communication developments (Thrift, 1990). The language of mobility also circulates in media culture. These discourses include those related to transportation, such as MIT's Mobility on Demand, Taxi Mobility, Mobility Transport Services, or BMW's film *Reinventing Mobility* (TEDxBoston, 2009; http://www.taximobility.com/; http://mobilitydispatch.com/; Eurotuner, 2011). Other linguistic examples include those

related to information mobility, such as campaigns from Ricoh,[16] IBM,[17] and Goldman Sachs on SanDisk's "Mobility Revolution" (BillionDollarProduce, 2011). In addition, research centers like DEMAND, MOVE, and SMART include "mobility" as the "m" of each acronym (http://www.demand.ac.uk/; https://sites.google.com/site/movenetworkch/; http://www.um-smart.org/). Last, contemporary sloganeering for mobile phones often suggest its namesake: to be mobile with its user. For instance, in AT&T's 2014 slogan, "Mobilizing Your World," each word highlights particular associations attached to the mobile phone (see SingAlongSongs, 2014). The world is organized, assembled—mobilized—under your control. AT&T acts as an immutable mobile that brings together the (cellular) network to facilitate your "media on the move" (Drotner, 2005). Mobility in this case and in all these examples denotes "the *movement* of people, ideas, objects and information" (Urry, 2007, p. 17, emphasis in original). The companies or other institutional entities are the stable presences that operate, manage, and direct the seamless connection of those movements; they act as the stable presences or immutable and combinable mobile that enable such movements.

This emphasis on movement is a central component to mobility discourse, as this discourse constructs an understanding of mobility systems as enabling the automobile subject's movements through the world. Often in discourse, the technologically mediated world of mobile phones and other mobile dispatches defines autonomous human movement (e.g., Sloop & Gunn, 2010). Mobility, or the assembling of tools for the mobile subject, promises to enable a sense of control as one moves through the chaotic world.[18] These mobile tools range from the mobile phone to the car, to the ways in which communication technologies get incorporated into the contemporary logic or articulations

of the car. For example, take the Buick Enclave commercial, "Landing." A nuclear family is about to land into snowy conditions and record low temperatures. As the wife sits tense during landing, the husband uses his phone's remote function to heat up the car to 82 degrees. By the time the family enters the car, the snow has melted off the car and everyone takes a deep sigh, their anxieties relieved by their digitally connected vehicle (AmericanAutoFans, 2013). The father is the mobile tool user, wielding the mobilized world for his and his family's needs (see Parks, 2004).[19]

In mobility discourse, the primacy of organizing one's movements legitimates the stabilizing of such connected environments. So that one's dynamic self can move, the argument follows, the mobilization of stable infrastructural networks must be in place. The production and consumption of energy resources governs these movements and stabilizes the functioning of a technologized urban environment. Amid challenges of climate change and stresses on supply, it is the stability of the company or immutable energy mobile that acts as the constant presence or stabilizing force in a dynamic world that celebrates the mobile body. In this context, "mobility" demarcates the (attempted, practiced and/or discursive) management, domestication, and differentiation of mobile practices and, primarily, of efforts (consciously or not, human-centered or not) to synchronize the movements of people, goods, ideas, and information (Morley, 2011; Urry, 2007). It is a rhetoric of alignment that attempts to harness and bring into order the unruly movement of worldly bodies. Mobility discourses celebrate movement while stabilizing it as well by channeling, directing, and championing the networks that harness movement.

An analysis of movement and mobility is best served when conceiving of each as dynamic processes that operate together discursively. On the one hand, some research

categorized under the mobility paradigm emphasizes non-representational theories and their primacy of movement (Deleuze & Guattari, 1980/1987; Fenske, 2007; Merriman, 2012; Thrift, 1996). Massumi (2002), for instance, offers the dynamic unfolding process of the mobile, sensing body as "movement-affect-sensation" (see Fenske, 2007; Shubin, 2011). On the other hand, research that attempts to delimit mobility studies, consciously or not, often tends to render movement inert and pliable in order to highlight "mobility" as a dynamic conceptual category (Adey, 2010; Cresswell, 2006). However, discursively conflating the dynamism of mobile concepts with mobility *systems* risks naturalizing particular systems as the source of the vibrant world. We should be careful not to erase an understanding of movement as force, excess, immanence, and other such intensities, in part because the persuasive appeal of mobility systems discourse often comes from the naming or representing of these systems as the source of such elusive qualities. These qualities often take on an *energetic* character, in which the mobility meme discourse often highlights the dynamic attributes of a subject wielding control over this mobile, modern world. The energy company advertisements analyzed next particularly highlight energy *resources* as the mediating source of such energetic qualities.

To ground some characteristics present in the oil company campaigns, I end this section with a couple more examples in mobility advertising discourse that illustrate movement as a dynamic unfolding process and systems as the enabler of that dynamism. First, in a commercial for the Blackberry Z10 device, the camera moves with various scenes in motion, all set to the backdrop of the Tame Impala song, "Elephant." The aesthetic form is one of movement, with the idea that one's experiential bodily movement/sensation will register with these representational elements, as the camera,

music, and bodily motions all synchronize and move sequentially, left to right. “Keep moving,” Blackberry’s slogan, is a particular “epistemology of movement” that only makes sense when an understanding of movement, as sensed physical hopping from one source of information to the next, is attached to digital devices (Parks, 2004). To move, but also to *keep* up: the speed of the rhythms—movement of camera, sound of music, duration of shot—all bundle together under the thematic of the slogan (CooleWerbung, 2013). The immutable logistics of the world enable your movements and your *auto* mobility.

Second, ads for wearable fitness trackers capture the concept of mobility as a networked assembly to contain and ignite human movement. A wave of products and platforms such as the FitBit utilize the language of movement to mediate, track, and represent the body through a network or mobility system that one proactively monitors. This is corporeal movement managed, represented, and mediated, incorporating all of the various devices or objects that move with one to synchronize one’s rhythms into consistent habits. The commercial on the Nike FuelBand website states: “Our minds, our bodies, and our experience all tell us that movement is life. And that the more we move, the more we live…But, unlike sport, life doesn’t come with convenient ways of measuring movement. So, we developed one” (Nike, 2014). The visuals in general are of intensive sporting activities of all kinds. One of the gentlest images, the camera at the point of view of an adult swinging a child at a beach, occurs when the narrator proclaims, “that movement is life.” There is pure joy on the child’s face: that movement-sensation one can see in the felt, whisking breeze of the ocean/bodily motion. Associated with the digital tracker, the suggestion is that such (bodily) movement takes mobility (systems).

In sum, this mobility meme suggests a contemporary moment in which movement, as the vitality of the automobile modern subject, is understood and represented as enabled through mobility infrastructures. The idea that human movement-as-life requires such digitized mobility systems is the base on which oil company advertising situates its argument. This assumed requirement allows for the conflation between the company that supplies energy resources and that company as powering one's physical movement. When physical movement is understood through these digitized systems, oil companies can argue that they supply the energetic capacity for both the mobility system (through energy resources) and the human on the move (through the continuously powered mobility systems) (cf. Parks, 2004). As mobility serves movement, the energy-mobility company will serve movement with its stabilizing supply of energy resources and technological efficiencies.

Contemporary Oil Company Advertisements

This chapter's analysis covers three recent oil company advertisement campaigns that highlight the articulation between energy and mobility. In this section, I discuss the rhetorical force of these three corporations and describe their campaigns under subsequent analysis: Petrobras, Brazil's national oil company (NOC), and its 2011 multiplatform and magazine issue on mobility; sample webpages and commercials from Royal Dutch Shell's campaign *Let's Go*; and ExxonMobil's *Energy Lives Here* advertisements. These corporations were chosen for their global reach and the fact that they offer a range of national and international oil companies (NOCs and IOCs) that are major players in global oil production. I briefly summarize the companies and their

advertisements' reach before analyzing how all three of them manifest links between movement and mobility under the banner of energy.

In terms of proven reserves, though these numbers oscillate, ExxonMobil, Royal Dutch Shell, and Petrobras were all around the top five oil companies in the world in 2014; in that year, all three totaled roughly thirty billion barrels in proven oil reserves, nearly a trillion dollars in revenue, and roughly $60 million in profit (Ausick, 2014).[20] Global oil production is often divided into OPEC and non-OPEC producers, as well as NOCs and IOCs (Downey, 2009). Ausick (2014) lists Petrobras among private oil companies, though the integrated energy company is a partially state-owned company with deep—and as recently revealed, corrupt—ties to the Brazilian government (Horch, 2015). ExxonMobil and Shell both have operations spread throughout the world and similarly Petrobras, while tied to the Brazilian government, exercises both a national and international presence, a dual image the company cultivates. Along with promoting its cultural investments in Brazil, the magazine issue under analysis includes a page titled "Petrobras Around the World" that illustrates how their integrated operations (such as exploration, refining, and distribution) span across six continents (Petrobras, 2011a, pp. 64–65).

In all, while the world oil market is dominated by state-owned monopolies, these three remain major players in terms of energy futures and represent an international presence both in terms of their business activities and their public voice or advertising reach. Their international emphasis is important in a world in which oil demand from OECD countries is diminishing and from non-OECD countries is growing; for every barrel of oil removed from the former, two are added to the latter (IEA, 2014). The

Petrobras campaign suggests how the non-OECD world positions itself, for national and international audiences, as developing infrastructural capacities or modern mobility systems.[21] The Shell campaign champions the mobility of this globalizing world that primarily runs on oil. And the ExxonMobil campaign offers an American narrative of mobility, in which transport and electricity—and oil and gas—are conflated together as the fossil power that fuels electric-mobile systems. In this context, the three companies produce a social logic around oil production, encouraging an investment in said social logics or in what oil supplies. Oil discourses exist globally, and speak forth this global imperative for expanding oil: to develop the whole world on a modernizing path. Emphasizing social logics, like mobility and movement, attempts to legitimate the presence of oil production activities around the globe.

Each campaign analyzed below offers key ways in which oil companies not only attempt to extend their public image as energy companies, but also as mobility companies (Cozen, 2010). First, Brazil's Petrobras is a publicly traded joint stock oil corporation and one of the world's largest integrated national oil companies, and in 2011 was particularly optimistic in its projections (O'Keefe, 2011). That year, the company's magazine, *Petrobras*, featured an issue on "Mobility" (Petrobras, 2011a).[22] The interactive online version of the magazine includes hyperlinks to online videos, extra content, and affordances to share content with others. This issue includes written articles, a cover story focused explicitly on mobility as an urban infrastructural challenge, and an online video addressing the relationship between mobility and movement through the stabilizing presence of energy supplies and oil companies like Petrobras (Barbosa, 2011; Petrobras, 2011b). This issue inaugurated two new developments related to *Petrobras Magazine*:

first, it introduced Petrobras' new global website; and second, it changed its format to an ISSUU clip, an online service that simulates the feel of reading a printed magazine while incorporating interactive features. The issue also offers a forum for Petrobras to champion its recent breakthroughs in new offshore oil drilling production that drills below water, rock, and salt layers. At the time, this breakthrough was a major development in the world oil market (O'Keefe, 2011), and as such the issue's global circulation intersected with Brazil's and Petrobras' burgeoning centralized position in projected oil reserves. In this context, "Mobility" denotes not merely its cover story, but also connotes the issue's theme and the desired persona of Petrobras within global oil and economic politics. The topics for the issue highlight the ways in which Petrobras mobilizes ideas to mobilize resources for the social, modern world. Much of the articles' contents coalesce in the final page in an art project that asked lomographers to visualize the thematic question, "What is energy to you?" (Petrobras, 2011a, back cover).

In the spring of 2010, while other oil companies were keeping a low profile amid the unfolding disaster of the BP Deepwater Horizon explosion, Royal Dutch Shell took on an aggressive set of two advertising campaigns. Bush (2010) details Shell's long-defunct *Energy Galaxy* campaign as well as their still running *Let's Go* campaign. Shell's *Let's Go* is a multimedia campaign aimed at mobilizing future-oriented decisions regarding energy production. Shell has deployed the tagline "Let's Go" in various media platforms over several years, including numerous commercials aimed for different national audiences. Currently on Shell's website, the campaign includes commercials of people around the world sharing how their mobile practices require energy, all metonym for the larger "Global Energy Mix" (Shell, n.d.a; n.d.b; n.d.c). Leni is an elementary-aged

student in the US who worries that lack of energy would keep her from watching movies with her baby brother; Elcimar is a manager of a Brazilian soccer stadium who worries over whether energy supply will meet sports fans' increasing demand; and Madame Lu is a restaurateur in China who worries about maintaining all of the flows of foods, goods, and energy that allow her restaurant to function.[23] Shell emphasizes these and other individual narratives, such as the British-produced advert located in Kuala Lumpur called "Kim," to highlight how Shell powers people's daily mobile lives around the world (Shell, 2010b). This work includes "Smarter Mobility," or the mobilization and ignition of infrastructure further illustrated in the interactive video, "The Sound of Energy" (Shell, n.d.e; n.d.g). These advertisements have circulated in different countries and in various online venues, including the oversaturation of the "Sound of Energy" advertisement preceding various YouTube videos (see Cheong, 2010; Shell, 2012b).

The largest publicly traded oil and gas company in the world, ExxonMobil, circulates American-themed advertising that maintains its nationalistic persona even if its investments extend well beyond the United States (Coll, 2012). ExxonMobil is a consolidation of the previously dissolved Standard Oil, recombining Standard Oil of New Jersey (Exxon) and Standard Oil of New York (Mobil). While the language of mobility is less prevalent in the U.S. than, say, the European Union, the oil company that most champions an American conception of energy has the idea of mobility in its namesake. While their current campaign, *Energy Lives Here*, is not as explicit in the language of mobility and movement as the preceding cases, its rhetorical maneuverings link the energy resources it provides with mobile consumption and the circulating rhythms of the urban environment. In late 2009, ExxonMobil announced its purchase of XTO, which

effectively made the company's natural gas reserves nearly on par with their oil reserves (Coll, 2012). Due to these recently expanded ventures,[24] ExxonMobil began to heavily promote natural gas as the fuel of the future, able to power transport, digital devices, and the combination of the two (ExxonMobil, 2011). *Energy Lives Here* extends these promotional efforts, in which a U.S.-focused form of mobility (communication and transportation hybrids) meets a U.S.-specific energy politics (the explosion of natural gas as a supplement to ExxonMobil's historical focus on oil). While not directly correlated, the campaign suggests how, as mentioned in the introduction chapter, increasing global oil demand primarily occurs in the developing world, and therefore developed world promotional campaigns will likely increasingly emphasize "all of the above" rhetorics. *Energy Lives Here* includes a minute long introductory video, a series of "energy quizzes," and other commercial videos that tell its audience how "energy lives" both here in the (developed) world and in the expertise and deployed resources of ExxonMobil (ExxonMobil, 2014a). The campaign employs an inventive visual scheme, specifically a visual light display, to thread together a relationship between the usually unseen energy sources and the mobile lives they empower. The campaign has continued with the *Energy Lives Here* tagline and has circulated nationally in such venues as the October 2014 Major League baseball playoffs, and has been recognized in the industry for its innovative themes (Shaw, 2013).

Immutable Energy Mobiles: The Oil Company Mobilizes Your World

In this section, I analyze how oil companies rely on the circulating discourse of the "mobility meme" already present in communication technology and transportation

discourses. These companies construct their personas as mobility companies, where energy is inextricably aligned with mobility and movement. In their contemporary advertising rhetoric, these companies frame their societal role as assembling a logistical framework to support the mobile world made of transportation networks, digital technologies, and the circulation of people, goods, and ideas. The three oil company campaigns argue that the companies perpetually supply the energy sources that empower the spatialized networks that in turn enable a person's everyday movements. Further, transport and communication "cannot be split apart" (Thrift, 1990, p. 453). They are both part and parcel to spatialized world building, each reliant on the other and each functioning as enabling (and constraining) this "movement in space" (Sterne, 2006, p. 119[25]). These campaigns suggest how the companies' support of movement in space is beginning to refer not simply to transport systems but communication ones as well. These stable if not sedentary mobility systems support one's dynamic bodily movements, emphasizing an understanding of movement as the key sensorial action of an animate body (Massumi, 2002). The oil company ads represent the social body in harmony with physical bodies and all their complicated, energetic qualities, desires, and capacities (Lefebvre, 1992/2004).

Petrobras e Mobilidade: "O homem ou os meios de transporte?"

Throughout *Petrobras Magazine*'s Issue 60, "Mobility," the individual human, "homem,"[26] is at the center of the relationship between mobility as an organizational challenge and justifications to meet this challenge (Barbosa, 2011; Petrobras, 2011a; Petrobras, 2011b). The campaign suggests that "movement" is dynamic and belongs to

people and that "mobility" is the stability of networks that enable movement. Objects and ideas are mobilized for the dynamic, ever-shifting needs of people as they move through the world. This section will discuss how the magazine's content highlights movement as people-oriented. Petrobras' focus does not deny nonhuman movement, but instead argues that the constant becoming of the world needs to be harnessed, mobilized, and contained so that people can move freely. Petrobras' construction of its role as a combinable and immutable mobile reveals how the mobility company harnesses ideas and technologies to stabilize these systems for the circulation of the individuated collective.

The issue's cover story argues for foregrounding the dynamic movement of individuals as enabled by the stability of managing systems (Barbosa, 2011). Drawing on numerous metaphors of stillness and movement, the article makes the argument that systems in place, and the energy company powering its rhythms, allow for a person's dynamic movements through the world. When the systems fail, they mirror Harvey and Knox's (2012) discussion of the promise of road infrastructures, an enchantment reinvigorated by the desire to see these projects through their ecological and political obstacles for the eventual promise of improving the circulation, and livelihoods, of people (and goods). The cover story emphasizes the challenges to managing these systems in order to reinforce the desire for overcoming these challenges in the name of human movement.

The article begins with an image of rush hour: "Everything around you seems to be standing still," as "everything conspires so that there is no movement around you" (Barbosa, 2011, para. 1). Traffic jams and the "complex mix of" transportation vehicles and infrastructures seem like "one of the most insurmountable dilemmas of the modern

world" (para. 2), a problem of urban planning that extends back to the first bus system in the 17th Century (para. 3). Social, economic, and environmental problems continue to increase (para. 3). But if you "look again," then you see how "everything is moving," including the world on its axis: "If there is life, there is movement" (para. 2). The intrinsic social problems cannot refute this vital need for movement. To rethink mobility "in favor of life" is to make these objects and networks "work for us, and not against us" (para. 2), lest "we, the people – who should be the reason for and object of mobility – we stay…stationary" (para. 3, ellipsis in original). Therefore, a stable mobility system "enchants" by unleashing the life force of movement inherent in people (Harvey & Knox, 2012).

At this point, the article explicitly draws on academic mobility research and experts, framing mobility studies as a distinct field that tackles the same social problems Petrobras faces (Barbosa, 2011, para. 4). Petrobras' assembly of expert voices attempt to think through how fuel innovations can play a part in stabilizing mobility systems for the movement of people. The article first quotes a professor of transport engineering, Ronaldo Balassiano, who extensively researches mobility issues. The article explains how Balassiano's words "always prioritize the human" (para. 4). Barbosa (2011) paints a picture of Balassiano's kinesthetic virtues, describing him as "in a hurry," "fir[ing] out" information "like a bullet train" (para. 4). The professor stands in for the burgeoning "field of mobility," defined as focused on systems or "the search for innovative projects capable of managing the increasing demands of movement and of accessibility in big cities" (para. 6). These demands of movement expand as life extends quantitatively and qualitatively. Mobility as a field is defined as the capacity for managing such movements

efficiently and sustainably. Building from these academic conceptions of mobility, Barbosa names Petrobras' development of efficient fuels as managing mobility and sustainability needs together (para. 6). Energy futures are vital to sustaining the ever-shifting demands and challenges of the world, all while (em)powering individuals. In the ISSUU-enhanced version of the magazine, the article also includes a blurb on the World Energy Council as a source for further discussions on transport and mobility. Outside of these two energy-related examples, the cover story primarily keeps the focus on a) the desire for movement; and b) the social challenges of keeping people on the move. As such, Petrobras answers the challenge.

A supplemental video further emphasizes that the stable presence of Petrobras harnesses another component of the organized mobilization of movements: that of ideas (Morley, 2011; Urry, 2007). Along with Balassiano, a collection of expert voices in various academic, governmental, and other fields appear in the video, representing different interests (Petrobras, 2011b). For example, an antique car collector discusses his love/hate relationship between people, cars, and the city. The comment highlights the frustrations with traffic conveyed in the opening to the cover story, but also suggests the desire for planning transit journeys as efficiently as possible (Peters, Kloppenburg, & Wyatt, 2010). This example shows how infrastructures frustrate and delight (Harvey & Knox, 2012). Others in the video consider the challenges of public transport systems and on-demand car services, like Brazil's Zazcar, in becoming successful services only when they can avoid hindrances and meet the human desire for unfettered movement. On this point, Balassiano discusses displacements in all of our movements, requiring a system in place that offers the capacity to move. To meet the universalized demand for movement,

Petrobras (2011b) assembles these expert ideas about the future of mobility and, in particular, the need for an emplaced if flexible system of numerous transportation means responsive to all the displacements of our movements.

Pedro Rivera, an urban designer opening the interviews, highlights an interest in polyrhythmia, in which the social body meets the ever-evolving requirements of the human body (Lefebvre, 1992/2004). Rivera suggests we need roads for different rhythms and speeds (Petrobras, 2011b). He critiques the sustainability of linking freedom to cars, but this only questions how we will build from there. The video presents the oil company, while attached to the car in that it supplies its fuel source, as less invested in the car per se. More so, the company is committed to a multiplicitous, effective system of transport, trying to enable the dynamic qualities of people's mobile lives through a system that can enable and manage these polyrhythms. Therefore Rivera's final comment, on building the future we want, aligns with Petrobras' purported position: "The future must be of permanent building, because every day what is around us is changing. The city, society, everything is changing all the time. The future must be a continuous process of trial, error and experimentation, never certainties" (Petrobras, 2011b). In the rest of the video, and of the magazine issue, this process of trial and error is concerned with how to manage or domesticate a world of change: to render the world pliable for human movement.

The video uses strategic lexical ambiguity in its enigmatic axioms, such as the Portuguese text that opens the film: "Mobilidade: Ainda assim se move," subtitled as "Mobility: And yet it still moves" (Petrobras, 2011b). The Portuguese verb is in the reflexive voice, leaving the subject intentionally vague. It could also mean "And that's how one moves," "Even so one moves," or "Nevertheless one moves."[27] Within this

polysemous space, the video along with the article explicitly emphasizes the movement of people as the "it" that deserves attention. People move, and mobility systems must not serve the vehicles, but the people in all their dynamic complexity. The video suggests that Petrobras is leading a rethinking of mobility, through new energy sources, sustainable transport, and attitudinal shifts with "man [*sic*]—and not vehicles—the priority" (Barbosa, 2011, p. 21). Under this conception, any sensed displacement between mobility systems and human movement can eventually be resolved if we place the movements of people first. As the video proclaims, as had the article nearly verbatim, "mobility needs to work in our favor, not against us" (Petrobras, 2011b). The video offers facts of the larger mobilization of objects, ideas, and information, such as how many roads have been built or how many cars appear each year, but only to render it part of the background environment that enables human movement. All other mobilizations, including that of energy resources, are subsumed under the agency of people. For instance, in relation to roads and cars, the accompanying text asks: "They take us **where?**" (Petrobras, 2011b, bold in original). Later, it enigmatically asks: "Where do we COME FROM?/Where are we GOING?" (Petrobras, 2011b, emphasis in original). The emphasis on "we" suggests that the first question to ask is about humans' everyday practices and desires for movement, and then later we solve the problems that enable these desires.

Movement further implies vibrancy. The video ends with the following phrases:

> Quem se move? [Who moves?]
> O Homem Ou os meios de transporte? [Man or the means of transport?]
> As pessoas nunca ficam no mesmo lugar [People never stay in one place]
> Os lugares são as pessoas [Places are the people] (Petrobras, 2011b)

The emphasis is fully placed on the immanent movement of people and, hence, mobility systems must be developed for that vital quality of life. It is people who move, or who are

constantly in process; as such, it is the mobility system that must be subservient to that larger effort. Similarly, the front insert page of the magazine includes a definition of mobility that includes various synonyms for mobility and movement. This definition begins: "*n. [mobility]* the act of being mobile. To be within a world that turns incessantly" (Petrobras, 2011a, cover insert). The definition continues: "It is movement; volubility; inconstancy; velocity" (Petrobras, 2011a, cover insert). In each definition or related synonym of mobility, these key terms associate with the chaotic world in which one attempts to live/move. *Movement* implies dynamism, vibrancy, and force; "volubility" quantifies rapid, energetic talk; "inconstancy" means frequent change; and the definition of "velocity" suggests a trajectory. To elaborate and combine, the world turns incessantly, suggesting rapid change; people move, offering ever-present challenges. Therefore, the means of transport need flexible stability, able to be an evolving system that stabilizes the contexts in which people move in unexpected ways. People do not stay in one place, so the production of space needs to be sufficiently stable and responsive to service this dynamism.

Therefore, the argument goes, while environments are constantly changing, we must keep building systems to align them with the primacy of human movement. The text of the video focuses on the individual who is mobile and the energy company that is immutable, ever-present amid these challenges. Yet, while always a background presence as the authorial voice, Petrobras is largely an absent referent, only making a guest appearance at the very end. The final comment in the video comes from the one interviewee explicitly tied to Petrobras, Carlos Vinícius Massa: "Petrobras monitors all this evolution and is preparing to provide the energy needed for the vehicles of today and

the future" (Petrobras, 2011b). Petrobras suddenly appears in this comment: as there and ready for the larger question of mobility or, here, the flow of transportation. Similarly, in the cover story, Petrobras is there to promote fuel innovations that can make all these circulating people move in cleaner and more reliant vehicles. The cover story ends with Massa, the metonymic spokesperson for Petrobras, stating: "We contribute to urban mobility by producing fuels which are perfectly suited to new motoring technologies" (Barbosa, 2011, para. 6). In these examples fuel and mobility, or energy and managing movements, are aligned to support human movement.

Petrobras in this rhetoric enables movement amid mobility challenges, by mobilizing scientific researchers, ideas, and technologies. Along with enacting this role by bringing together such voices and ideas in the video, subsequent articles of the issue highlight ways to reduce pollution, maintain labor capital through Brazilian institutional research investments, and most challenging of all tackle the technological obstacles presented by the pre-salt layer of oil extraction (Petrobras, 2011a). To illustrate the technical challenge of the pre-salt layer, the cover image of the magazine depicts a man-in-motion running along the ocean floor as he pushes against the water pressure. Petrobras' efforts are both reflective of and in service of such human motion, regardless the difficulties.

Be it running or drilling underwater (under rock, under salt), Petrobras' energetic efforts power through to move the world. The headline on the final page of the magazine issue states exactly that: "Energy that moves the world" (Petrobras, 2011a, back cover). The page promotes Petrobras' joint photographic exhibit with Lomography, the largest Lomowall in Latin America, which asked photographers to visualize "how people see

energy" (Petrobras, 2011a, back cover). The project, which marked the launch of Petrobras' global website, mobilized photographers from around the world. The lomography website that invited photographers to the project asked, "what moves you? What drives you to succeed? What energizes you? We want to see what the energy around you is like!... Show us what powers you, what motivates you, what pushes you forward!" (Salas, 2011). The call for photographs continued, conflating movements, sensations, motivational drives, and mobility systems under this trope of energy:

> Whether it's the alarm clock that wakes you up in the morning, or your daily run, we want to see what the energy around you is. Is there a bicycle or even a car you find fascinating, or the smile of a dear friend? (Salas, 2011).

In this project "energy" functions as the movement-sensation that "energizes you," be it the mobile run or the sensation of another's smile (Massumi, 2002). Energy, then, is movement; the energy company, as an immutable energy mobile, stabilizes the mobility systems—the "bicycle or even a car"—so that movement, as life, can flourish. In all, the magazine issue claims that mobility, as an academic research area focused on the urban challenge of transport systems, is really about the movement—i.e., dynamism—of people. The immutable stability of Petrobras enables such life activity: "if there is [Petrobras], there is movement" (Barbosa, 2011, para. 2).

Let's Go With the Tune of Shell

While Petrobras' campaign highlights its leading role in Brazil's global positioning, the private international corporation Royal Dutch Shell mobilizes the whole world through its energy supply. Shell's "Future of Energy" webpage begins, "energy is vital to our daily lives [and] helps us…fuel transport and power communication channels

across the world" (Shell, n.d.f, para. 1). To sustain human movement, the Shell campaign *Let's Go* argues, we must continue to expand the mobility systems and fossil fuel energy that ignites it, along with any other source that can help. Their call to "broaden the world's energy mix" is essentially a long-term investment in expanding this vision of mobility infrastructures that legitimates Shell's role as accelerating its fuel supply for the ever-changing world today, and laying inroads to not replace, but add to this mix as we move into the future (Shell, 2012a). Shell emphasizes a call to action ("Let's Go") to mobilize solutions to the energy and mobility challenges that the world faces. In turn, the campaign highlights individuals' stories to suggest that it is the autonomous human's daily movements or rhythmic (and rhythmed) activities that legitimate all this mobilization.

In their corporate webpage on "Smarter Mobility," Shell articulates a definition of mobility that links moving peoples and objects to vitality:

> Mobility – the movement of people and goods – is the lifeblood of the global economy… we depend on transport to go about our daily lives…. At Shell we are constantly finding innovative ways to address these challenges and help move more people and goods safely, cost-effectively, and with reduced impact on the environment. Our approach, called smarter mobility, focuses on products, use and infrastructure. (Shell, n.d.e, para. 1).

The argument, here, is how to maintain the contours of mobility in the present for an ever-evolving future that will still require the movement of people (and goods). Such requirements are also deemed desirable and universal. The top of the webpage includes an image of a compact car at the Sepang International Circuit motorsport racetrack in Malaysia. Embedded in this image are multiple assumptions about the future: that it is global; that the future of energy is predominantly in Asia; that it will maintain our mobility habits such as speed racing, if with advancements in cars' efficiencies and

changes in aesthetics; and that Shell, with its logo and color scheme on the side of the car, will lead the way. The webpage includes hyperlinks on smarter products, smarter use, and smarter infrastructure. Under "smarter products," Shell states, "demand for transport will continue to grow over the coming decades," and that the purpose of their fuel research and development is "to help keep the world moving" (Shell, n.d.d). Articulating "smart" and "mobility" combines communication and transportation into a managed network of interconnectivity for the purpose of motion. Overall, the emphasis on mobility suggests that this movement of people and goods, as "the lifeblood of the global economy," is the starting, unquestionable, and hence naturalized premise from which Shell operates its energy decisions now and into the future. In that regard they advance new fuels, efficient uses, and urban planning efforts in a world that will continue to move at accelerated speeds but, with Shell's guiding hand, can do so "from cleaner sources," that is, new advances in fossil fuels more than alternatives to fossil fuels (Shell, n.d.e, para. 2).

While the mobility system infrastructure functions as the "lifeblood of the global economy," the advertising videos under the "Let's Go" tagline emphasize the human-centered purpose to all this infrastructural work. Shell mobilizes the movement of the world to build the context through which one moves, as the advertising discourse positions the company as the enabler of human rhythms and sensations. In particular, Shell's "Global Energy Mix" commercials feature three main characters—American Leni, Brazilian Elcimar, and Chinese Madame Lu—whose everyday practices function as loci for the global flows of energy resources. Each story raises a specific, common sense, and universalized dilemma: how to maintain the energy-dependent infrastructures that every person relies on to live their mobile lives. A few iterations of these people's stories

include the same repeated opening. After overhead imagery of a Brazilian and Chinese cityscape (Rio de Janeiro and Shanghai, respectively) and the Mountain West (somewhere in Colorado), the commercials depict these three people in their daily activities: Leni in band practice, playing out in the snow, grabbing hot chocolate, answering a phone, and using a pencil sharpener; Madame Lu directing an employee, a child eating in her restaurant, and a cook doling out rice; and Elcimar inside a control room and on a walkie talkie near a stadium field as soccer (or fútbol) players run past him. The narrator asks us what these three people "have in common" and proceeds: "The answer is simple: they all need energy to go about their daily lives" (Shell, n.d.a; Shell, n.d.b; Shell, n.d.c). These lives are mobile lives, evident in one iteration that incorporates all three people's stories over the narration, "energy: we all need it to move" (Shell, 2012a).

In each personal story, the characters narrate their reliance on energy resources in their everyday experiences. Leni takes the bus to school where heat warms her gloves, cocoa, and swimming pool. She learns in school how "lots of things need energy to work," such as the iPad that connects her to her baby brother, or the phone that connects her to her grandma, or the nightlight that connects her to the story in her nighttime reading (Shell, n.d.b). Both Elcimar and Madame Lu are concerned about the future. Elcimar is responsible for the proper functioning of a stadium, in which the "fan experience" (food supply, large screens, strong lighting) requires ever-increasing energy demands. Elcimar "hope[s] someone out there has the answer…to keep things going" by supplying the energy needed (Shell, n.d.a). Madame Lu similarly reflects on "how much we have come to rely on energy" (Shell, n.d.c). Amid these concerns, Shell, the Narrator, shares some of

the things the company is doing, such as their joint venture in Brazil involving biofuels, to meet the inevitable increases in demand these individual stories reflect (Shell, n.d.a). To increasing demand, and hence need for expanded production, Shell states "let's go" find solutions. To go is to mobilize for the energy future. That future is in part justified through metaphors of bodily movement and the energetic in present times. Madame Lu "run[s] on adrenaline most of the time," emphasizing bodily speed and a metabolic stimulant (Shell, n.d.c). Elcimar takes pride in the "electric" atmosphere, as "fútbol lights people like nothing else," bespeaking sport's kinetic activity and excitement (Shell, n.d.a). As Leni, Elcimar, and Madame Lu go about their daily energetic lives, Shell asks the questions, and finds the solutions, on how to maintain this movement. From the rural U.S. to two burgeoning [or BRIC] countries, the "future of energy" oversees the naturalized expansion in demand to both maintain and push forward such mobile lives.

Other commercials circulating online under the tagline "Let's Go" include those with a British voiceover narrating in different parts of the world: "Guitar" in Japan, "Kim" in Malaysia, and "Kite" in Brazil (Shell, 2010a; 2010b; 2010c). In "Kim," A man is stopped at a red light on his motorcycle with his partner sitting on the motorcycle behind him. As the opposing walk signal counts down (4, 3, 2, 1) and the quiet nighttime traffic breezes by, the narrator states: "This is Kim, about to feel one of his favorite sensations" (Shell, 2010b). The puddle reflection of light turns green, Kim takes off, and his partner wraps her arms around him in an embrace. As the motorcycle enters a tunnel,[28] the narrator continues: "At Shell, we are developing more efficient fuels that can help us get the most from our energy resources" (Shell, 2010b). The commercial collapses the boundary between energetic human connection (the motorcycle riders) and the

technological extensions of Shell: the lighting of the tunnel, the efficient fuel for the motorcycle, and the infrastructure of roads and tunnels. Each needs to be sustained for the maintenance of, as the narrator describes it, one's "favorite sensations." Reflecting Massumi's (2002) movement-affect-sensation triad, "Kim" emphasizes the movement of the motorcycle with the naming and visualizing of sensations, conflating the sensations of the open road, the motorcycle-as-freedom, and of intimate human connection (Packer, 2008). Each element relates to how Shell helps Kim "get the most from our energy resources." Shell, in turn, embodies the immutable energy mobile, where the mobility systems its energy supplies support are the stable infrastructures and circulations for such movement. The YouTube description for "Kim" explains that the Shell campaign highlights such global personal narratives to foreground the purpose of their practices. That is, Shell supplies human desire, meeting "rising energy demand" that supports such movements and sensations (Shell, 2010b, "About").

Shell's support of movement, in sum, is grounded in their support of mobility systems that enable such movements. "The Sound of Energy" (Shell, n.d.g), an interactive video that shifts slightly with each rendition, highlights the constant, dynamic presence of repetition and difference in the movements of the social body (Lefebvre, 1992/2004). To mobilize energy resources is to account for this repetition and difference. This online advertisement attempts to situate its audience's sense of their everyday movements within the social organization of mobility and energy systems that coordinate the individual's activity. Opening the webpage immediately begins the interactive video, which consists of a quick succession of everyday objects that make noises to the tune of "In the Hall of the Mountain King" by Edvard Grieg. Eventually these images vary

depending on one's viewing, but the first fifteen seconds of the video remains the same series of actions: a flicked light switch, a refrigerator door, a soccer ball pump, a whistling tea kettle, a frying egg, a lit mirror, a stove dial, a microwave door, a flicked lighter, a power nob (seemingly for a coffeemaker), and a stationary phone with a dial tone. The rest of the video invites the audience to "conduct your own mix," selecting energy sources (oil, gas, renewables, etc.) from an intermittently appearing pull down menu, as variations of transportation vehicles, household uses of heated water, and so on populate the screen, all to the tune of the Mountain King.[29]

As discussed in the mobility meme section, one key characteristic to the rhetoric of mobility systems is the synchronization of movements. The visual form and aural display in "Sound of Energy" combine to construct a play of rhythms that attempt to synchronize the social (mobility systems) and corporeal (mobile, human) body. The mobility paradigm has been described as a thirding of time and space (Merriman, 2012). Organizing movements is a spatial and temporal, or rhythmic, act of synchronization. Turning to a "micropolitical dimension of synchronization," Sharma (2008) suggests, "the control of time makes possible the coordination of activity and ultimately effective social control" (p. 460).[30] Time is a qualitative, relational experience dependent on how one's rhythms synchronize with organized mobilities and where one is situated within such organized social power (p. 461). The video's everyday sounds of the car, the household, one's patterned movements: these all coalesce to highlight the various rhythms of universalized time-spaces. Lefebvre's (1992/2004) "rhythmanalysis" attends to the circulating rhythms that attempt to align the arrhythmic circulations of social time and the body. To attend to rhythm is to attend to repetitions and, in these repeated

rhythms, to attend to the immanent differences that exist in time and for which political power attempts to assemble in synchronization:

> Political power knows how to utilise and manipulate time, dates, time-tables. It combines the unfurlings [*déploiements*] of those that it employs (individuals, groups, entire societies), and rhythms them. This is officially called mobilisation. The authorities have to know the polyrhythmia of the social body that they set in motion. (Lefebvre, 1992/2004, pp. 68–69)

Such "authorities" include Shell, attendant to the energies and movements of the social, setting in motion political power by deploying the vast rhythms of the social and corporeal body.[31]

The video attempts to bring the music, visual, and audience's mobile activities—the coalescing rhythms—under alignment. Speed dominates over reflection in how the video threads together a quick succession of cuts between everyday objects and habitual practices, and the accompanying intensities of Grieg's increasingly faster rhythm (see Virilio, 1977/1986, p. 5). Bull (2005) discusses this proactive effort to align music and sight in interviewees' iPod listening practices. In that personalized music dictates a rhythm that others in public space do not hear, the "aesthetic impulse" of the mobile listener compels the listener to attempt to synchronize or manage sight and sound (Bull, 2005, p. 350). This rhetoric of alignment plays out in the Shell video, where split screens are also employed to further suggest simultaneity to the rhythms of the image-sounds. These polyrhythmic activities coalesce as the "sound of energy" that meets the visualization of energy: namely, mobile tools for mobile habits. Shell sounds the call: Quick! Quick! Add the next energy source to the mix! Let's power these mobile habits! Let's go![32]

ExxonMobil Turns Us On With Their Electric Feel

In the campaign *Energy Lives Here*, ExxonMobil links energy resources with mobile consumption and the circulating rhythms of the urban environment. In this final case, I highlight the visual schema to argue that the campaign's rhetorical force primarily draws on representing energy's immersive contours, or in associating energy resources with ambience. Rickert (2013) defines the ambient as an environment's surrounding, encompassing, diffuse presence that, in the environmental "ensemble of variables, forces, and elements that shape things in ways difficult to quantify or specify," takes on a "vital quality" (p. 7). If we could see energy, ExxonMobil proclaims, we would see its stable presence, and its dynamic presencing or vitality, all around us. However, unlike Rickert's emphasis on our "ambient age" as a blurring of subject/object distinctions that jeopardizes "modernist conceptions of the autonomous subject" (p. 9), I argue that naming or attributing energy resources as the source of the world's ambient qualities reinforces these boundaries. Energy resources are the result of the world actively harnessed by and channeled toward human activity. The human subject is powered by ExxonMobil's mobilization of energy resources that a) embrace the object world; and b) enable the modernist subject's movements through this enlivened world.

The *Energy Lives Here* campaign makes the invisible energy resources visible in relation to mobility systems and objects or, specifically, the unseen presence of the mediating flow of energy. Shaw (2013) describes the campaign as a series of imagistic arguments "that helped connect quality of life in America with the energy that makes it all possible" (para. 6). The campaign's particularly innovative component occurs in how it visualizes this connection between the daily devices that stand in for this "quality of

life" and the energy resources required to power them. The campaign employs a visual scheme that is difficult to describe verbally, but that might best be understood as an aurora. The Northern Lights (Aurora Borealis) are one well-known aurora phenomenon, a natural light display resulting from combined atmospheric conditions from the Earth and the Sun. From the particular vantage point beyond the Earth's magnetic poles, color schemes of light become visible. ExxonMobil deploys this scheme as its main motif in order to visualize energy resources as a sort of aurora. The introductory video opens with a girl pressing her iPad play button, causing illuminating colors to emerge from its screen. As the commercial cuts to an expansive, flat city scene illuminated by the same aurora lights, the narrator asks, "if we could see energy, what would we see?" (ExxonMobil, 2014c[33]). This aurora trope follows the campaign throughout, from further cityscapes pulsating with these vibrant hues to the colored lights emanating from an air conditioning system as a little girl feels its cool air on her outstretched hands and face.

This production design saturates the whole campaign with a cool, tranquil lighting scheme that surrounds, encompasses, and diffuses the campaign's depicted mobility systems; in other words, the visualization functions as these systems' ambience. Rickert (2013) relates his theory of ambient rhetoric to ancient theorizing on "the power of our surroundings, both material and spiritual" (p. 6). ExxonMobil offers the aurora light display as both a means to visualize the power of the mobile world's material objects, as well as to suggest how energy resources act as a spiritual presence or circulating power. Renzi Stone, chairperson of a rival ad agency, attempts to explain the visual scheme as a combination of x-ray vision and astral plane: of seeing beyond the eye's visible plane to an almost deified depiction of the urban scene (Shaw, 2013). The "x-ray" descriptor

suggests how light, here an aurora, always surrounds us whether or not we can see it. This aurora-lit scheme saturates the campaign's visual canvass, encompassing the energy-dependent mise-en-scène. Energy resources in their immersive ambient qualities, depicted via light, are a (or the) necessary component for our everyday objects. The campaign highlights mobile daily habits to visualize the link (as interpreted by Shaw, 2013; see above) between an American way of life and the capacity of energy resources: taking the subway or bus to work, using phones to connect with people and with ideas, attending a concert, running a marathon while equipped with a wearable fitness tracker, and so on. Tellingly, this scheme resonates with visual depictions in advertisements of the mobile phone, particularly the color palette on the screen of Sony's XPeria SP Mobile Phone advertisement (Sony Xperia, 2013; see 0:34 and 0:56). The aurora therefore resonates with mobile technologies both by saturating their appearances within the campaign and through the pre-established visual scheme of illumination in mobile phones' promotional imagery.

Such visualization attributes an ambient quality to energy resources. Rickert (2013) suggests, "*ambiance* can mean the arrangement of accessories to support the primary effect of a work," and through the aurora the campaign suggests that energy supports the primary work of mobility systems (p. 6). "But," Rickert continues, "it does significantly more than that. It begins to convey more elusive qualities about a work, practice, or place. Often these are keyed to mood or some other form of affect" (p. 6). The campaign's mood lighting embraces these objects to represent their otherwise elusive qualities: namely, their energetic qualities of movement. It also associates a calming, cleansed presence to ExxonMobil's activities, adding a quality to the energy resource

itself. The focus is on the uses of energy in a mobile world, yet its added emphasis visualizes the energy presence that makes these uses possible. As ambience, that energy enfolds a new focus or perspective: not the oil derrick or hydraulic fracturing of production, but the rhythms, movements, and sensations of consumption. The energy resource becomes the delicate breeze of an air conditioner, for instance. Energy here is social practice, serving the demands of mobility (Shove & Walker, 2014). To visualize the ambience of energy is to put emphasis on the social practices suddenly glowing with the aura of energy. These social practices exist in and through mobile tools or those "sensations of freedom" of our mobile prostheses (Sloop & Gunn, 2010).

The campaign visualizes energy to focus on the need for it in our everyday rhythms or practices. "Energy lives" in the animating presence of pulsations and vibrancies. On ExxonMobil's website, a textual synopsis explains the campaign through presence and sight: "Energy lives in everything we do. If you could see energy, where would you find it? The answer: everywhere" (ExxonMobil, 2014d). Whether we see it or not, the lumen of energy is visible in our social practices, ever-present in our mobile habits and spaces of consumption (see Jay, 1994, p. 29). Amid this rarefied glow of energy—its illumination—the city and the people are abuzz: buses running on natural gas, the electric feel of a concert, the cool breeze of the air conditioner, the informative QR code linking the art museum and the mobile phone. The introductory commercial concludes, "Life takes energy" (ExxonMobil, 2014c). This tagline resembles the cover story from *Petrobras Magazine*: "look again" to see that "if there is life, there is movement" (Barbosa, 2011, para. 2). Or, as Nike's Fuelband proclaims, "movement is life" (Nike, 2014). If life is movement, and "life," visualized through mobile devices,

"takes energy," then movement takes energy.[35] This felt, stable presence, of energy all around our mobile bodies, positions ExxonMobil as the stable entity that manages all this movement through its supply of energy resources. ExxonMobil, therefore, becomes the immutable mobile, investing in the mobilization of ideas, objects, and resources for the movement of people amid this ambient flow: "energy lives *here*" (emphasis added).

The campaign fully embraces transportation *and* communication as this organized movement in space. "Energy Lives Here" combines ExxonMobil's historical focus on oil with its recent investments in natural gas to emphasize a mobile world that runs on both: for transport and buses running on natural gas, for electricity, and for the ambient energy of each. The visual scheme of the "Energy Lives Here" campaign, saturating communication and transport technologies, relies upon a contemporary "epistemology of movement" where its target audience sees digital objects as enabling movement in space (Parks, 2004). *Energy Lives Here*'s logistical components of transportation (for instance, the subway system) and communication (the wearable fitness band synced to a smartphone) are not simply a part of the naturalized background but instead are foregrounded as central to the contemporary urban lifestyle (Thrift, 2004). When the campaign asks what would happen if we made the invisible logistics visible, it assumes a viewer well aware of the mediating presence of buses as well as of phones. Whatever mobility system is emphasized, each is incorporated into the sense of the autonomous mobile subject using these devices to move and connect with others (Burnett, 2004). Networks and the logistics of the digital, electrified urban infrastructure are therefore the basis for making energy resources visible (Graham & Marvin, 2001). The invisible, naturalized, infrastructural requirements of these hypervisible logistics, in the formulation

of this campaign, are the energy resources that power them.

ExxonMobil visualizes the presence of these resources to promote the corporate brand: not as extractors of energy so much as the stable, ambient presence of your communication and transport logistics, or your organized movement in space. From the "vantage point" (Burnett, 2004) of seeing energy, the target viewer is asked to reflect on one's experience in the world with a new perspective: to think about energy and its future in the warm glow of mobility systems. Amid this glow, ExxonMobil's presence is "everywhere" (ExxonMobil, 2014d). They argue: Life requires ExxonMobil's supply, and indeed, one just needs to see that it has always been all around us, and hence will continue to do so. The immutable energy mobile makes life run, function, and move, as one can see energy getting you to work, flowing through your devices, and in life-saving medical plastics. So in the campaign's rhetoric, the energetic elements of movement are enabled, maintained, and expanded through the "energy" it takes people to be dynamic, polyrhythmic, and so on. This calling forth of movement-as-vital legitimates not just the mobility system but also the stable presence of its ignition.

Conclusion

In a special issue on energy and society, Shove and Walker (2014) challenge the dominant paradigm by which energy futures policies get framed: as isolated issues that are causes or consequences of social change, and which entirely take for granted present practices and demand stability. To remedy this situation, Shove and Walker (2014) suggest a practice-oriented approach that starts with theories of social practice and change:

> To persistently ask 'but what is energy for?', and to take that as the central question, is to take a different view of the social. It is to see society *not* as an outcome of intersecting systems, like geological forces pressing this way and that, but as emergent from, and defined by, social practice. (p. 46, emphasis in original)

This approach would recognize that energy is always coupled with practice, such as demand for hot water consumption (the bathing, laundering, and washing on which this demand depends), and how policy can intervene at that level. Of particular interest in this analysis is where the article ends up: with Shove and Walker specifying their research with the Centre DEMAND: Dynamics of Energy, Mobility and Demand (see above). Others are also starting to address this nexus between energy, mobility, and demand, for instance Urry (2010; 2013) and Sheller (2014).

While I agree with Shove and Walker's (2014) emphasis on the dynamic qualities of demand, I wish to include a caveat to their linkage, effectively, between energy and mobility. This chapter's analysis shows that oil companies *are* considering practice, where the strategy of linking "movement" and "energy" legitimates oil production as a response to desired social practices already determined. Social practices have asked what energy shall be used for, the campaigns suggest, and the answer necessitates the expansion of energy, particularly with fossil fuels and oil at the fore. Further, oil company advertising does not fix demand in place as much as it fixes the company in place as an immutable energy mobile, able to evolve with social practice. As both immutable and combinable, the oil company declares itself the driver of the middle space created by the link between energy and the dominant social theory in which it is operating: mobility. To privilege and evolve with social practice is also to point to practices that "need" to be maintained, and how to do so: through the energy resources of modernity. This stable presencing of the oil company does approach energy as social

practice, but from a universalizing perspective that naturalizes the increase in demand. Shove and Walker's conclusion is instructive not because it is novel, but because hitherto it is primarily conceived by those who wish to maintain the status quo. The scope of the companies under analysis suggests that, regardless of audience analyses that may show some resistances to such campaigns, their claims mirror the ubiquity of oil as used in practice and therefore, at least to a certain extent, articulate these social practices to the level of common sense.

The preceding campaigns' primary strategy, of dynamic movement and the immutable mobile, collapses energy futures into the discourse of mobility and suggests the effective stabilization of oil production now and into the (at least immediate) future in order to power and expand these systems. The campaigns' consistent recognition of "sustainability," investments in natural gas and biofuels, and the acknowledgment of shifting dimensions of epistemologies of movement do little to suggest a move away from oil, instead naturalizing oil production expansion. "The global mix" simply invites all the resources oil corporations like Shell can handle under the corporate umbrella. Hence discussions on alternative futures of energy do not automatically distress the oil corporation; as a mobility company, they simply collapse such efforts into the inevitable push to accumulate as much as we all can, from wherever we can. They argue: "Let's go" and continue to mobilize the world in their image. None of these arguments are meant to be novel, per se—of course the oil company is invested in oil's perpetuation. Further, the actual stability of these companies is in constant flux. Consider Petrobras' recent financial troubles and political graft scandal (see n. 21), or ExxonMobil's reliance on their natural gas venture to try to keep up their accumulated reserves with consumption

(Antunes, 2013; Coll, 2012; Lyons, Colitt, & Galvao, 2015). However, instead of concerning myself with the implications of these campaigns for each company's success, I am more interested in the campaigns' implications for energy consumption in general.

I argue for the importance of analyzing the logics of these large companies and their circulating campaigns for at least three reasons. One, their political and economic power are too large to ignore, regardless of any particular struggles. Two, their logics help frame discussions on the future of energy. The naturalized assumption that the world needs more and more energy resigns us to a feeling of inevitability where we might as well focus on how to expand oil production, if more efficiently. And three, their discursive efforts that attribute dynamic qualities to energy resources suggest something useful for activists seeking a post-carbon society and the attendant challenges of producing alternative spaces, rhythms, and effective energy policies. To get invested in the rhythms of mobility systems is to miss the ways in which they are not laws but socially produced. Alternatives to energy futures would be alternatives to rhythms, inscribing interventions not simply in space but in time-motions as well (Lefebvre, 1992/2004, p. 14). A linking of mobility and energy may indeed open up a space in which we can actually take this focus on social practice into fruitful directions for the future of energy, addressing the ways in which desired social practices may be able to demand less energy use.[36] Concurrently, we need to understand empirical instances today that do actually take this link as a structuring argument, and how they do so.

Notes

[15] The academic interdisciplinary field of "mobility studies" does not stand outside of this material and discursive context but, instead, such literature reflects how social theorizing derives from an experiential base and also exists as a parallel process to such circulating discourses (Adey, 2010; Cresswell, 2006; Cresswell & Merriman, 2011; Hannam, Sheller, & Urry, 2006; Sheller & Urry, 2006; Urry, 2000, 2007). Also see Merriman (2012), p. 13, for an extensive list of approaches in mobility studies, as well as the journals and other centers that have developed around the heuristic.

[16] While information is a theme on Ricoh's main homepage, see: http://www.workintelligent.ly/information-mobility/. This article explicitly talks about thinking "mobility" beyond the mobile phone and as information working for you: http://www.workintelligent.ly/information/transformation/information-mobility-business/.

[17] See this sponsored page: http://www.theatlantic.com/sponsored/ibm-mobile/. Also note: http://www-935.ibm.com/services/us/en/mobility/infographic/mobile-infrastructure-study.html

[18] Mobility studies also point to the fear of lost human agency amid object-oriented agency, and indeed, Cisco's "Tomorrow Starts Here," which is the follow-up campaign to "The Human Network," does suggest such things: how the world is awoken, alive with agency and smart data (https://www.youtube.com/watch?v=BJSjbttGaVM). The "mobility" meme does often suggest this emphasis on object-oriented agency. However, I argue that this sense of agency in objects does as much to reinforce a popular desire for retaining a sense of agency in humans as it does orient theorists away from the human at the center. See the introduction chapter's discussion of rhetorical modernism for a further discussion and the concluding chapter for implications. For this chapter's purposes, the efficacy of oil company campaigns' proclamations, championing individual human movement, are at least in part attributable to fears that human control is indeed a fiction, with an attendant desire to perpetually reclaim such lost agency.

[19] There is a specific gender component at work here. The plane, as a fearful space that strips agency or control over its functionality, frightens the wife. But her dependence on a protective husband comforts her. Such a thematic, between the domination of nature and the dominant husband, reflects upon ecofeminist arguments that hegemonic binaries reproduce one another (see Plumwood, 1993).

[20] Downey (2009) lists these three in the top seven of non-OPEC upstream companies,

with each producing 2.7, 1.9, and 1.85 millions of barrels per day of crude oil, respectively (statistics from 2007).

[21] Petrobras has been at the center of an enormous graft scandal, in which executives have been tried (and some convicted) for manipulating large Brazilian engineering contracts. The scandal has severe repercussions for a country heavily dependent on the solvency of this company. Current President Dilma Rousseff was an executive of Petrobras from 2003–2010 (overlapping with her position as President Lula's Chief of Staff). Further, in relation to this chapter's analysis, it is instructive that the scandal ties Petrobras to infrastructure. Petrobras' focus on mobility systems was both a discursive maneuver and a move with purported financial incentives.

[22] You can also find individual articles from the magazine on Petrobras' main website: http://www.petrobras.com/en/home.htm.

[23] Shell (n.d.a; n.d.b.; n.d.c) denotes an interactive video in which you can choose between these three stories. Youtube videos of commercials that isolate each story are no longer active links. Please see author for copies of these videos.

[24] The history and relationship between oil and gas is a complicated one, where one could argue that oil companies have always been oil and gas companies and simultaneously argue that something new is under way. While gas was originally seen as a waste product of oil fields, it acts as pressure that enables oil to be released from a well (Yergin, 1991). It was primarily used as localized fuel for oil fields before taking off as its own business around WWII (Melosi, 1985). As of a few years ago, 25% of natural gas production was "associated gas," or gas from an oil field, with very little capital incentive for unconventional sources of natural gas (Downey, 2009). Recently, these unconventional sources have sparked the natural gas boom, not because they suddenly became known, so much as that they only recently became seen as cost-competitive.

[25] The full quote offers Sterne's (2006) project: "to explore some of the issues raised by thinking about communication and transportation as a combined, intertwined process—as a massive assemblage of organized movement in space" (p. 119). This organizational and spatial component of transport and communication underscores the relationship between mobility studies and geography, sociology, and communication (Cresswell & Merriman, 2011; Urry, 2007; Wiley & Packer, 2010). The current project includes a material rhetoric to examine the discursive elements organizing a logical sequence that links mobility, movement, communication, transport, and energy.

[26] The issue's accompanying video translates "homem" as "man."

[27] I have consulted a Portuguese speaker to verify these multiple meanings.

[28] The tunnel functions as a common sexual trope and a reflection of the lit urban nighttime scene. As such, both associations suggest a release of energies (see Chernus, 1986).

[29] It is unclear if the pull menu has any effect. Further, one does not need to do anything for the images to continue coming at the viewer in rapid succession. The subsequent images may include kitchen activities such as a stove lit manually in different ways, stereo nob-turning and sound waves, motorcycles, cars, and bicycles making various sounds (revving up, opening and closing a door, honking, ringing a bell, and so on), bathroom activities (shaving, turning on the shower, closing the shower curtain, dropping a rubber ducky), various alarm clocks, split screens of water usage, and, as a way to punctuate the end of the orchestral tune, the click of a camera.

[30] Sharma will later describe the process of such micropolitics as "recalibration" (Sharma, 2011).

[31] A "rhythmanalyst" studies the repetitions of these vast movements that produce space and time. Similar to Merriman (2012) on mobility, Lefebvre (1992/2004) argues for "energy" as a third category, but not a Hegelian synthesis, to space-time; the rhythmanalyst, by attending to one's own bodily rhythms, embodies a mode of analysis in which movements, energies, and rhythms coalesce.

[32] While the speed, repetition, and ubiquity of this advertisement included negative written comments by certain audience members (Shell, 2012b), I am suggesting that these attributes, directed towards a wide and diverse audience, are attempts to discourage reflection (see Deluca, 2006).

[33] At the time of this writing, the website currently titles this video "Energy in Our Lives." I cite the video and other texts as they are listed at the time of screen captures (April 25, 2014), but I am offering updated links in the citation page where appropriate. Not all pages still exist, and some addresses have been replaced (yet with the same content). Please see the links in the reference page, or contact the author for screen and video captures.

[34] At the time of this writing, the campaign is still active. Subsequent ads tell someone's story of energy resources and energetic movement and conclude, "[Name] is Energy." Here, energy connotes mobile practices at human loci. "You" are the locus of the energy flows. Your world is defined by energy-as-movement and so needs the immutable energy mobile to ignite energy-as-resource. That is, your (mobile) life takes (ExxonMobil's) energy.

[35] The desire for this aspect should be clear enough. For instance, Petrobras had some accidents since their "Mobility" issue. The continual discoveries of new reserves to maintain our mobility also suggest, in McKibben's term, more and more "extreme energy" sources. Petrobras' work on pre-salt layers reflects extreme energy production, and is work they championed in the "Mobility" issue. That said, concurrently, we must attend to the counterclaims that increased energy in developing countries is a social justice issue. I take on this focus in the next two chapters.

CHAPTER THREE

PRONUCLEAR ADVOCACY: *PANDORA'S PROMISE* AS MODERNIZATION THEOLOGY

Pandora's Promise, a pronuclear energy documentary that premiered at the Sundance Film Festival in 2013, narrates individual stories of five "green nukes" (Lynch, 2012), avowed environmentalists that were purportedly once antinuclear advocates but have reversed course and are now vocal in their pronuclear advocacy. The film frames this reversal in stance as an environmental decision: that to combat the largest environmental existential threat—climate change—those interviewed changed their viewpoints on nuclear energy. In this context, they see nuclear energy as the only viable option to combat climate change while meeting the accelerating energy demands of the developing world. To elaborate on this stated thesis, the film frames climate change as itself an unintended consequence of modernization, particularly as it relates to energy production; however, simply because we face this existential threat does not mean we abandon the promise of energy and its powering of the modernist project. Indeed, the film argues for the opposite, in which we recommit to nuclear energy to make it safer and benefit from its seemingly unlimited capacity for powering the modern world. The source of energy becomes less important than the ends it promises: mobility, linear progress,

lifting the world out of poverty, and so on. Therefore, the threat of climate change suggests diving deeper into the technology box where we find nuclear energy: or, Pandora's promise.

In this chapter, I argue that *Pandora's Promise* renews the promise of science and technology through the rhetorical strategies under the eco-modernist term, "modernization theology" (Shellenberger & Nordhaus, 2011). The film features protagonists testifying to their modernist faith, a faith tested but ultimately recommitted amid such concerns as major nuclear accidents. Displaying faith in the face of such unintended consequences situates advocacy for nuclear energy as a commitment to human knowledge, and technology as overcoming all obstacles we unwittingly produce. Examining this strategy helps further theorize how energy discourses, and other large-scale sociotechnical projects, re-inscribe the promise of teleological modernist progress narratives. First, energy-related discourses under an eco-modernist umbrella encourage faith in modernization. Second, commitment to modernization primarily manifests through discourse (see Grigg, 2007[36]). To speak forth and reiterate one's commitment to modernism reproduces that commitment and compels actions by those who speak their faith and, the hope goes, those who hear or bear witness to its utterance. Modernization theology as a rhetorical strategy points to how support for large-scale projects such as energy development are (re)produced in discourse. In the case of nuclear energy—and in particular its rapid deployment—there are tremendous implications to such faithful commitment to modernism for international energy politics, such as the nonreflexive justification for or reinforcement of energy production's sociopolitical power relations.

Technical deployments like nuclear energy require the constant reproduction of

rhetorical narratives, discursive frames that attempt to reinforce cultural commitment to nuclear power that wavers with every "normal accident" (Perrow, 1984) or unexpected geopolitical, environmental, or social shift related to its production process. Enmeshed in a network of economics, policies, and risks, nuclear energy is also enmeshed in symbolic meanings tied to master narratives of the cultures in which it is embedded (Chernus, 1986; Geels & Verhees, 2011; Mechling & Mechling, 1995; Welsh, 2000). In turn, nuclear energy deployment requires rhetorical efforts that combine a) articulations of nuclear energy as central to base cultural narratives; and b) a loyalty to nuclear energy where proponents see through its challenges and restate/renew their loyalty to it. In this case, modernism is the master narrative. *Pandora's Promise* follows converts' stories to argue that we must constantly accelerate our efforts in nuclear energy deployment for the purposes of progress: to overcome the inevitable negative consequences of modernization so that technology can continue to bare its fruits. In all, the film builds the case for nuclear energy and its rapid deployment toward combating the larger peril of climate change. However, it also speaks to technical rationality and modernism more broadly. The argumentative framework follows these premises: a) modernism is the discursive promise of human uplift via modernization; b) modernization is powered by technology; and c) energy resources are its key technological driver (Nye, 2004). Pronuclear energy discourse functions as a renewal discourse, in which to articulate positive attributes to nuclear energy is also to renew a faith in this promise of modernity (see Ulmer, Sellnow, & Seegar, 2007).

Pandora's Promise circulates amid other eco-modernist discourses, which it draws upon. In particular, interviewee Michael Shellenberger, promoter of the film and of

nuclear energy policy, coedited a book, *Love Your Monsters*, that I argue shares themes with the modernist logic of *Pandora's Promise*. *Love Your Monsters* offers a religious themed concept, "modernization theology," that promises human salvation through the unwavering commitment to technological progress, in which humans as toolmakers continuously fashion the world towards improving lives. Modernization theology functions in discursive practice as a heuristic for technological projects that require a long-term commitment amid inevitable challenges (such as the nuclear disaster that occurred in Japan 2011). To turn to pronuclear discourse is to see both attempts to frame modernism as a commitment to modernizing projects, and attempts to reiterate religious symbolic forms around nuclear energy and its limitless potential.

Pandora's Promise functions as a cultural performance of modernization theology. *Pandora's Promise* employs particular strategies to disseminate the message of faith in ecological modernism as faith in nuclear energy, where further technological advances will only continue to improve upon nuclear energy. The narrative encourages faith in modernization, and the film itself functions as the communicative action of publicizing that faith. To discuss this public avowal of one's faith, I use the analogy of the historical revival, defined as a public performance in which one shares one's religious awakening by way of voicing one's own commitment and of inspiring mass conversions (Kidd, 2007). I highlight the documentary as a cultural performance by drawing parallels between the historical revival and the circulating functions of the film. Sharing such faith-based testaments of the film protagonists' recounted conversion to nuclear energy guides the content and material dissemination of the film. Not only does the narrative of the film function rhetorically, but the film's protagonists and director carry the film with

them on tours and screenings in which the film acts as testament to their own faith-based stories. Audiences are invited to see and hear the reenactments of the protagonists' commitments and, in turn, are invited to shift their own perspective and change the ways in which they come to understand the reality of the world and nuclear energy's place in it. While the film mainly circulates among pronuclear advocates, it ultimately seeks to shift public discourse—perhaps through more people viewing the film, but primarily through those who do watch it to re-commit to advocacy efforts, disseminating the pronuclear arguments found in the film to those less inclined to support the energy source.

In what follows, first I offer an elaboration on "modernization theology" as a heuristic that encompasses eco-modernist discourses regarding large-scale modernization projects such as energy development. The next section offers a brief description of the film and its circulation, and also describes its modernization theology as a performed revival, or an event in which people explain their faith to others. Then I analyze the film through the rhetorical strategy of modernization theology as a journey in four stages: narratives of one's condemned past life, narratives of one's conversion, narratives of one's renewed commitment in the face of doubt, and narratives of a missionary commitment to extending salvation to others. In that modernization theology functions as a logic by which to support nuclear energy's rapid deployment and long-term commitment, I conclude by examining a few implications of a discourse that encourages two sets of options: abandonment, or total faith and commitment, to both nuclear energy and modernization more broadly.

Modernization Theology as Rhetorical Heuristic

How does the combination of religion and modernism build support for large-scale technology projects, particularly in relation to environmental issues? Modernization projects require a rhetorical legitimacy component in which faith in the promise of forward progress is renewed through discourse. Recent environmental discourses, specifically in efforts to combat climate change at a global scale, have articulated an environmentalism that links care for the world with a faith in development and modernization towards social and ecological betterment. Environmentalists using this discourse have subscribed to the names post-environmentalists, eco-pragmatists, eco-modernists, or even "modernist greens" (Brand, 2009; Latour, 2008; Kloor, 2012). The recent manifestation of this rhetorical movement can largely be traced to the work of Michael Shellenberger and Ted Nordhaus, authors and co-founders of the Breakthrough Institute (Nordhaus & Shellenberger, 2007; Shellenberger & Nordhaus, 2004). Such eco-modernist discursive efforts attempt to rearticulate what it means to be an environmentalist. In this frame, environmentalism is commitment to human progress and development and, in turn, to large-scale sociotechnical projects that can combat climate change while also maintaining economic growth.[37]

In 2011, the Breakthrough Institute came out with an online book, *Love Your Monsters: Postenvironmentalism and the Anthropocene*, which builds the link between modernization and the redemptive promise it affords (Shellenberger and Nordhaus, 2011). This form of ecopragmatist discourse embraces human potential through technology. "Modernization theology" is defined as the faith placed in humanity's technological capacities, but a faith that requires an active commitment to see its

modernizing promises through or to care for one's technological creations.[38] Recalling climate change researchers who have argued that humans are indeed causing changes to the environment (e.g., Oreskes, 2007[39]), *Love Your Monsters* argues that humans must embrace their agentic role in the age of the "Anthropocene," improving "our gardened planet" (Shellenberger and Nordhaus, 2011, Introduction section, para. 5) by staying committed to human agency through technology. Instead of apocalyptic doom that calls on humans to withdraw from nature before it is too late, the narrative in *Love Your Monsters* champions a commitment to the modernist dream of human gardening: of making and remaking the world for the purposes of human (and ecological) progress. Calling on its readers to "open our eyes to the joy and excitement" (Introduction section, para. 11) of prosperity, the authors suggest that also saving our ecological heritage will require us to "once and for all embrace human power, technology, and the larger process of modernization" (para. 3).

Within this framework, commitment to modernism must also recognize that "unintended consequences" are an inherent component of life (Shellenberger and Nordhaus, 2011, Evolve section). Here they borrow from Latour's reenvisioning of the Frankenstein parable, as well as his championing of the modernist narrative of attachments, not emancipation (Latour, 1991/1993, 2008). Shellenberger and Nordhaus' (2011) lesson is not to abandon technological projects but to "love your monsters" like they were your children, nurturing them when they misbehave and making them better (Introduction section, para. 8). They advocate for "a new posture and a new paradigm" (Introduction section, para. 11) in which we embrace the positives of the modernist project of managing the natural world and do not abandon the beauty of that project when

things go poorly. In that tools have always uplifted humanity, they argue, "we must understand technology as natural and sacred, not alien and profane" (Introduction section, para. 8). This faith in technology is a belief that civilization has indeed progressed and evolved through the modernist project—hence the title of their chapter: "Evolve: The Case for Modernization as the Road to Salvation."

"Modernization theology" functions as a conceptual heuristic for analyzing rhetorical modernism. Modernization theology helps guide the narrative logic of eco-modernist discourses or rhetorical attempts to articulate various modernizing practices with environmentalism, particularly the fight against climate change. Articulating development, large-scale projects, and theology attempts to fashion this modernization-as-salvation narrative toward particular policy implementations.

The following examination of a pronuclear text notes several preliminary strategies that congregate around this faith-based commitment to modernization. The overarching structure of the rhetoric of modernization theology suggests how discourse produces and reproduces the journey of one's (renewed) faith in the modernist project. Therefore, the key feature of modernization theology rhetoric is the concept of the journey. While a religious journey connotes the path to otherworldly salvation, a modernization theology connotes a faith in the modernist conceptions of reason, science, progress, and humankind's ability to garden the world. This evolutionary narrative is modernization theology's road to salvation. Its teleological narrative builds around the similar conceptions and global projects of modernization and development, in which discourses and practices assemble around the logic of human stewards improving the world along a track of forward progress.

Modernization theology, as taken up in *Pandora's Promise*, includes at least five other characteristics. First, it emphasizes its modernist impulse. Modernist faith, as illustrated through discourse such as the film, is situated in a commitment to reason (Grigg, 2007), the scientific removal of prejudices,[40] and the belief that human progress overall follows an upward trajectory. Second, it encourages personal journeys of conversion, in which its audience is called upon to associate this faith in modernism—as a commitment to modernization and the global project of development—to faith in particular (large-scale) projects. These personalized journeys, therefore, can be ones of conversion or the recommitment to a faith one has already established. The journey of conversion to nuclear energy, for example, unfolds through linking nuclear power to an already existing commitment to modernism, creating a recommitment to modernism. Therefore, the third characteristic is one of renewal. Human progress may not always be linear, and so this modernist impulse requires a commitment to not be swayed by bumps in the salvation road. Renewal discourse emphasizes a future orientation and opportunities in crises, particularly pertinent with large-scale technical systems that require long-term planning and for which future crises are anticipated (Cotton, Veil, & Iannarino, 2015; Ulmer et al., 2007). Amid the unintended consequences of modernization, bumps in the road may test one's faith, but that fear and self-doubt should recommit one's conviction, not lead one to abandon the faith. The fourth characteristic combines stylistic components. Bartow (1997) argued that the success of evangelist Aimee Semple McPherson drew from her content and style, particularly the lived embodiment of her narrative tellings as both performer and preacher. Reid (1995) also speaks of combined rhetorical styles, particularly the rational written form and the

emotional expository form, in the history of America's theological praxis. In secular texts that tap into themes of religious communication, like *Pandora's Promise*, combining "rational" modernism with "emotional" religiosity sutures claims of dogmatism while still being reliant on the symbolic codes of salvation. Fifth, while a conversion emphasis focuses on one's personal journey of understanding, it also emphasizes performing it through public discourse. Modernization theology as a rhetorical concept denotes a public enactment of commitment, wherein an audience member who hears of this journey will potentially be inspired towards faith. This fifth characteristic is a missionary politics that identifies scientific progress, the key element of modernization, as a theological endeavor that we must commit to for ourselves and spread to others for the salvation of the world.

In the next section, I will use revivalism as a general heuristic for the fifth characteristic, publicizing one's faith, but I could use other terminologies and religious genres. For instance, the protagonists of the analyzed film, *Pandora's Promise*, could be classified as missionaries of modernization theology, attesting to the salvation they proselytize to others.[41] In the final section of the analysis I will speak of such missionary rhetoric in the film. Revivals and missions, therefore, should not be thought of as competing religious genres, but as different ways to describe the communicative enactments of a modernization theology. Indeed, the articulation of "modernization" and "theology" is designed to blend such categories, where one is called to take on faith empirical science and technology as guides into the ever-changing future. This articulation streamlines a specific religious conception committed to certain ideals, as opposed to counter-doctrines that may question the universal promises and imperatives of modernizing projects, such as those found in certain types of liberation theologies (e.g.,

Manz, 2004). Thus, modernization theology is not actually tied to any singular theological tradition, but instead blends categories to favor a general conception of faith in modernity.[42] Still, its commitments must be exercised in discourse. While the pilgrim's "road to salvation" (to take the phrase in *Love Your Monsters*) is about oneself, the revival, or missionary rhetoric, is about speaking of oneself for others (see Howell & Dorr, 2007, on the difference between missions and pilgrimages). It is this public, communicative element I wish to highlight next, through the pronuclear text *Pandora's Promise* as an empirical example of modernization theology.

The Eco-moderns Hold a Revival

Pandora's Promise primarily follows five proclaimed environmentalists who purportedly once resisted nuclear energy, but now vocally support it. Michael Shellenberger is one of these featured protagonists. The Breakthrough Institute's pro-modernizing, pro-technology stance runs parallel and overlaps with the framing of *Pandora's Promise*, as do the eco-modernist works of others involved in the film. In this section, first I describe and offer background to the film. Second, I argue that the film functions as a performed revival. That is, I conceive of the film as performance or social practice (Labanyi, 2010), particularly taking on characteristics of a religious cultural performance that rhetorically enacts a modernization theology and circulates at least among those promoting rapid nuclear energy deployment.

Pandora's Promise and its Eco-modern Advocates

Pandora's Promise is a pronuclear advocacy documentary that features eco-moderns and nuclear energy converts, including: Stewart Brand, founder of the Whole Earth Catalog; Gwyneth Cravens, novelist and columnist; Mark Lynas, past activist and author of a handful of climate change books; Richard Rhodes, author of numerous nonfiction books, including a classic series on the history of nuclear weapons; and Michael Shellenberger.[43] Each protagonist narrates their own past journey of conversion to nuclear energy, as well as why they maintain their nuclear commitment. This narrative was not simply a theme that emerged in the making of the film, but a precursor to those voices director Robert Stone chose to feature in the film. Throughout his DVD commentary, Stone explains how, reflecting his "own personal journey," the film is about the personal conversions of environmentalists who had "gone on…this journey" from dogmatic antinuclear environmentalist to enlightened pronuclear environmentalist (Robert Stone Productions, 2013a).[44] The film features these converts throughout as it details its case for nuclear energy expansion as the only viable option to meet demand while mitigating climate chaos. The film also addresses some of the safety concerns surrounding nuclear energy, countering concerns of antinuclear environmentalists by refuting some of their statistical claims on death rates,[45] contrasting nuclear energy's safety concerns to other energy sources, and pointing to technological advances that improve upon nuclear energy safety. In particular, the film builds its legitimacy claims for nuclear energy around the claims Stoett (2003) identified ten years prior,

> detaching in the popular imagination nuclear energy production from nuclear weapons proliferation fears … feeding into the broader project of espousing a modernization project for developing states, and—most recently—the argument that nuclear energy use can mitigate global warming. (p. 99)[46]

The film's protagonists attempt to reframe the energy discussion around these claims, in particular arguing for nuclear energy as the green energy option for a modernizing world.

The film's modernization theology functions to renew one's commitment to a technology that requires not only a long-term technological and political commitment but a long-term discursive, ideological, and emotional commitment as well (Geels & Verhees, 2011; Welsh, 2000). Public acceptance of nuclear power has always been ambiguous and "reluctant" (Bickerstaff, Lorenzoni, Pidgeon, Poortinga, & Simmons, 2008) and tends to be much easier to lose than to gain (Whitfield, Rosa, Dan, & Dietz, 2009). As attempts to sustain long-term commitment, nuclear discourse legitimacy claims often tap into similar religious symbolism, in particular emphasizing faith in scientists' capacity to shepherd the limitless powers they have unlocked. More generally, the rhetoric of science and technology often appeals to religious symbolism (e.g., Johnson, 2006). As Welsh (2000) puts it: "In a paradoxical manner appeals for progress through science and technology—the application of rationality—lead to calls for the suspension of rational and economic doubt on the basis of 'faith'" (p. 8). Nuclear discourse in particular slides from the scientific and rational to the faith-based such as in the use of transcendental symbols. Analyses of nuclear weapons discourse have emphasized its religious cultural symbols as "the unifying embrace of limitless power" (Chernus, 1986, p. 9). Like the religious comingling of life and death identified in weapons discourse, nuclear energy discourse offers energy as the resolute promise of salvation, even if it also presents fears of meltdowns and radiation exposure. Energy's potency and entelechy—two master themes identified in nuclear discourse by Kinsella (2005)[47]—hold a promise that (ideally, for its proponents) outweighs any peril. Mechling and Mechling (1995), for instance, analyze

the Disney film *Our Friend the Atom*, which features the magical powers of a Genie (and all its metaphorical entailments). Chernus' (1986) emphasis on "limitless power" also functions in this genie metaphor, where ultimate cosmic power—seen in the swirling galaxies encircling the Nuclear Genie released from his lamp—is bottled and contained within the lamp and the three granted wishes. As a potent, entelechial force, nuclear energy symbolizes a celestial power in modernist theology: the moment of not an external God but a God that works through human powers that unlock this ultimate symbol in human technology and the progress narrative it affords. Nuclear energy, in a modernization theology narrative, can be the road to salvation, in which we evolve into an energy source that powers the world without fossil fuels and their no longer tenable consequences.

In *Pandora's Promise*, parallel postenvironmental or eco-modern narratives coalesce, linking modernization and theology around nuclear energy. Various discourses—particularly those produced by people also involved in the film—are mobilizing a shift by which "nuclear energy" is understood less by its associated peril and more by its limitless promise. *Pandora's Promise* features protagonists that can speak to and encourage faith in modernization theology. Each of the main protagonists are writers and, in addition to the books mentioned above, have written pronuclear books that often include similar themes of eco-pragmatism, embracing the Anthropocene, One Worldism, and following a journey towards nuclear energy as salvation (Brand, 2009; Cravens, 2007; Lynas, 2011, 2014; Rhodes, 1993). For instance, Rhodes, whose pronuclear energy book is titled *Nuclear Renewal* (1993), also wrote the introduction to Cravens (2007). Rhodes begins and ends that introduction through a modernization theology frame:

"Gwyneth Cravens evokes an old tradition in this very modern book: seeking understanding by going on a journey…Let's join Gwyneth's pilgrimage" (Cravens, 2007, pp. xi, xv). Post such pilgrimages, the film includes the narratives of these protagonists' commitment to nuclear energy's modernism. The protagonists' journeys demonstrate that, perhaps like some skeptics in the audience, they too were once lost but now are found.

Pandora's Promise and its Rhetorical Circulation

Pandora's Promise is one nodal point in the discursive struggle to shift (or move) public discourse by articulating nuclear energy anew. A rhetorical emphasis can illustrate how public discourse shifts through the rearticulation of meaning in public consciousness (DeLuca, 1999), and *Pandora's Promise* offers one rhetorical invitation to shift public discourse on nuclear energy. Admittedly the film did not garner the same audience numbers and positive critical reception as particularly noteworthy documentaries such as *Food Inc.* (Lindenfeld, 2010), though *Pandora's Promise* has won a few environmentally-themed festival awards such as Best International Documentary at the Kuala Lumpur Eco Film Festival and the Green Award at the Sheffield Documentary Film Festival (KLEFF, 2013; Pandora's Promise, 2013). Regardless, the film does circulate well among particular audiences. While not overtly successful when conceived of as an isolated text, *Pandora's Promise* can also be seen as a pivot of pronuclear interests within broader discourses of eco-modernism. This understanding highlights the film in a series of discursive articulations linking modernist promise and technological commitment. I turn to the film as an elaboration of strategies that are reflective of other pronuclear texts in circulation, a discursive flow into which the film enters. Therefore,

while the film does not necessarily measure a large quantitative impact in terms of viewership, it coalesces various interests around articulating nuclear energy as a/the solution to a sustainable energy future.

Pandora's Promise as a material artifact is interconnected with a series of channels or networks: the eco-modernist channel, the modernization theology narrative, the nuclear scientist channel, eco-documentary channels such as the Sundance circuit, and donors who seek sustainable economic futures. As illustrated above, the film features writers who all disseminate similar eco-modern, faith-based narratives in various capacities. Primarily, the film functions as a nodal point that articulates the nuclear science community with eco-modernist networks and discourses, particularly as developed by the Breakthrough Institute. In my attendance of two 2014 American Nuclear Society (ANS) conferences,[48] Stone, Brand, Cravens, Shellenberger, and Lynas were all cited by various nuclear professionals: quoted as green nukes, mentioned as an example of people changing their mind on nuclear energy, and referenced as allies in the discursive struggle to promote nuclear energy.[49] The film itself was further discussed at ANS as a particularly useful tool for disseminating pronuclear messages. For instance, an opening plenary speaker asked the audience of a few hundred how many had seen the film, and spoke of it as a narrative that would lift all nuclear professionals' spirits and recommit them to the task of promoting their work into the future. Further, this presenter's speech was couched within a larger mobilization for nuclear scientists to share their stories, that is, to promote the circulation of a positive narrative around nuclear energy. Additionally, the film intersects with various channels related to environmental and energy themed discourses. Stone consistently utilizes his cache—

having directed the anti-nuclear weapons documentary *Radio Bikini* (1988) and the environmental history documentary *Earth Days* (2009)—both to build the film's ethos and encourage its circulation among eco-discursive circuits. This circuit includes Impact Partners, co-founded by the film's producers Jim and Susan Swartz, whose work often combines Christian elements with "environmental crusades" in various documentary and other artistic formats (+ImpactPartners, 2015). Further financial backing of the film includes Paul and Jody Allen through their Vulcan Productions, and Virgin Airlines' Richard Branson, each a popular figure in various sustainable energy futures efforts, with "sustainable" both a reference to combating climate chaos and to sustaining global economic growth.

In sum, *Pandora's Promise* circulates among particular audiences and offers strategies on how to speak of and remain committed to one's pronuclear stance. The film presents its protagonists' faith in nuclear energy in an attempt to turn audiences into witnesses of this faith and, ultimately, build public support for taking nuclear energy salvation around the world.

Pandora's Promise as Performed Revival

Each author featured in the film attempts to revive interest in nuclear energy through recommitting faith to modernization, and therefore to science and technology, solving our climate problems. As a performance of one's previous conversion and current committed faith, these protagonists stand as revivalists: performers that speak their faith in an effort that encourages others to witness said faith and perhaps convert as a result of this witnessing. This section borrows from the revivals of colonial America's First Great

Awakening to suggest ways in which *Pandora's Promise* attempts to enlist audiences into its modernization theology, either by way of a recommitment to nuclear energy and modernism, or by way of conversion to nuclear energy through one's commitment to modernism. The film does so by compiling, in its content, a series of protagonists that function as "Revivalists," or people that publicly promote their faith, and in such promotion—as an assemblage of various pronuclear discourses and channels—the film's rhetoric does circulate at least among particular audiences within a series of networks.

Revival rhetoric denotes an evangelical mode of speech in which believers restate their faith and moment of (an often individual) conversion. In particular I am working from a historical understanding of the American colonial revival. As outlined by Kidd (2007), the revival was an organized evangelical event, in which a performed gospel hoped to incite conversions en masse and bring about attendant salvation. A revival in this sense is a performance or event in which one who is committed to the faith speaks about their commitment, often in a bombastic style, but not necessarily so (Kidd, 2007; Reid, 1995). While conversion may imply a changed position and revival a return to an older position, historically the two have worked in tandem. The desired audience effects from revivals ranged from the renewal or recommitment of one's spirit to full religious conversion (Kidd, 2007).[50]

Characteristics of the revival event include the act of speaking one's commitment and faith in order to revive one's personal conviction but also call on others to witness the power of such faith. Nuclear energy has a long history of seeking continual revival, with the supposed "nuclear renaissance" being one recent instance (Nuttall, 2005). At the time of the film, belief and economics supporting nuclear seemed to be wavering in various

countries across the globe, particularly in the wake of the Fukushima Daiichi disaster (see Ramana, 2013, for various nation-state responses). So too will new struggles in the future challenge investment in nuclear energy. By having its protagonists perform their faith, the film attempts to build faith among its audience in modernism and in seeing nuclear energy deployment through in the face of such uncertainty and creeping doubts. Two publics are targeted in the film-as-revival. The first audience includes those already committed to nuclear energy, but needing their faith reinvigorated in the face of perpetual challenges to nuclear energy. The second audience includes those who, while purportedly antinuclear, have an opposition that, according to Stone, is "very broad but […] very thin" (Robert Stone Productions, 2013c). If one is not entirely sold on nuclear energy, for instance, then an explicit hope of a revival is that the act of witnessing may convert them or shift their position. The antinuclear environmentalists are indeed considered lost. But those who can be saved are those whose commitment to modernism can be revived. If you revive within people their commitment to modernist ideals of social uplift through technology, so the logic goes, then you can stimulate interest in modernization projects.[51] The framework of the revival, therefore, functions to emphasize the commitment to seeing through the positive potentials of (nuclear) technology. It further enlists a missionary politics, in which the revival inspires personal conversions, but towards the larger purpose of widespread salvation, or the desired expansion of people born again and experiencing God's grace. Finally, Revivalist performers who are born again can point to their own lost ways and path to salvation.

Pandora's Promise invites its audience to be stirred by the conversion journeys of others as a path for the salvation of the world. Stone further performs the film's role as a

revivalist event and himself as a revivalist, traveling with the film on screening tours and speaking forth the film's ability to either convert audiences or recommit the faithful. Director Robert Stone invites others to share the film as a mobile testament that can be carried and shared with others. For instance, Stone completes his DVD commentary with an extended case for viewers to vocalize their support, a repetitious call to action for people to share the film and discuss its rhetorical arguments. In his screenings, Stone mirrors the Revivalists who "traveled unbelievable distances and risked health and comfort in order to preach the gospel to thousands across the Atlantic world" (Kidd, 2007, p. xviii).[52] One of these screening events was captured in a DVD special, when Michael Moore interviewed Stone after the screening. Here Stone emphasized how audience members mirrored a desired effect of the film: that of conversion to modernization theology. Stone asked the audience who supported "the general premise" of the film, a question he claimed to ask at each screening. Unseen but professedly, "just about everyone" after this screening supported the premise, while only two opposed. Stone stated how he asked the same question at Sundance, where the film was premiered. While before the screening only twenty percent held a favorable attitude—a number Stone stated he found shockingly high—he concluded, "When I walked out of there, it was like eighty-five percent. And that's been consistent wherever I've taken it." This Sundance conversion shocked Stone, who stated to Moore: "and you know Sundance, my god, right?" Moore responded: "Oh I thought you'd be crucified" (Robert Stone Productions, 2013c). Instead, he saved. Stone continues to carry the testimonials of this film with him, in which protagonists and Stone himself share their personal experiences of conversion to inspire a religious fervor for nuclear energy.

Pandora's Promise's Path to Salvation as Modernization Theology

"Fear of meltdowns like Fukushima have made nuclear energy
synonymous with the disasters of the modern world.
But what if everyone has nuclear power wrong?"
-Description for a screening of the film (The University of Chicago, n.d.)

Pandora's Promise is constructed as a recounting or reenactment of various environmentalists' past conversions and continued commitment to both nuclear power and modernism. The first purpose of this narrative frame is to sway converts who are simply lost and can find their way back to modernism, with nuclear energy as the antidote to the existential climate crisis. The second purpose is to recommit the faithful to the rapid deployment of nuclear energy. To achieve this dual purpose, the film follows the rhetorical strategy of the modernization theology journey. The film's journey incorporates the various characteristics discussed previously and follows four stages. First, *Pandora's Promise* situates the "modern" emphasis of its theology by establishing its faith through contrast with antinuclear advocacy. Second, the film emphasizes a conversion narrative. Conversionism is central to both traditional and moderate evangelicalism and to the purpose of the historical revival (Kidd, 2007). The film's performance of recommitted faith both encourages witnesses to be reborn, and also recounts how the pronuclear advocates are born again proponents. This personal journey of theirs continues amid the challenges of nuclear energy that were contemporary to the film, specifically the Fukushima Daiichi disaster. While they are already faithful to nuclear, the protagonists admit some doubt in relation to Fukushima. Their revived commitment is stated through the film. Last, their personal journey on the road to salvation is also the salvation of the world, or as Cravens' book title puts it, nuclear energy is seen as "the power to save the world" (Cravens, 2007). These four stages—the

burlesque apocalyptic, the reenactment of one's conversion or rebirth, a renewed personal commitment to nuclear energy in the face of subsequent challenges, and a missionary zeal to promote nuclear energy's salvation—are each explored in turn.

I Once Was Lost: The Burlesque Frame and Dogmatic Environmentalists

The film blames antinuclear advocates' unexamined beliefs—previously held by the film's protagonists—for causing widespread doubt of nuclear energy as a viable solution and, more broadly, of the master narratives of progress and of science as breaking down prejudices and leading human progress. Just as the context for the historical revivalist movement, or First Great Awakening, was the sense that colonial America was losing its ways and that religion needed to bring believers back into the fold, *Pandora's Promise* suggests that antinuclear advocacy is making people skeptical of modernism (Kidd, 2007). The protagonists' narrative recounting of their past lives includes a substantial focus on their lives before their "rebirth" or conversion: as dogmatic, antinuclear environmentalists. The film contrasts the framed dogmatism of the Environmental Movement—as stated by the interviewees, visualized in images of protestors, and embodied in antinuclear activist Helen Caldicott—with the clear-headed theology of the pronuclear environmentalist.

The setup of the film's antagonists, as Peeples et al. (2014) find with the coal industry, combines apocalyptic rhetoric and a burlesque frame, "a frame of rejection in which an advocate ridicules opponents mercilessly" (p. 231) by presenting the opposition as thoroughly nonsensical. The pronuclear rhetoric in *Pandora's Promise* heightens the apocalyptic narrative of climate change while positioning the oppositional stance—of

apocalyptic diatribes against nuclear energy—as an "object of ridicule" (p. 232) stripped of any possible identification by the audience and "defective beyond repair" (p. 236). For instance, Michael Shellenberger critiques the antinuclear film *The China Syndrome* and its depiction of "the worst case scenario [as] apocalyptic." The burlesque frame positions those that unreasonably say no to nuclear energy as burying everyone in the true apocalypse: the climate chaos world of increasing fossil fuel burning. Employing "the scoffing dismissal of burlesque" (Peeples et al., 2014, p. 244), then, enables the film to situate its own articulated modernization theology as reasoned "common sense" and, as Angwin's (2013) review interprets the film, to view the narrative as a thoughtful piece of information sharing instead of a "Road to Damascus" conversion story (cited in Adams, 2013).[53]

The film opens with this dual framework: of the antinuclear environmentalist ideology as foil to pronuclear modernization theology. Visual cues and statements frame the closed-minded beliefs that the main characters once held. The opening shot comes into focus over waves crashing against the shore. Then the film cuts to an Indian Point Nuclear Plant protest. A protest sign reads, "the root of all evil," as Helen Caldicott calls the nuclear industry "wicked." The next scene shows Stewart Brand staring out over the ocean. Brand speaks in the present tense as a hitherto unexamined statement of fact, simply taken as a given: "As a lifelong environmentalist, I'm against nuclear." This sets up his subsequent comments, when he starts to question all that he and other environmentalists believed. Brand also opens the introductions for all five of the film's main protagonists. In another introduction, Gwyneth Cravens begins, "I was against nuclear power. All you had to say was Three Mile Island, Chernobyl, atomic bombs.

Atomic weapons. My mind was made up, definitely!" These statements stand in for Brand and Cravens' past selves as dogmatic antinuclear proponents. In the film, they share with the audience their past, misinformed ways.

Later in the film, Mark Lynas shares a similar explanation of his previous anti-nuclear stance as an unexamined belief:

> I was against nuclear power because I was an environmentalist. I am an environmentalist. And the two things go together. Certainly that always seemed to be the case. Looking back I suppose you could say I was a hardcore activist. It's almost like being in a battle zone. It's a kind of experience that most people never had, where you're battling the forces of evil almost on a day-to-day basis. Evil being the big corporation, those who are making big profit out of this destruction, and good being us… Well, I mean, nuclear power is evil. No doubt about it.

Over Lynas' recollection of his previous positions, the film shows an activist insurgency at a construction site. The juxtaposition—between on the one hand Lynas vocalizing the life he once lived before the conversion, and on the other hand protest images—positions environmental protesting as a misguided stance. But more than misguided: the film frames antinuclear activism as a fall, of not recognizing that this battle of good and evil, at least when it came to the nuclear energy industry, may have positioned Lynas on the side of evil. By the time Lynas has recalled his previous position on the taken-for-granted, undoubted evil of nuclear power, the visual cuts to present-day nuclear protestors. Here Lynas, as a Revivalist performer, shares what he was like—a protesting activist—before his rebirth. Lynas' "common sense" framework that articulated environmentalism to antinuclear activism becomes for him an untenable articulation in today's context. His previous identity, defined through the articulation of pro-environmentalism and anti-nuclearism, is disarticulated, as he recounts how he committed anew to a different unitary conception of the world built around tackling climate change.

The film often assigns such previously held beliefs to the legitimate yet ultimately misguided fears of nuclear weapons. Such fears, and attendant nonproliferation activism, are offered significant weight in the film though, ultimately, the film suggests that the continued conflation between weapons and energy are only exacerbating the palpable fears of, and inaction toward, climate change. That is, the fear of nuclear technology's peril, the argument follows, keeps (primarily American) society from remaining committed to nuclear energy's promise. Through archival footage and narrative recollections, an early portion of the film recounts the apocalyptic fears around nuclear annihilation. Brand refers to nuclear weapons as "a little window into some kind of Armageddon," as archival footage shows nuclear weapons tests while Brand further recounts his childhood nightmares and an historical billboard reads, "pray for peace prepare for survival." From this billboard, the camera fades and the film turns to antinuclear energy protests. In the DVD interview with Michael Moore, Robert Stone recounts how many who campaigned against anything nuclear believed that getting rid of nuclear plants would also get rid of nuclear weapons (Robert Stone Productions, 2013c). Therefore, when the main protagonists discuss their previously held kneejerk opposition to nuclear energy, the film juxtaposes these comments with images of archival and contemporary protestors fighting both weapons and energy.

The film frames this conflation between nuclear weapons and nuclear energy as something that was not thought through, but simply believed, and that conflation implants itself as the main reason why people continue to take an antinuclear energy stance. Most of the protestor images function as backdrop, where none of the protestors are heard except for sloganeering that illustrates the protagonists' misinformed pasts. For instance,

scenes of archival protests from the late 1970s and early 1980s follow Cravens' recalling how the time of Three Mile Island and *The China Syndrome* was when she "began to conflate" weapons and energy and the envisioned radioactive wasteland of either source. Richard Rhodes recounts his past "standard point of view that I think many journalists still have: that [nuclear energy] must be bad," speaking over images of protestors who, by extension, also remain misinformed. Cravens and Rhodes both speak of these past beliefs to ground their subsequent journey, reinforcing their support of modernization, which, in turn, determined their support of nuclear energy.

Activist Helen Caldicott functions as the primary burlesque foil for the film. Caldicott is the intolerable and ultimately rejected "fool" that must be removed from her pulpit of misinformation and not accepted, as would be the case in a comic frame (Peeples et al., 2014). The film explicitly compares antinuclear activists to global warming deniers, and constructs Caldicott as just as misinformed, aloof, and dangerous: the fool whose evil influence must be cast off. After Lynas comments on the "urban myth" of Chernobyl death rates fed to publics, the film cuts to Caldicott asking protestors how many more millions will die in the next Chernobyl. Then Shellenberger states that, to believe Caldicott and Greenpeace mortality statistics, "you'd have to believe" in "exactly the same thing global warming deniers think": of massive cover-ups involving scientific falsifications. At the end of the film, while the visual shows Caldicott speaking to an audience, Shellenberger discursively repositions Caldicott as archaic, stating that older generations tied to unfounded fears of nuclear energy may not change, but younger generations will. In all, the argument goes, Caldicott's apocalyptic messaging is keeping us from the real apocalypse that people are realizing we must address: climate change.

Shellenberger, in particular, consistently speaks of the former, "seductive" narratives that told his past self, before the film's timeline, that nuclear energy was evil. Shellenberger builds the narrative of his conversion through contrast, repeating phrases about the "very seductive narrative" of environmentalism that kept him misinformed for so long. Shellenberger recounts how, with his friends, they would look at the industry as "tools" and "stooges" of a "propaganda campaign," and how "to actually believe in nuclear power was, by definition, to be a dupe." This youthful Shellenberger's nonreflexive antinuclear stance is attributed to his socialization in an antimodernist cynicism, explained through *The Simpsons* and its depictions of a nuclear power plant. Both Amory Lovins and the Kyoto Protocol, in their counter to fossil fuels, also offered a "very appealing, seductive message" of a renewable energy utopia, one that "everybody I know believed," and that kept attention away from nuclear energy. Such a dogmatic "religion," as Shellenberger calls it, closed him off to anything that would counter that belief. Hence, Shellenberger disregarded assertions that natural gas plants are necessary supplements to renewables: "I'm sure people had told me that. And I didn't believe them." Subsequent awakenings shatter the constructed narrative of Shellenberger's past identity as an Antinuclear Environmentalist: that other alternatives are not feasible; that any risks to nuclear are ones we can overcome; and that the risks themselves have been overblown. To the infeasibility of alternatives, Shellenberger expresses disappointment in his past beliefs and "anger" at those "propagating that myth" or that "hallucinatory delusion" of this religion of renewables: those chanting that renewables (and efficiency) could replace fossil fuels alone.

In contrast, argues the film, a lack of faith in nuclear technology has led us astray.

In this context, of faith in nuclear technology, the film offers further examples of mistakes made because people did not let science guide them, such as: the unfortunate "price…paid for commercialization" of the light water reactor, peddled over the "real nuclear power" of closed fuel cycle reactors that reprocess spent fuel; Chernobyl as a disaster yet one blown out of proportion by environmentalists, who use statistics that are wildly divergent from the science cited in the film; and Cravens' blaming of emotional women's irrational nature for the Shoreham Nuclear Plant closure, stating that women hold up their hands at anything that "looks like it's bad" and say, "no, pl-please, we, we can't have that." Each example illustrates the theme in which closure to scientific rationality is holding back nuclear energy, and by extension human progress. Ultimately, the apocalyptic fear of this delayed progress is the threat of climate change. In Stone's DVD Commentary he states that, while nuclear energy will not guarantee avoiding the climate apocalypse, "it's guaranteed that if we don't, we're going to be facing a climate catastrophe" (Robert Stone Productions, 2013a). This catastrophic, apocalyptic counter to the misinformed apocalyptic environmentalist antinuclear narrative sets up the contours of the film protagonists' subsequent conversion: as a rationalized faith in nuclear energy, and as a transition from the antinuclear seduction to nuclear-as-savior. If we just listen to science, the conversion goes, we will see that nuclear energy's unintended consequences have largely been solved—or that, in the case of weapons, we can choose to move beyond them—and that we must embrace nuclear science and technology if we are to engage in the unintended consequences of climate change, which remain unaddressed. To embrace nuclear energy carries the promise of moving from lost to found.

But Now Am Found: Conversion Stories and the Road to Modernist Salvation

In the film's portrayal of the contemporary moment, of people mistrusting modernist teleology and in turn nuclear energy, the film as cultural performance functions as a planned revival by those supporting nuclear energy. This revival emphasizes past stories of conversions to inspire others to follow. While criticism of the film has focused on moments in which the protagonists share all the misinformation they once held regarding nuclear—undercutting their ethos as knowledgeable supporters[54]—that critique assumes the protagonists stand in as scientific experts. But Stone's interviewees were not selected for scientific credibility, but for building a conversion narrative from environmentalists once resistant or unreflexive in their opposition to nuclear. In the DVD commentary, Stone states that the film is about protagonists recounting the history of "their journey of conversion" (Robert Stone Productions, 2013a). The ultimate conversion is, instead of opening one's heart and accepting the Savior, opening one's mind and accepting Nuclear: "The environmentalists, those who care about climate change, need to engage in, and open their mind, and accept nuclear energy" (Robert Stone Productions, 2013c). In this section, I examine how the film is constructed around the personal road to discovery or salvation, not chronicling their conversion as it occurs, but recounting their path. The film constructs this personal journey of conversion in at least three ways: one, framing the film's protagonists as they reflect on the natural sublime and humanity's place within this supposed age of the Anthropocene; two, in road motifs that suggest paths toward salvation or continued damnation; and three, through general comments by its protagonists as well as those offered by a DVD interviewee.

Visuals in the film reenact the protagonists' reflections on their personal journeys

of discovery and ultimate salvation. When we are introduced to Stewart Brand, the visual motif of vast landscapes underlie Brand's search for answers amid his self-doubt. Before Brand first speaks in the film, he is framed standing away from the camera, looking out to the sun and its reflection cast against a body of water, with rock cliffs along the side. When he declares how environmentalism and antinuclear positions always seemed to go hand-in-hand, the camera cuts to an up-close profile shot. Brand does not look at us but holds a slight smile and pensive expression in his eyes as he stares out into the horizon. In that he is reenacting the journey already completed, sharing his faith with others, Brand asks, "but what if what I've been thinking all of this time, and what my friends have been thinking all this time, was wrong?" This moment of self-questioning is primarily reenacted through the visuals that overlay his question: his personal reflections as he ponders the great beyond and his place in the world.

Such reflections, staged outdoors as protagonists contemplate their personal journeys and the human role amid the sublime, further function as moments of transition in the film. In particular, Gwyneth Cravens' conversion primarily progresses through such imagery. When we are first introduced to Cravens, she is on a beach walking from the shoreline toward the camera. Then staring at us in an extreme close-up, Cravens confronts the viewer as she states that she was undoubtedly antinuclear and needed much help to change her mind. At this moment Cravens has determined that nuclear energy is the answer to her personal contemplations, as she turns from the ocean—symbolizing the sublime that ignited her questioning—and confronts the viewer to follow the same path (Oravec, 1996). Later, in the key transitional scene between the historical problems that nuclear deployment has faced to the existential crisis of climate change, Cravens walks

along the beach at a profile angle. As Rhodes states over this image that his friends, such as Cravens, mirrored his own conversion, Cravens enters from off screen and walks right to left across the frame. Cravens stops walking once one third of the frame remains in front of her. Walking right to left and stopping, Cravens' journey suggests that she is looking to the past and, as she stands there, the future is behind us in the nuclear "monster" we left behind: that which we abandoned and forgot to love. Cravens' bodily comportment mirrors the arc of the film, suggesting that she is looking back at the past mistakes she and others made in opposing nuclear energy. Moving in the film from a historical retrospective to climate change, this scene as transition suggests that our abandonment of nuclear has exacerbated our current predicament of climate change; having looked back on our nuclear faults, we must now look to our future and embrace climate solutions.

Amid these contemplations, road symbolism populates the film's reenactment of the protagonists' journey, in line with the Shellenberger and Nordhaus (2011) subtitle, "modernization as the road to salvation." Often roads symbolize either this road to salvation or, in contrast, roads that lead to dead ends or intractable obstacles. The film includes road imagery when our protagonists, specifically Stone and Lynas, enter the "danger zones" of Fukushima and Chernobyl. Instead of taking these roads to Damascus to persecute nuclear energy, they find their salvation. If seeing is believing, Stone takes the viewer on roads to "scientific truth" where we discover the opposite of what antinuclear advocates believe. As Stone films these path-centered journeys on roads to Fukushima and Chernobyl, various protagonists comment on their own previous paths of discovery, specifically commenting on how worries of radiation are overexaggerated.

Other roads point toward continued damnation. While Lynas comments on how the sun does not always shine and the wind does not always blow (a common rejoinder from critics of renewables), a road with a wind farm in the background shows turbines immobile. Another road includes one in the Global South—potentially Brazil—where after the camera captures traffic up-close, it pans skyward to the never-ending stacking of buildings in a favela. These two latter roads suggest that a) humanitarian efforts to expand electricity access are necessary to raise people out of poverty; and b) renewables will not make a dent, so our choice is between nuclear or fossil fuels—and with the threat of climate change, the latter is untenable. The argument states: as one looks at these two roads, one knows which path we must take on our journeys of self-discovery.

The protagonists' testimonials share a similar language of conversion and personal redemptive journeys as they vocalize their commitment to nuclear energy. Some comments include the sneaking suspicion they used to have but would not speak forth: What if they were wrong about nuclear? Mark Lynas, for instance, was "scared" to say anything about his suspicions because he did not want to make enemies of his environmentalist allies. However, the film's testimonials function as the performance in which these Revivalists articulate their faith-based journeys, reenacting how they finally had to change their mind and speak out—how previous articulations eventually became untenable. Lynas quips how he had "no doubt" that his reputation was at stake if he vocalized his transition, but that he could no longer keep quiet. Shellenberger, in recounting his history with Ted Nordhaus, states how, "we really accepted most of the basic ideas of the Environmental Movement" but became "disillusioned" with approaches to climate change. Cravens and Rhodes both state how they needed to hear the

testimonials of scientists over and over before they changed their minds. Finally, ex-Greenpeace director Stephen Tindale, asked in a DVD interview special about people's response to his change of mind on nuclear, responds: "I would accept that my change of line has been somewhat dramatic since [being antinuclear] was a central part of my own belief—it wasn't only in my job description, it was one of the things I firmly believed" (Robert Stone Productions, 2013d). The camera then cuts to Tindale sitting alone on a park bench, staring out in the distance. He is reflecting on his personal journey, and concludes the interview: "I'm sure there are some people who regard me as a traitor. And I am not a religious person, but, I think, it was like a religious conversion" (Robert Stone Productions, 2013d). Each story recounts some strong element of resistance to nuclear faith that, over time, became untenable. That moment of conversion centers around the climate crisis and nuclear energy as the central modernizing technology that can solve it.

Once the protagonists do make that conversion, and reflect on the gap between where they are and where (and who) they were, they question what they could have been thinking. Leading up to the opening credits, Shellenberger states: "Whenever you change your mind, so, radically, like those of us that have become pro-nuclear … you start to wonder what you were thinking. … The more you peel that onion, the more strange things you figured out." Such statements reflect a group of people that have been reborn and look back at their past selves as different (and lost) people. In recreating that conversion, they hope that others will witness their story and similarly shift their mindset.

Renewal of Commitment and Loving Modernization's Technological Monsters

This section illustrates the protagonists' moments of self-doubt and their ultimate recommitments to nuclear energy. In building its case for nuclear energy, *Pandora's Promise* primarily addresses issues that nuclear energy critics have had regarding safety issues. During filming, the tsunami and subsequent power plant disaster at Fukushima Daiichi occurred. By incorporating this disaster into the film, Stone reaffirmed a key component of modernization theology: that faith in modernism means not abandoning our technological monsters. Modernization theology cannot merely be about a single moment of conversion but, instead, must continuously be reaffirmed through discourse. Further, it must address the "monsters," or "unintended consequences," that accompany "progress" or modernization. In the film's narrative, Fukushima functioned to reaffirm a commitment to modernization theology amid a) some self-doubt among the protagonists; and b) a belief on the part of the audience that the protagonists' commitment to nuclear energy is both genuine and validated in spite of—and even because of—these challenges. In sum, such unintended consequences of nuclear energy production require modernist revival performances, or outspoken recommitments to not abandon one's technological monsters but, after such instances cause faith to diminish, to improve upon technological safety. In the filmic narratives, protagonists restate nuclear promises and the dangers of abandonment in order to revive or renew a personal commitment to modernism and, in turn, nuclear futures.

After the film introduces each protagonist and plays the opening credits, the audience is confronted with the devastation of the 2011 Japanese earthquake and subsequent tsunami. The camera shows the protagonists reflecting on what they see on

television. Literally, the television screens reflect through Lynas' and Cravens' eyeglasses; figuratively, they reflect on all the fear discourse that permeates the Fukushima news media coverage.[55] Shellenberger, with a furrowed anxious expression as he stares at the television, comments that he had not been pronuclear long before Fukushima, and that "it's hard to watch that happening and not start to question whether or not this is an energy source that is really safe." Amid such depicted doubt, Stone and Lynas decide to go to Fukushima to get their head around Fukushima and not "completely lose it." Doubt persists: once there, Lynas calls the radioactivity a strange invisible presence and "eerie," and he admits that he is beginning to have a "wobble" on his support for nuclear energy. He continues: "nobody can look you in the eye and say you shouldn't be worried." Lynas and Stone ask each other if they are still pronuclear, and Lynas tells Stone to ask him again in a few days when he has had a chance to get his head around it. These scenes build a sense that fears of nuclear energy are both reasonable and emotionally charged and that challenges to the articulation between nuclear and progress cannot be dismissed out of hand. Stone's later trip to Chernobyl follows a similar pattern, as Lynas narrates, "You can't go to Chernobyl and not re-examine your core beliefs about nuclear power." In both instances, themes of abandonment add to the eerie sense of the nuclear accident's aftermath. For instance, in Fukushima, cars are abandoned on the side of the road; buildings are abandoned as Lynas and Stone drive by decrepit stores. Stone and Lynas question their support for nuclear energy in a parking lot: instead of a road, they are questioning while immobile, scanning the deserted landscape. To recommit, they will need to continue down the road and not abandon the nuclear and modernist project.

Stone mentions in the DVD commentary, when in the film Lynas and he first travel to Japan, how he was often asked if he would abandon the film project post-Fukushima. But since one does not abandon one's creations—be it monsters or film projects—Stone "felt quite the opposite" (Robert Stone Productions, 2013a). As "the baggage that…most of the audience would come to the film with [in that it was] the most recent experience with nuclear power," Stone incorporated Fukushima as "a central part of the film" (Robert Stone Productions, 2013a). This central status positions Fukushima as an ill-fated calamity of our technological creations but, ultimately, one that demonstrates the strides nuclear technology has made and, if we continue to love and support our technologies, will continue to improve. A common analogy for this engineering logic, of finding solutions to our problems, is the airline industry. In another DVD interview, climatologist James Hansen somewhat dismissively says, "yeah, there have been a couple accidents" of significance in nuclear energy's history. But he adds: "If you have an airplane crash, that doesn't mean that—well, we're not going to have airplanes anymore" (Robert Stone Productions, 2013b). Instead, Hansen concludes, you find out the problem and make subsequent planes safer. In other words, societal norms have determined that we love our airplane monsters, chastising but further supporting their technological components when they falter. This reasoning suggests we follow the same logic for nuclear energy.[56]

The main culprit fighting against nuclear energy, then, is not the accident. Accidents in this frame are not unexpected consequences that give pause and cause for abandonment, but instead are unintended consequences of modernization that we can and must address and overcome. Therefore the main culprit is the impulse to abandon the

challenges that the modernist promise will inevitably present. In this context, the film spends a lot of time on nuclear technology's historical achievements, which would have already realized the nuclear promise if we had simply followed through on our commitments.

The film places particular emphasis on the fateful history of the Integral Fast Reactor (IFR). Charles Till, one of two nuclear scientists featured in the film, directed the advanced reactor development program at Argonne National Laboratory's Idaho facility from 1984 until 1994, when funding was cut. The film introduces Till via a demand image—in which he stares at the camera in an extreme close-up for thirteen seconds—and his stated desire to do something for humankind by unlocking this "unlimited source of energy." The film recounts successful demonstration projects, in which the facility invited international guests to witness the simulation of meltdown conditions that were subsequently averted. Till recounts the fear and doubt others had during the demonstration, in contrast to the Argonne scientists' faith in its technology. Till explains how guests "turned around like so to see if I was, or if the Argonne guys were running," and that as meltdown conditions were simulated, "you could just stand back" and watch as "the reactor shut itself down" without any action required. Amid dissonant musical chords that precipitously drop and disperse, the scene builds a heroic tale of crises not simply averted but rendered obsolete. This testimonial is not simply a demonstration of the technology. It also illustrates the faith Till and others place in the technology. When asked to confirm that the IFR could not melt down, Till stares at the camera, states, "no, it can't melt down," and holds his stare. Statements of technological certainty position the demise of the IFR's commercialization as due to political jostling and ineffective policy,

not ineffectual technological capacities. *Pandora's Promise* spends much more time on the IFR story than more recent developments in order to demonstrate how committing to nuclear technology is the only obstacle preventing it from continuing to improve and expand. Loving these technical monsters will enable humans to continuously renew all that human technology—as tools that extend our capacities—can achieve and overcome.

Salvation Army: Mobilizing the Global Mission of Nuclear Energy

Pandora's Promise suggests that humans harnessing the power of nuclear energy will save the planet and uplift humanity, revealing its globalized teleology. As efforts that "try to leverage communication to change the world" (Schultze, 2005, p. 7), this missionary rhetoric identifies nuclear as divinely chosen to lead the charge (see Zúquete, 2007). The film does not simply discuss the abandonment of projects like the IFR as an unfortunate historical lesson for the U.S., but also for the rest of the world. The middle of *Pandora's Promise* functions as its key moment, in which the focus shifts from the historical problems of nuclear technology, and the contemporary crisis of the climate, to the universal desires for energy, the promise of modernization and its social practices, and why it can only be nuclear energy that meets demand and brings about energy's attendant social betterment. Here the film moves to why we must have faith in nuclear technology not simply to save us, but to "save the world" (Cravens, 2007).

While the conversion narrative is often a personal journey, it is not an individualistic one but shared, and sought to be shared with and for others. Amid images of favelas, people sorting in a landfill, and a city street enmeshed in stolen power lines, Brand chastises environmentalists who want to "condemn" the world "to poverty, and

sickness, and short lives," while Cravens specifies a direct causation between "countries that consume the most electricity" and "the best quality of life." After Cravens' comment, the film cuts to a light bulb. The camera pans down to two smiling children, likely Brazilian in the context of other assembled images. Such imagistic arguments build toward the exact midway point of the film, when a revolving globe grows increasingly bright as Shellenberger discusses the future of greater electricity demand. As the United States and Europe pulsate with the aurora of electricity, the Global South also gets brighter. The film returns to this symbolic future—in images of the One World globe, the Global South, and children—at the very end of the film. As Shellenberger states, "I have the sense that this is the beginning of something really beautiful," children of color are filmed next to a shanty house as the camera pans up to a lamppost with faint light, either emanating from the lamppost or through a reflection. The camera then cuts to an up-close steady shot of these children staring at the camera, a shot that holds for about eight seconds before the camera cuts to the One World spinning globe that opens over a lit Africa. The film fades out on the Americas, with the pulsating United States illustrating the development path of the whole world. This savior mentality moves the film-as-revival performance from the personal narrative of an individual religious journey of redemption to the collective uplift of speaking one's rebirth to and for others.

The "beauty" Shellenberger speaks to, of this teleological narrative of energy, is of raising the world to "our" "quality of life" through electricity. Nuclear energy functions as the savior that can offer this teleological endpoint while also, as Shellenberger states, "stabil[izing] emissions, at some reasonable level." While evolutionary narratives like that of Richard Dawkins can enable a sleight of hand by

which their teleological themes are grounded in history and therefore "better concealed" (Johnson, 2006, p. 310), nuclear energy's rhetorical mobilization focuses on future deployment—or why nuclear energy is necessary for the future, for the world—and, in turn, its teleological religious themes are more recognizable. The religious undertones of such missionary zeal are illustrated in Brand's comment during the midway transition of the film, when he states that nuclear energy can supply "such an improved world, it takes your breath away." Trapp (1973) suggests that connecting all major religions is the sense of the numinous, or a "feeling of being grasped by something alive and compelling…the indescribable wonder and majesty" (pp. 2–3). Brand's breath is swept away by the compelling majesty of nuclear energy's promise, as he looks to its future with indescribable reverence.

Missionary politics in the film construct a development framework in which space is temporalized: where the whole world consists of regions at different stages of the same teleological beginning and endpoint (Massey, 2005; Zúquete, 2007). In that way, scenes in the Global South follow intensely electrified cities such as New York City, as Shellenberger explains how we keep finding more uses of electricity, such as the whole infrastructure that powers an iPhone. This "West and the Rest" discourse places the whole world on the same path, while energy discourses stand in as a silencing of such discourse's colonial origins (Hall, 1992). The imagery in the film, however, maintains the same colonialist, stereotypical depictions. The film is not drawing on global voices, but on those of white Americans (and one Briton) speaking for others while stereotypical images of children, and globalized children of color, function as synecdoche for underdevelopment. These scenes detail assumptions and stereotypes embedded in the

visual arguments and demand shots of non-white children staring at the camera as white men (and Cravens) speak over them. The film updates the white man's burden thematic with a missionary politics of common sense, in which the stated argument by Stone (in his commentary) and others is that it is foolish to think that the world is not developing, and irresponsible to tell them not to develop like us.

Stone's aspirational logic may have some elements of truth, but it also attempts to elide how "modernization is the vocabulary of power" (Christensen, 2012). Disregarding power relationships encourages a homogenizing framework and "moral pathos" that Sachs (2010) criticized two decades prior to the film (p. 112).[57] Today, there appears an inevitability functioning in such discourses, in which the temporality of linear development paths is assumed to be on an unavoidable and indeed welcomed path, as long as we can find clean energy sources to guide this bright future world. To find that clean source already available for further deployment, the logic follows, can "take your breath away." The numinous promises of electricity and development's modernizing projects meets the savior, nuclear energy, and its "power to save the world" (Cravens, 2007). To meet a future of the whole world "living high-energy, resource-intensive, modern lives without killing the climate," as Shellenberger champions at the end of the film, the argument follows that we must look forward towards nuclear energy and maintain that commitment to save the world.

Conclusion

For advocates who seek the rapid deployment of nuclear energy, both in the United States and around the world, the film *Pandora's Promise* offers itself as a means

to help spread this gospel. When Shellenberger concludes the film with the statement, "You really do feel like this is the beginning of a movement," the film's arc suggests that such "movement" is meant as rhetorical, where the film is a key moment to channel that shift in discourse. Such rhetorical action is specifically meant as sharing conversations, recirculating discourse, and reframing terms of the debate (or even creating a debate). Seeing the film as a part of a larger discourse articulating nuclear energy to modernism, and modernism to faith in technology, suggests ways in which energy's social function gets taken up and rearticulated in particular mobilization efforts. Shellenberger and Nordhaus have a pragmatic reason to build this case for nuclear energy, as they seek present and long-term support for technical solutions to mitigate climate chaos, solutions that in their assessment will be better than the fossil fuel power world of today (even as these solutions inevitably lend to their own set of unanticipated problems). As such, turning to modernization theology as a rhetorical heuristic suggests implications not just for nuclear energy advocacy, but for any discourse that attempts to address climate change while maintaining the world's architecture (cf. de Courcelles, 2011) through technical solutions.

The modernization theology framework, of unintended consequences as reimagined, suggests a rhetorical move in which we are encouraged not to dwell on what could happen, such as how rapid deployment can mean a new set of worse problems. Instead, the film's narrative argues: We are here to solve a problem; that problem is (primarily) climate change; it stands to reason that we now need to meet rising demand (primarily) with nuclear energy. The narrative builds the grounding for the investments required for nuclear by offering a discursive legitimacy framework meant not merely to

encourage builds but also to sustain licensing of plants so that their costs are justified.[58] However, rapid deployment lends its own set of problems. While the reframing of unintended consequences suggests that modernization theology supporters would admit as much, problems likely will arise not from the scientific empirical evidence of technological effectiveness but from the teleological, metaphysical, and ontological claims of these energy and modernization narratives. That is, the narrative produced around this technology is based on an idealistic assessment of linear technological progress that does not always reflect the larger scientific debates.[59] For instance, a Massachusetts Institute of Technology (MIT) study—which was designed to assess what was needed for rapid deployment of nuclear energy to effectively help mitigate climate change—argued against closed fuel cycles, or reactors that reprocess spent fuel, because their myriad problems outweigh their benefits (MIT, 2003). Yet closed fuel cycles are held as a panacea in the film. While such assessments are open to debate and may shift with time, they are still contestable issues that require continued evaluation, not unquestioned commitment.

Nuclear energy, in essence, is framed as requiring a commitment of faith, but one that will lead the world to salvation. The film's rhetorical action is thus also global in scope. This element intersects with the One World fears of climate change—we are all implicated together—and the missionary spirit of global development (Heslam, 2004; Pelkmans, 2009; Sachs, 2010). The description of *Pandora's Promise* on its DVD case asks whether our biggest technological fear is actually that which will save us from climate change as well as lift billions out of poverty. Stone's subsequent mobilization efforts, specifically his website "Energy for Humanity" and its supplemental "We Love

Electricity" graphic, emphasizes this humanitarian rhetoric of development (energyforhumanity.org). We need to better understand how such humanitarian rhetorics disregard geopolitics. Geopolitics challenges the explicit technological determinism of "more energy = better lives," even if such efforts offer an admirable implication that almost all that energy must be clean, or else climate apocalypse is inevitable. Critiquing such efforts is not to argue for the abandonment of such large scale technical projects, but to examine the implications of a discourse that only leaves one with a choice between two options: abandonment or total faith and commitment. The religious communication themes encourage a nonreflexive commitment not simply to nuclear energy, but to a discursive logic that can reinforce a missionary framework by which "we" tell the whole world they want to be like "us." Such didactic rhetoric can be analyzed in various capacities not simply tied to energy development.

Finally, the film's TINA ("there is no alternative") discourse produces policy implications. Such TINA rhetoric is not merely about nuclear energy as a solution, but also modernization as a guide and commitment (Grigg, 2007). The following quote from Stone may be persuasive but it is also something worth challenging:

> We have no choice. The developing world wants to live like us. And I have yet to meet a single person who will come up to me and give me their iPhone to save the planet. Or give up their hair dryer, or their dishwasher. Nobody's going to give up anything. Nothing. ("The Nuclear Fix", 2013)

This quote embodies the narrative framework of the film. To assess that there is "no choice" is also to assess that the whole world has the same desires of lifestyle, that quality of life has direct causation to energy access, and that a politics of limits will never work. Together, they produce a sensed inevitability to a development model of linear progress offered via energy resources and, in particular, through nuclear science and

technology as the ultimate expression of mastery, control, and rationality. Such associated links are worth further exploration, drawing focus on “the social justice aspects of imposing risks upon vulnerable others, whether through nuclear power or climate change” (Vanderheiden, 2011, p. 612).

Notes

[36] From Grigg (2007):

> Let us stipulate that modernism derives from the elaboration of the notion of human rights in the seventeenth and eighteenth centuries, from the Enlightenment's commitment to universal reason, and from the commitment to pursuing technology. What is more, modernism exudes confidence in what human beings can accomplish in the world via their use of universal reason and technology and by their commitment to human rights. (p. 314)

As such, modernity implies a commitment to various tenets.

[37] While many earlier environmentalist discourses have been tied to modernism, contemporary ecopragmatists define traditional environmentalists as anti-modern, a boundary-defining charge. This rhetorical boundary creates their own identity and attempts to frame definitional parameters regarding what it means to take an environmentalist stance on issues (e.g., see the opening to Brand, 2009).

[38] For other overtly theological emphases in eco-modernist discourse, see Cravens (2007), Latour (2008), and Lorimer and Robinson (2010).

[39] For instance: "To deny that global warming is real is precisely to deny that humans have become geological agents" (Oreskes, 2007, p. 93).

[40] This emphasis lends to Cravens' (2007) epigraph, a quote from Richard Rhodes.

[41] See Littlefield (1992) for a discussion of Shakers' public forms of communication that sought to inform as well as convert others, the latter through missionaries.

[42] See Maddux (2011) for an argument that evangelicalism and modernism are primarily rhetorical styles that can shift and blend within a rhetor's discourse. Just as one is not an evangelical or a modern but employs evangelical and modern discourse, an eco-modern employs sliding articulations between modernization and theology.

[43] The film's other two talking heads are nuclear engineers: co-developer of the Integral Fast Reactor (IFR) Charles Till and co-developer of the first generation of nuclear energy electricity Leonard Koch. Till is also an author, having co-written a history of the IFR, *Plentiful Energy: The Story of the Integral Fast Reactor* (Till & Chang, 2011).

[44] Prolific blog writer and nuclear proponent Rod Adams, in a disclaimer he left in a comment regarding a critical review of the film, mentions that he offered technical advice for the film (the credits list him under "Special Thanks") and adds, "unfortunately, I was not considered to be a candidate for an appearance because I was not a convert; I became fascinated with the incredible potential of nuclear energy to solve important problems [from childhood]" (Adams, 2013).

[45] Specifically, Caldicott and Greenpeace base their statistics on the linear no-threshold model (LNT), a contentious model that works better for certain projects than others and that also has no alternative when building regulatory measures.

[46] Stoett (2003) also emphasized international components.

[47] In Chernus' account we see all four master themes of nuclear discourse: mystery, secrecy, potency, and entelechy. The latter two remain emphasized as desirable for nuclear energy proponents, while the former two are accounted for as some of the reasons why nuclear energy is conflated with nuclear weapons.

[48] I would like to thank the National Science Foundation for funding the collaborative grant work that allowed me to attend two national nuclear science conferences (NSF: SES-1329563; PIs Danielle Endres, University of Utah, and Tarla Rai Peterson, University of Texas – El Paso). In this capacity, I attended numerous conference panels and events as well as interviewed nuclear professionals. The technical information found in n. 46 was also aided by this experience.

[49] A member of the Breakthrough Institute was also a plenary speaker, as well as a presenter on a communication-focused panel. This inclusion prompted discussions around the value of aligning nuclear scientists with eco-modernists.

[50] These historical events also helped produce the contemporary evangelical movement, which often features an emphasis on conversions, specifically a discernable moment of one's conversion. According to Kidd (2007), revival events originated a continued cultural desire to simulate one's born again or renewed faith in the gospel.

[51] Similarly, commitment to nuclear energy can revive commitment to modernism. The historical revival was also known as an "awakening," and occurred at a time when people were concerned that the country's religious commitment had diminished (Kidd, 2007). So too today, we see concerns that modernist commitment is not what it used to be. Pronuclear discourse revives this support for modernization as itself an ultimate manifestation of technological potency.

[52] For another example of the film medium as carrying the testimonial/gospel, Orgeron and Elsheimer (2007) detail how The Moody Institute used film to convey the relationship between science and God. Also see Greene (2012) for the relationship between film channels and circulating a religious comportment of the self.

[53] The burlesque frame enables the Road to Damascus narrative that structures much of the film without alienating those who are already pronuclear but may not wish to see their own mobilized actions crafted in such religious terms. Here the sliding discourses between modernization and theology come into play.

[54] See Lyman's review:

> "Pandora's Promise," taking a page from late-night infomercials, seeks to persuade via the testimonials of a number of self-proclaimed environmentalists who used to be opposed to nuclear power but have now changed their minds, including Stewart Brand, Michael Shellenberger, Gwyneth Cravens, Mark Lynas and Richard Rhodes.
>
> The documentary tries to make its case primarily by impressing the audience with the significance of the personal journeys of these nuclear power converts, not by presenting the underlying arguments in a coherent way. This strategy puts great emphasis on the credibility of these spokespeople. Yet some of them sabotage their own credibility. (Lyman, 2013)

This review contrasts sharply with Angwin's (2013) assessment of knowledge sharing.

[55] Lynas wears glasses again while in Japan and holding a Geiger counter, but not while interviewed; Cravens does not wear glasses at any other point. Their use, therefore, appear strategic: as both a shielding and reflecting screen technology, mediating their relationship to television coverage and their travels to accident sites (Packer & Oswald, 2010).

[56] Even further, Fukushima has been framed as ultimately a positive reflection of nuclear energy, in that the worst moment for the industry in many years was not as impactful as the continuous impacts of other energy sources, particularly fossil fuels (see Monbiot, 2011).

[57] Sachs' critique of the "One World" motif relates back to the Spaceship Earth photo that made Stewart Brand famous, à la his Whole Earth Catalog.

[58] Shellenberger builds this perspective, of a forward-looking long-term commitment to nuclear energy, near the end of the film: "When you really look at it that way, there's just really no question."

[59] Entanglements with racial politics (and fears over nuclear weapons) further complicate this idealism; see Izadi & Saghaye-Biria (2007) on the Orientalist discourses surrounding Iran and its nuclear aspirations.

CHAPTER FOUR

FACTING FICTION: *REVOLUTION*, THE UNITED NATIONS, AND CULTURAL POLITICS OF ELECTRICITY

In the summer of 2013, members from the United Nations' Development Program (UNDP), Creative Community Outreach Initiative (CCOI), and various UN Foundation energy campaigns approached Bad Robot, Warner Bros., and NBC to start a collaborative campaign with the primetime television series, *Revolution* (2012 – 2014). Since *Revolution* was a show about the global loss of electricity, the United Nations felt that the series would offer a creative platform through which the UN could discuss their energy resource campaigns with a wider audience (United Nations [UN] News Centre, 2013). Between Fall 2013 and the conclusion of *Revolution*'s final season in May 2014, the two entities collaboratively produced various texts and events encouraging audiences to learn more about UN energy initiatives. This collaboration followed the stated strategic purposes of all UN collaborations with the creative community: to tell the UN story. In this chapter, I examine how this effort to articulate global energy campaigns with a dystopian fictional television narrative did not merely serve its instrumental function of promoting energy access for the forthcoming Post-2015 Millennium Development Goals (MDGs). Beyond utilizing the television show as a communicative resource to tell the UN's story and communicate their message, the collaboration itself is a rhetorical

production that invites the audience to reflect on their own dependence on particular energy regimes and in turn legitimate the maintenance and expansion of those regimes globally.

This chapter will analyze the collaboration between the UN and *Revolution*, emphasizing how the series and its themes circulated amid the United Nations' energy access channels. As such, this analysis will include both the content of the show—a dystopian narrative that invites potential reflections on energy loss—and a collection of texts produced through the collaboration. The dystopian narrative of the show offers a framework in which the target viewers are meant to a) reflect on their own dependencies on electricity-as-social-practice; b) sense fear that it could all be lost; and c) see energy itself as the stabilizing presence of one's subject position: energy stabilizes the (modern) subject's movement through the world. In the content of the show and the collaboration materials, electric devices such as mobile phones were often conflated with an understanding of energy as the vitality of the modernist subject. To lose electricity, as occurs in the show, is to lose all of the elements linking electricity use to social practices. Within that framework, those involved in the collaboration reflected on the show's sudden and long-term absence of electricity infrastructures in relationship to the fear of losing all these associative, material practices in real life. In turn, power connotes the stability and sense of agency that energy resources afford, a stability projected onto the rest of the world. As the series consistently conflated electricity, energy, and power when talking about the global blackout, actors, creators, and UN representatives involved in the show and its UN collaboration reflected on the power voids that would result from a loss of electricity. The dystopian, fictional story in *Revolution* encouraged viewers to read the

progress narrative of providing "energy for all," which is at the heart of the UN's energy campaigns, while reflecting on personal loss.

This narrative constrains considerations of energy distribution and social equity; instead it problematically enables thinking, from the perspective of the target viewers' own dependencies on an electric-powered object world, about global others as lacking in material gains afforded by electricity, from healthcare services to the iPhone. The collaboration's outcome, as it relates to articulating a dystopian narrative of loss with a call for helping those who lack, has potentially negative implications for social justice by a) effacing the geopolitical components of energy production; b) maintaining the modernist progress narrative around energy; and c) projecting a growth stage model of development (Rostow, 1998) where everyone needs to, and wants to, pass through the stage of electrified social practice on the way to "becoming modern" (Inkeles & Smith, 1998).

In what follows, I offer a description of the television series *Revolution* and an overview of the United Nations collaboration, the latter a primary channel for the rhetorical circulation of the television text. I then further explore this collaboration by explaining the contemporary context through which UN actors attempt to put energy at the head of the table by speaking the language of development through energy. In the following section, I elaborate on the theoretical framework through which I understand how the UN-*Revolution* collaboration resonates with a modernist perspective regarding electricity's fears and dependencies. The first section of the analysis focuses on the content of the television show as a dystopian narrative that associates electricity as the stable presence of modernist social practices. The second section analyzes how, in stated

responses from actors, creators, interviewers, and panel participants, these invested viewers interpreted the United Nations' efforts through a reflection on their own commitment to securing the energy that powers their subjectivity. Considering the UN campaigns through a dystopian loss frame—which equates energy poverty with the fear-based sensation of electricity loss among target viewers—suggests potential consequences for social justice. I conclude by arguing that effective challenges to the collaboration's problematic assumptions would need to both address articulations between energy and fear and between energy and social justice, as well as offer viable energy futures that take into account social equity when it comes to energy access.

Revolution and the Circulation of its Energy Access Thematic

Revolution, a television series created by Eric Kripke[60] about the aftermath of a global loss of electricity, aired on NBC from September 2012 – May 2014. *Revolution* was NBC's highest testing drama pilot of the 2012 Fall Season (Andreeva, 2012) and opened to much fanfare and investment, including a coveted slot after the hit show *The Voice*. The caption for the series' trailer summarizes the opening as follows: "Our entire way of life depends on electricity. So what would happen if it just stopped working? Well, one day, like a switch turned off, the world is suddenly thrust back into the dark ages" (New tv shows, 2012, para. 2). The show follows a group of characters that viewers later discover were involved in this sudden loss of electricity. The source of the power outage stems from a military operation where nanotechnology was designed to absorb electricity in a particular target range. However, the nanotechnology replicates all over the world, creating a perpetual holding pattern in which a seemingly infinite number of virus-size

computers absorb electricity everywhere.

The first half of Season One follows Charlie Matheson (Tracy Spiradakos) employing the help of her uncle Miles Matheson (Billy Burke) to find her kidnapped brother, Danny. In the fifteen years between the electricity going off and the starting point of the show, the United States divided into several regional states or factions. The leader of the northeast portion of the U.S., General Sebastian Monroe (David Lyons), kidnaps Danny Matheson because Monroe (correctly) believes that Charlie and Danny's parents, Ben and Rachel, know why the electricity went out. Beginning in the second half of the first season, the plot focuses on the search to turn the lights back on, particularly Monroe's search for (literal and figurative) power.[61] This quest leads him and the others to "The Tower," a military location with the capacity to shut down the nanotech and turn the lights back on. Aaron Pittman (Zak Orth), friend of the Mathesons and a computer scientist who recently discovered he wrote the code for the nanotech, switches the power back on but only momentarily and with disastrous results. Randall Flynn, previously Assistant Secretary of the Department of Defense, gets into the control room of The Tower and uses the electricity to release nuclear bombs on Atlanta and Philadelphia. In response, Aaron turns the nanotech back on to absorb all electricity, but it is too late to stop the bombs.

Season Two focuses on the encroaching presence of the Patriots, a sinister group behind the bomb attack who espouse the veil of patriotism while secretly brainwashing the populace in order to exert better control over a compliant military citizenry, turning faction against faction. They occupy Willoughby, Texas, the town in which Rachel Matheson grew up, her father still lives as town doctor, and where our heroes are now

residing and secretly fighting the Patriots' ominous presence. Meanwhile, Aaron slowly discovers that, when he briefly shut down and then quickly turned the nanotech back on, this act "awoke" the nanotech. These "nanites" are now sentient and exercise agency, growing progressively ominous in act and intent; the series ends on a cliffhanger, with the nanotechnology calling on thousands of people drawn to evil to travel to a town where an unstated peril awaits.[62] While the series showed enough promise for renewal and a second season, and was on-the-fence for months as to whether or not it would continue into a third season, *Revolution* was canceled after two seasons and a total of forty-two episodes.[63]

Television shows circulate in a variety of ways. Numerous plot forays can be found circulating among *Revolution* audiences, such as fan-generated content romantically linking Charlie with General Monroe, or "Charloe."[64] This chapter highlights the circulation of *Revolution* through its uptake by the United Nations, or how the show circulated into energy politics. Regardless of the various plot turns and forays into supernatural themes, losing electricity is a key heuristic taken up by others to discuss contemporary political issues. For instance, a Heritage Foundation blog argued that this show about EMP (electromagnetic pulse) attacks should remind Americans how important it is to guard against such an attack (Dodge, 2012). The show is not premised on an EMP attack; regardless, the plot "loss of electricity" circulates culturally as people reflect upon the role and politics of electricity in the world today. In the next section, I will expand upon one key case study, in which the United Nations latched onto this central theme to a) discuss their contemporary development efforts as they related to energy; and b) situate energy as central to their ongoing development goals. This UN

collaboration itself evidences the circulation of the show, and its energy thematic, into the realm of energy futures politics. It was not necessary to proactively access these texts to experience the collaboration. For those viewers who only watched the show on the NBC network, *Revolution* informed viewers of their collaboration in the final shot of the series, which featured the UN logo, stated that 1.3 billion people live without electricity, and told people to go to the Action 4 Energy website to learn more and "help power the world" (O'Bannon, Grellong, & Beeson, 2014).

Revolution Meets the United Nations: Framing the Millennium Development Goals in Terms of Energy

The United Nations approached *Revolution*'s creators before Season Two and asked to collaborate on the show and its central theme: a world without power. This section interrogates why the United Nations was interested in building a public narrative that linked their development work with the story and content of *Revolution*. In what follows, I first detail the content that was produced around this partnership. Next I offer background on the UN's Creative Community Outreach Initiative (CCOI). Subsequently, I explain how the collaboration was uniquely tied to the mobilization efforts regarding the UN's Post-2015 Development Agenda. This mobilizing effort—building a public narrative through a fictive universe—attempted to speak for the reality of people throughout the world who lack electricity and for the UN efforts to minimize hardships associated with that lack.

Numerous texts promoted the yearlong collaboration that showed no signs of discontinuing if NBC had renewed the series. *Revolution*'s second season premiered at

the United Nations Headquarters in New York City, where series creator Eric Kripke and three cast members—Billy Burke (Miles Matheson), Giancarlo Esposito (Tom Neville), and Tracy Spiradakos (Charlie Matheson)—were invited to attend a screening and follow-up panel discussion. The collaboration continued with conversations and experiential exchanges between UN field correspondents and *Revolution* writers (Warner Bros., 2014a). The collaboration also included events, online content such as the NBC series website's "UN Collaboration" pages, UN blog postings, two specials on the second season DVD set of the series, hyperlinking between the two platforms, and specific references in blog posts and the NBC series page to where these exchanges influenced *Revolution*'s content (e.g., NBC, 2014b; Seyedi, 2014b; United Nations [UN] Foundation, 2014; Warner Bros., 2014c). These venues also included promotional efforts to link the public to larger efforts of the United Nations, such as suggestions that viewers use social media as a platform to voice their support for energy-related development issues (UN Foundation, 2014). Each text or event reflected similar themes. At the annual festival South by Southwest, Bad Robot's Steve Tao mentioned a plan for a website called "Fact or Fiction." This website idea would juxtapose real-life images with images from the show in order to highlight their similarities (UN Foundation, 2014). This thematic, while never materializing in the form of the website, was nonetheless prevalent through all of these produced specials, blog posts, and other content: where, overlaid onto scenes from the television series, various UN employees and *Revolution*'s writers, producers, and actors discussed UN field experiences in order to illustrate the similarities between fact and fiction.[65]

On one level, the *Revolution* collaboration followed other Creative Community

Outreach Initiatives (CCOI) that link the UN with the entertainment industry and its popular culture artifacts. The United Nations are pioneers in assembling actors and other well-known cultural figures to act as "ambassadors" for various projects and initiatives. The UN utilizes such "Celebrity Diplomacy" efforts to reach "untapped audiences" and "round out the United Nations' portfolio of sophisticated public information projects" (United Nations Creative Community Outreach Initiative [UNCCOI], 2014). In that context, the UNCCOI has collaborated with television shows and films in the past.[66] The stated purpose of any of CCOI's collaborations is to tell the story of the UN development efforts. The UN saw *Revolution* as representing certain problems that arise in areas that are "energy poor" (UN Foundation, 2014). As the UN's Bahareh Seyedi put it, the show had access to an expanded audience to whom the UN could "communicate the message…on energy poverty" to facilitate understanding, inspiration, and action (UN Foundation, 2014; Warner Bros., 2014a). If the audience of *Revolution* could see this vision of the world, and articulate it with the work of the UN, then, so the logic goes, this effort would expand the awareness of UN efforts, such as their "Sustainable Energy 4 All" Initiative, their "Action 4 Energy" campaign, and other UN Foundation campaigns, such as their "Global Alliance for Clean Cookstoves."

On another level, the collaboration was particularly noteworthy. The length and scope of the collaboration occurred at a particular strategic moment for the United Nations, as the UN Millennium Development Goals (MDGs) for 2015 were giving way to the Post-2015 Development Agenda. The "Millennium Declaration Goals for 2015" purportedly have functioned as "an effective organizing tool" for the diversified humanitarian campaigns under the UN umbrella (United Nations Development Program

[UNDP], 2001; UN Foundation, 2012). These declarations feature eight overarching goals that have helped structure such efforts: eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria, and other diseases; ensure environmental sustainability; and develop a global partnership for development (UNDP, 2003). The *Revolution* partnership coincided with the ramping up of the Post-2015 Development Agenda and a massive campaign to formulate a new round of goals. *Revolution*, in this context, offered an instrumental public narrative by which those involved with the handful of energy-related UNDP campaigns could frame "energy access" as a master narrative determining the success of each current development goal.

Discussions by UN representatives in the *Revolution* collaboration promotional materials, while not immediately clear on the surface, were geared to encourage viewers to find out more about energy as an issue in the context of the Post-2015 Development Agenda. Broader agenda-related efforts have spanned a series of actions, energy-related or not, in which the public's understanding of UN goals and participation in formulating these frameworks have been key components (Comedy Central, 2014; http://www.worldwewant2015.org/; Social Good Summit, 2014). Concurrently, various efforts have attempted to make energy access central to UN development agendas, such as the General Assembly announcing 2014–2024 as the Decade of Sustainable Energy for All (UN, 2012). The UN found sustainable energy access as one of eleven major themes in their "Million Voices" initiative, a series of global public consultations from January–April 2013 that led to their World We Want campaign (UNDP, 2013).[67] At this time *Revolution* was completing its first season, and soon after the UN would approach the

show's creators. In this context, *Revolution* functioned as a public screen for these energy access discourses and offered an additional audience for public outreach campaigns. The *Revolution* collaboration was meant as a tool for getting UN messages out to a wider public, not merely narrativizing ongoing efforts but serving as a key feature in efforts to place energy more centrally on the Post-2015 Development Agenda. The collaboration, therefore, framed the UN 2015 Millennium Development Goals as energy issues, (hyper)linking the public to a) knowledge regarding UN efforts; b) knowledge of the upcoming MDG agenda; and c) thinking about these efforts through the lens of energy access.

These efforts trickled into *Revolution*'s content. The UN offered informative material for the show to visualize broader issues related to energy development. Season Two depicted a world in which the loss of power exacerbated all of those development issues that the UNDP has tried to combat. UN Blog posts and NBC's *Revolution* website both address how different scenes from Season Two explicitly drew from experiences of UNDP fieldworkers (http://blogs.un.org; http://www.nbc.com/revolution). Each of these depicted scenes related as much to the UNDP MDGs in general as they did to energy. For instance, in a dream sequence back to the electric world of 2014 (detailed below), Aaron Pittman grabs for a sandwich in a trash bin, forgetting that food is abundant (Edlund, Grellong, & Dawson, 2014). Aaron is also a teacher in the dystopian world who in one instance meets students in a crowded building as political turmoil forces them to scatter (Grellong & Sgriccia, 2013). The show tackles maternal and child mortality when, in a flashback sequence, General Sebastian Monroe's wife and newborn die in childbirth (Callaway, Grellong, & Boyum, 2013). Last, a typhus outbreak threatens to destroy the

primary town setting of Willoughby, Texas (O'Bannon, Edlund, & Offer, 2014; Grellong, Barnes, & Boyum, 2014). Each of these scenes—content explicitly influenced by the partnership—related to the MDGs of 2000: to eradicate hunger, reach universal primary education, improve maternal health, reduce child mortality, promote gender equality, and combat diseases.

Bahareh Seyedi, an energy policy specialist for the UNDP, was the leading figure in the collaborative effort with *Revolution*. For Seyedi, collaborating with *Revolution* continued her previous efforts to frame energy as the missing MDG, such as her essay, "Energy for the Poor: The Missing Link for Achieving the MDGs" (Seyedi & Takada, 2010), a theme that also comes up in the *Million Voices* report (UNDP, 2013). Seyedi consistently called on viewers of the show and its supplemental content to get involved while discussing energy as this missing development issue. In a South by Southwest Panel focused on the collaboration, Seyedi made this relationship, between energy and development goals, explicit:

> In 2000, when the world came together to develop the development agenda, they came up with eight goals, for example. And none of these goals mentioned energy. A mistake, right? And now, we're entering 2015, where the next development agenda will be set. Through media – social media, your networks and the general public can participate in different ways, and your voice can be heard in the discussions of the Post-2015 Development Agenda. (UN Foundation, 2014)

Indeed, throughout the collaboration's content, Seyedi and others explicitly drew parallels between *Revolution*'s dystopian world, a large percentage of people living today without electricity, and both the past and upcoming UN development agendas. While Seyedi stated on the Season Two DVD special, "the parallels are strong in the sense that you see this society [as depicted in Revolution] is paralyzed," the special visualized for the viewer these chaotic scenes (Warner Bros., 2014a). Seyedi continued: "And that's

what happens in these regions where there's no power. Life changes" (Warner Bros., 2014a). Seyedi proceeded to situate this lack of energy as the "difference" that the UN combats in its humanitarian efforts.[68]

In all, Seyedi weaved together the MDGs through a narrative of electricity access as a progressive good. Kathy Calvin, the CEO of the UN Foundation and heavily featured in the *Revolution* DVD special "Impact Revolution," repeated this master narrative (Warner Bros., 2014a). The special interspersed Calvin's narrative with Monroe's wife's ill-fated labor, a scene from *Revolution* related to the MDGs (Callaway, Grellong, & Boyum, 2013). Calvin stated over this maternal mortality scene, "*Revolution* took on one of the biggest issues facing the world today. One in five people doesn't [*sic*] have access to energy, doesn't have electricity to ensure a woman gives birth in a hospital safely" (Warner Bros., 2014a). Situated within this context of a power void, energy (and electricity in particular) grounds a development narrative: that with increased access to electricity, other development issues will diminish. This discourse framed energy as an obvious guide for achieving the 2015 action agendas.

In sum, the collaboration with the United Nations shows how *Revolution* became articulated with previously established channels around development goals and energy access campaigns. The articulation—in which the show becomes about its relationship to energy poverty, energy access campaigns, and broader development goals—circulated for a year by those invested in producing the second stage of an influential, global development agenda. In this context, *Revolution* functions as a public "screen" in multiple senses: as disseminating discourse to mass publics (DeLuca & Peeples, 2006); as a screening technology that mediates UN discourse (Packer & Oswald, 2010); and as a

terministic screen that enables and constrains (Burke, 1966). The series, once articulated to the collaboration, circulated among a networked assemblage of universal energy access discourses and, in part, influenced that flow of discourse.

Fears, Futures, Orientations: Articulating the Lost Electric Sublime with Energy Poverty

Revolution reflects cultural desires and fears of an electric world. Throughout the series, characters' desires for the world lost and fears of this world's power void repeat the theme of the opening narration: that "we relied on it for everything" and, when "the power went out, we weren't prepared" (see Kripke & Beeson, 2012). Those watching the series encounter this dystopian world amid circulating cultural promises of energy and its social practices, as well as cultural fears of losing the social meanings embedded in energy use. While the resulting United Nations collaboration spread the word about UN initiatives, publicizing these efforts through a dystopian television show problematically promotes these campaigns from a particular perspective and may erase the complexity of energy-related causes.[69] In this section, first I overview the cultural discourse of the electric sublime that associates electricity with progress but, in one's increasing dependence on it, also reinforces a sense of fear for its loss. Second I offer how *Revolution* functions as a rhetorical technology that heightens the fear of losing electricity and, as such, encourages political regimes that secure electricity. Last, I explain how articulating energy access campaigns with this dystopian narrative encourages a particular orientation toward these campaigns.

The relationship between light and the modernist ideal of progress, reflected in

"the Age of Enlightenment," was often quite literal, and contemporary discourse about electricity remains both literal and metaphorical (Park, 1997). For example, Shome (2011) points to each when she analyzes a picture of Princess Diana and African children with the caption, "Lighting up the third world" (p. 393). Here "lighting" is a metaphor for Princess Diana's position as a Global Mother and as a visual trope, in which the literal lighting of the photograph suggests that Diana gives hope to the African children who surround her. In energy, electricity, and industrial light discourses, we see this constant literalization of the "light" metaphor, where the industrial production of light offers the world not simply the sublime of the electrified object, but of electricity itself (Ivie, 1994). Two explicit examples in the UN-*Revolution* collaboration reflect this literal/figurative motif. One, the South by Southwest panel title, "Shining a Light" (UN Foundation, 2014), suggests the panel was "shining a light" to raise viewer awareness that others cannot shine a literal light (bulb). Two, the Nepal PSA on micro hydro projects, "United Nations: The Mission Continues," details how Nepalese villagers smile "from mouth to eyes" (Warner Bros., 2014c) when they see the first click of a light bulb. Such literal turns of en/light/enment discourse rely on the recovery of a modernist teleology: that energy serves the purpose of human progress and helps define the modernist subject.

Dystopian narratives like *Revolution* are at least in part reflections on the feared loss of our culturally and historically situated dependencies, potentially tapping into a fear over the fragility of the self as mediated by electrification. Electricity has a long history of this modernist promise of order and of enchantment, and fear both of its powers and of its loss. Czitrom (1982), for instance, recounted the ubiquitous and ambiguous discourse surrounding the introduction of the telegraph and its conflation of

light, electricity, and godly powers. “The rhetoric of the electrical sublime” (Carey, 1989, p. 99, borrowing from Leo Marx) meets the underlying presence of grid logic and desires for this order (Campbell, 2008; Rogers, 1998). The immanent threat of electricity loss constantly reinforces a reenchantment of that which it promises: the stable presence on which the modern world relies (cf. Harvey & Knox, 2012[70]). Breakdowns, or security concerns, involving energy (such as critical infrastructure) enact their own justification for the continual process of grasping for stability or the management of energy infrastructures.

Discursive texts such as *Revolution* can orient their viewers toward cultural fears of electricity loss by reinforcing a sense of one’s subjectivity as dependent upon these electrified environments. As viewers of *Revolution* experience and move through a digital world in everyday practice, the series can function rhetorically by mediating such bodily experiences (Sloop, 2009). In relation to energy politics, I borrow from Biesecker’s (2007) definition of rhetoric, which considers how the psyche is mobilized in power relations and through such rhetorical texts as *Revolution*. For Biesecker, rhetoric is “a technology of (re)subjectivation whose constitutive but conjunctural effects contribute to the consolidation and stabilization of particular epistemological and political regimes” (p. 152). We can think of the particular or conjunctural moment—of intersecting energy futures discussions, energy and critical infrastructure security fears, the approaching 2015 timeframe for the MDGs, and constant bodily dependencies on digital, electrified objects—as the epistemological and political energy regimes that consolidate around discursive practices and the rhetorical production of subjectivity. In sum, *Revolution* primes viewers for reflection on their own dependence on electricity, reinforcing

subjectivities within these political and epistemological regimes.

Within this invited reading of the series, *Revolution* also invites a particular orientation to the meanings and depicted realities of the UN collaboration. The collaboration identifies energy access and names it as the unjust experience of the global poor. However, I argue that additionally, as a circulating dystopian narrative, the rhetoric of *Revolution* invites an orientation toward the UN collaboration in relation to one's own electricity-hungry lives. The series orients one to the collaboration by tapping into a "futurity of fear" (Ahmed, 2004, p. 65): of a world that could be lost, at any moment. Energy at the center of a modernist, teleological narrative stabilizes "life as we know it," and even "life itself" (p. 64), and hence simultaneously produces fear over its anticipated loss and a desire to preserve the social practices it affords and the universal progress narrative it promises. *Revolution* offers consistent narrative reminders of order lost and, in turn, a securing of present social and culturally produced norms.

All Is Lost: The UN Meets *Revolution*'s Dystopian World

Articulating two circulating discourses—one projecting into a feared future and the other projecting how global others experience the world today—suggests certain conflations that, while raising important issues, may be problematic for energy futures politics and an ability to address the negative impacts of energy production in general. I argue that *Revolution*, through its depicted fiction of sudden loss, functions as a circulating discourse that has already influenced those involved with the show—actors, creators, writers, and others—by naming their fears and dependencies and, as such, suggesting some ways in which understandings of energy in society circulate. As

discussed in the introductory chapter, I rely on Ahmed's (2004) use of David Hume's term, "impressions," to examine the orientation taken by those involved with *Revolution* towards global energy poverty. Regarding energy access, how does the circulating discourse of the dystopian television series leave an impression, or press upon those involved with the show particular ways of conceiving of electricity? In other words, how does the show influence their perspective on the UN campaigns, at least as reflected in their mediated comments regarding the collaboration? To answer these questions, first I do a close reading of the series to suggest that the series names attributes of stability and progress, or evolution, to electrification. Then I consider how the show orients perspectives towards the realities of the collaboration, or how *Revolution*'s dystopian projection of sudden loss informs an orientation towards energy poverty: as underdevelopment, and through the perspective of one's own technological dependencies.

Electricity as Ambient Order: Power and (*R*)evolution

The show often reflects on that which electricity—in the series conflated with energy and power—supplies: a singular, universalized evolutionary narrative; the rational ordering over the environment that categorizes the modernist Age of Reason; and an ambient presence that is godlike yet knowable. Each theme attempts to reinforce a sense that electric energy supplies stability, order, and meaning in people's lives, and to lose electricity would mean losing all these associations and hence revolutionize or transform a whole way of life.

Spelling Evolution in Revolution: Electric Blackout Threatens Narratives of Progress

Revolution depicts numerous contrasts between the assembling of the electric world and its dystopian world where nothing works and things are rendered useless. *Revolution* offers a world of lost electricity that includes various remnants of the past, representing elements of today's world to highlight the vision of a world that has lost these elements. Dormant yet recognizable infrastructural ruins in various locales highlight contemporary forms of physical and virtual transport, such as the protagonists passing by airplanes that lie dormant (Kripke & Favreau, 2012). Coal stacks and power lines are often seen in the background, and on occasion the camera sets up an establishing shot for the scene by focusing in on such infrastructural ruins. These backdrops of the immediate natural environment tend to trigger characters' memories and longings, with flashbacks often generated by the sudden appearance of some forgotten technological item.

These recurrent references to communication technologies and transportation narrate the collective anxieties of losing the grounding of communicative exchange: that we interact with others through these mediating elements. In the series' second episode, when Charlie Matheson, who grew up in this environment, leaves Aaron Pittman behind to search for her uncle Miles, Aaron states, "she [Charlie] will find Miles, but we will never find her, without [light chuckle] GPS" (Kripke & Beeson, 2012). Pittman and other characters often make references to both mobile media technologies (including transport, such as a reference to FedEx [Grellong, Barnes, & Boyum, 2014]) and popular media references, particularly film and television. The latter include references to *Scarface*, game show hosts, and *Full Metal Jacket* (O'Bannon, Edlund, & Offer, 2014; O'Bannon

& Toye, 2014; Rambo, Callaway, & Copus, 2014). Although these examples are sampled from 2014, such references litter the entire series, where every main character old enough to recall the pre-Blackout makes some mediated cultural reference, seemingly still tethered to the mediated world of fifteen years prior. While the writers are clearly having fun with these references, on another level they also suggest that the characters are holding onto the peccadillos of the world that is theirs, or onto the universe before the blackout. Further, the continual references invite the viewer to feel confronted by the dystopian world as dissonant from their usual daily experiences and mediated modes of exchange.

The characters also long for the object world mobilized through the interconnecting networks enabled through electricity. On the series website, a running "Aaron's Journal" narrates his thoughts while he tries to survive in the non-electric future. The journal post "Everything is Awesome" finds Aaron's thoughts within the dream world of episode "Dreamcatcher" (Edlund, Grellong, & Dawson, 2014; NBC, 2014a). In this episode, the nanotech have a memory leak, so they transport Aaron's mental state to a *Matrix*-like fantasy world that simulates real-time (March 5, 2014, the date of the episode's original air date) and trick him into fixing the code. Aaron writes in his journal on the lingering sensation that none of this world is real but, at the moment of the journal entry, Aaron will "choose to hew close to my present reality" (NBC, 2014a, para. 7). Accepting openly the gifts of this electric world, Aaron expounds the glories of a cookie and "all the ingredients, and how difficult they are to bring together" (para. 6). Aaron follows the cookie:[71] raising the dairy cow, tending the wheat field, and all the other ingredients assembled together. The episode "Dreamcatcher" visualizes the world that

was lost when the electricity was shut off. After Aaron snaps back to reality and treks back to his friends, he sees a fallen lamppost and emptied can of beer on the ground. These objects are two signs—light and electric refrigeration—of the world lost; without electricity, they lie fallow. Food distribution, industrial light, and refrigeration: each is mobilized through the progress march that electricity no longer affords this world.

This narrative of electricity, and the world transformed when it disappears, is apparent in each episode's opening title sequence. About five minutes into each episode, at a climactic moment, the screen turns black before the viewer is presented with the power button symbol (the crescent circle with a vertical line cutting through the top). The show offers this constant drumbeat of (for most viewers) a ubiquitous yet rarely considered image. The power button turns things on: computers, razors, and so on. Next in the title sequence, simulating an electric surge, the power symbol converts to the second "o" in the appearing word "evolution." The visual continues to surge and adds an "r" to form the word "revolution." Finally it surges again and everything shuts down. As its stabilizing force, power manages an evolutionary narrative. To switch off the power button moves this world from "evolution" to "revolution." This narrative centralizes energy in the linear narrative of evolutionary progress and a modernist teleology. Bauman (2000) argued that there are no more revolutions because there are no central control desk buildings to topple; and yet in *Revolution* that place, where the power can get turned back on, is given a centralized nickname reminiscent of the panoptic gaze: "The Tower." Electricity's sudden loss—toppling the tower of reason and progress—would therefore mean revolution, while its maintenance means evolution. As seen in the longings of Aaron Pittman, illustrated next, the search for turning the power back on is a

search to get back to the "evolutionary" progress narrative that the lost world engendered.

Reason in Light: Losing Rationality, Control, and Mastery

The show's creators explicitly refer to Aaron Pittman as the stand-in for the Hollywood producers of the show, successful because of the digitized environment that surrounds them. Aaron was created when J. J. Abrams, an executive producer, asked other producers which character represented them (Warner Bros., 2013a). Aaron had been a multimillionare working for Google,[72] losing everything with the blackout. The show intermittently refers to his past life and his jet, his boats, his $80 million bank account, his beautiful wife, his two MIT degrees, and his abilities to expertly secure all of these things. While Aaron will not realize until later in the show that his coding work supplied the intelligence for the nanotechnology, in earlier episodes he deduces from events that the power outage may have been man-made. Aaron calls this "the best news": if we know why the power went out, "we can fix it" (Kripke & Beeson, 2012). If the blackout is a matter of human control, then the characters can possibly control electricity once again. Aaron, as a stand-in for reason and control over the environment, seeks the lost order and mastery of the world that energy and its electric objects afforded him.

Aaron Pittman's vocal desire for the previously electrified world often espouses the en/light/enment of the Age of Reason. In the final episode of Season One, our heroes have entered "The Tower," a Department of Defense Skunk Works facility in Colorado that can shut down the nanotech and turn the lights back on (Kripke, Grellong, & Beeson, 2013). However, due to the uncertainty of suddenly resupplying the world with power, as well as of what will happen if the seemingly infinite number of nanotech computers

suddenly turn off, some people responsible for the nanotech are protecting the facility against anyone who tries to turn the lights back on. When one member, Dan, scolds Rachel Matheson (a main character and creator of the nanotech) for the bloodshed that will occur if they turn the power back on, Aaron interjects: "It's more than that. It's, it's medicine; and clean water; and *reason*! It means that I don't have to be afraid of someone coming for me, or my *wife*! We can help people. We can make things better." When Dan subsequently sets fire to a book that details how to shutdown the nanotech, Aaron screams, "No! NO!" and asks in exasperated perplexity why. Grace Beaumont (Maria Howell), a member of the team that built the nanotech, answers cryptically: "If [Rachel] turns the power on, maybe she saves the world. Or maybe she sets it on fire" (Kripke, Grellong, & Beeson, 2013). Grace's comment summarizes Aaron's desires: for reason, for security, for medicine and clean water. These desires combine the promises of development (the aspects of the show that will intrigue the UN to utilize the show for promoting their Millennium Development Goals) and an association between reason and literal light. Aaron's desire for a return to electricity, then, is both a matter of seeking material practices (the clean water and medicine of healthcare) as well as the rationality ("reason!") that made the world knowable and controllable.

Aaron seeks the agency he lost, afforded by the mediation between his bodily capacity and its environmental extensions. Aaron's character briefly returns, as a simulated illusion, to this comfortable world in Episode 2.15, "Dreamcatcher" (Edlund, Grellong, & Dawson, 2014). The nanotech transport Aaron back to a hypothetical vision of his life sans blackout: the digital, environmental context he once mastered. This world is not the one he left behind, but projects a couple years later, when Aaron is the founder

of Pittman Digital. Aaron has his wife, his digital alarm clock, his smart coffee maker, his flat screens, his high-rise apartment, more coffee, an overabundance of food, cold beer, the television glow of advertising, and a whole office teeming with workers that look up to and respect him. Here we receive a half-episode vision of what Aaron's life was like, a masculinized master of his domain in a world where nerds are hypermasculine because of their ability to manipulate the hypermobile, digital, technological world.

Outside of the simulated dream sequence, Aaron futilely seeks this masculinized re-mastery over his environment. Aaron was in control in his digital life but is now overwhelmed by this unexplainable world. At the end of episode 1.3 Aaron tells a "joke" to Maggie Foster (Anna Lise Phillips), Ben Matheson's lover. It is an ironic choice of terms: Aaron recounts how growing up he was constantly bullied. The "revenge of the nerds" refrain, where intelligent bullied youngsters get the last laugh, is no longer true, as Aaron states that the bullies run the world again. Suddenly a pendant that Ben Matheson gave Aaron, which actually holds a secret flash drive holder, lights up. Momentarily disabling the nanotech, the flash drive in the pendant briefly turns electricity on in the room:[73] Marvin Gaye plays on a Walkman, and Maggie is able to turn on her phone long enough to see the face of her sons on her screensaver.[74] Aaron refers to the experience of suddenly gaining and just as quickly losing electricity "like Lucy yanking some enormous cosmic football just as Charlie is about to kick it" (Owusu-Breen & Bookstaver, 2012). In this moment, Aaron does not know why Cosmic Lucy keeps pulling the ecological grounding out from under him. Contrasted with the "joke" he had just told Maggie regarding bullies ruling the world, the "Dreamcatcher" episode shows the juxtaposition of Aaron's mastery over his environment and his complete sense of lost

agency. Aaron, once a bullied child, grew up to control the world. He is the nerd who followed the progress narrative of using his intellect to control nature and the aggressive forces of the world. That aggression is embodied both in the bully and the (seemingly) diverted laws of physics that took away electricity and, as such, his ability to use reason to control the physical world.

"God" Versus Godlike: Electricity as an Explainable Force

The loss of electricity is set up in the show as equivalent to an unexplainable *force* that removes Aaron's ability to control nature. The relationship between spirituality, technology, energy resources, and the rationalized ordering of the world are front and center through the nanotech character. The implication of the show's nanotech subplot is that electricity offered a mystical force to those who harnessed its power. Now that other forces control electricity—that is, the nanotechnology absorbing electricity throughout the world—the electrical sublime no longer empowers Aaron. Instead, the nanites stand in as a Godlike ambience of the post-apocalyptic world, replacing electricity's grounding of the rationalized world. First I explain how the nanotechnology functions as a God character in the show before arguing that this numinous presence is meant as the replacement for the powers attributed to electricity.

Throughout Season Two, the nanotechnology moves from a simple computer code that spread uncontrollably to a sentient presence that develops increasingly sinister motives. As character Grace Beaumont puts it: "This thing is everywhere. And apparently, it's got a mind of its own…Aaron, how is that any different from God?" (O'Bannon, Edlund, & Offer, 2014). In the Season Two DVD special "Revolution: Heading West,"

the writers-producers explain how they would refer to the nanotechnology as a character named "God." As writers developed plot sequences, the question "what would God think of this?" was not a metaphysical question but a specific reference to how nanotech-as-God would act within that plot device (Warner Bros., 2014b). They perform extraordinary powers, at first healing an injury Aaron had sustained—he literally rises back from the dead—but slowly encroaching into more and more sinister territory, such as inhabiting the body of Aaron's ex-wife, Priscilla, and ambiguously referring to similar experimental designs for other humans (Kripke & Boyum, 2013).

Aaron, his ex-wife Priscilla, and their friend Peter—the three people to help with the code that gave the nanotech its mind and who subsequently sense the nanotech in various metaphysical ways—respond to the wonder and awesome power of the nanotech in diametrically opposed ways. Aaron and Priscilla, who are both "called" by the nanotech to seek answers by traveling to Oklahoma and Texas, are relieved to realize they are not "losing [their] mind" (O'Bannon, Edlund, & Offer, 2014). Knowing the source for their visions, and that someone else is having them as well, offers a rationalized (if odd) explanation for recent events. Their friend Peter, however, has found his explanation for the miracles the nanotech have helped him perform: God. He recounts how a girl was dying in his arms and, when he could think of nothing to do but pray, she miraculously healed (Rambo, Callaway, & Dickerson, 2014). This born-again version of Peter exasperates both Aaron and Priscilla. When Priscilla says it is not God and that Peter should tell everyone "the truth," Peter replies, "I've been thinking about that. I don't see the difference. It lets me perform miracles. It blesses me because I listen to it. It's a wonderful gift" (Rambo, Callaway, & Dickerson, 2014). Aaron and Priscilla, in

contrast, resist its allure as a non-rational trickster opposed to physics; yet in their resistance, the nanotech proceeds to act in a progressively sinister manner, or as a wrathful God.[75]

By contrast, in the electrified world, to embrace the mystical powers of electricity's harnessed powers is to heal, to make better. While Peter's body is the mediator of "God," Aaron's was a body enabled through energy resources as the mediator of God-like powers: and he wants that back, as detailed above. As a body's operating "intelligence is grounded in the body's affective relationship to the surrounding environment" (Del Gandio, 2012, p. 35), Aaron Pittman is seeking the comforting stable presence of an energy source that once grounded his digital self. One's immersive environments are an incorporated extension of human agency, and in this storyline—in which nanotech's ambient, agentic presence exists everywhere and controls unconscious choices—the implied loss is the jump from unexplainable attributes of power (be it new technology or religious explanations of the universe) to "enlightened" reason wielded through scientific knowledge and technical mastery. The desire for lost electricity, here, is a desire for the powers the universe embodies without the uncertainty that a godlike entity brings.

In sum, nanotechnology enacts a dialectical counter to electricity. While the ambience of electricity and its sources are ordered and understood[76]—they have become the naturalized background processes of the digital world—the nanotech is unpredictable, has its own agency, and is everywhere. In this storyline—in which nanotech's ambient, agentic presence exists everywhere and controls unconscious choices—the implied loss in this dystopian world is the evolutionary narrative jump. The elucidated modernist

narrative, purportedly lost, moved humanity from unexplainable attributes of power—be it new technology or religious explanations of the universe—to "enlightened" reason wielded through scientific knowledge, technical mastery, and the naturalization of these processes. Aaron Pittman is seeking the comforting stable presence of an energy source that is watching over him and protecting him, and igniting his own potential energy. Viewers of *Revolution* are invited to reflect with Aaron on electricity's central, irreplaceable role in their own (digital) identities.

Reflections on the UN Collaboration: Facting Fiction, Abstracting Facts

Revolution's depiction of a world that suddenly loses electricity is more illustrative of fears of anticipated loss than it is reflective of the realities of energy poverty. While there was an instrumental aspect to the UN collaboration—for the UN to build awareness for energy access issues—it also invited viewers to contemplate the energy dependencies in their own lives. Therefore, when writers, producers, actors, and others discussed the collaboration in the various promotional texts, they consistently referred to the realistic elements of their fictional television series in relation to the role of electricity in their own lives. This section argues that the circulating discourse of the television series oriented those invested in the show towards the collaboration in particular ways, encouraging a perspective grounded in one's own fears and dependencies. The resulting juxtaposition—between what "we" have and may lose, and what "others" purportedly lack—enforced a sense that *Revolution* depicts the "really real" world not simply of the dystopian loss of electricity but of the absence of modern energy infrastructures as well.

First I show how each side of the collaboration repeated the theme that the series collapses fiction and nonfiction. The collaboration, in this way, "facts" the otherwise science-fiction world created. Second, I detail how this sense of reality was grounded in the dependencies the creators and potential audiences had with the electric world of contemporary digital culture. Turning to those involved with the UN-*Revolution* collaboration—UN personnel, actors, producers, writers, interviewers, and audiences at panels—can suggest ways in which the series and the UN campaigns invited certain conflations between the show and the realities of global energy poverty. While a developed audience analysis would turn to people not involved with the content of the collaboration and show, the contemporary media ecology suggests we turn to content producers as themselves invested viewers, especially in the promotional materials that accompany content (also see Ross, 2014).[77] Nonetheless, I offer this analysis as focused on the circulation of additional texts more than as an audience analysis.

The Really Real of Facts and Nonfictions

In United Nations-*Revolution* promotional materials, the relationship between fiction and nonfiction guided talk about the collaboration. The UN shared information with *Revolution*'s writers, the show utilized this information in the series, and in turn the UN and NBC highlighted in their collaborative materials how what viewers were watching in the show reflected what UN field workers experienced in their everyday interactions. In particular, the UN Blog highlighted this relationship between fiction and nonfiction. In relation to scenes such as Aaron's dream sequence, where, having a sudden sensation of food scarcity, Aaron starts to take food from the trash, the UN blog reminded

its readers that food is indeed difficult to come by for many in the world. The argument followed that lack of energy makes food preparation even more difficult (Gunders, 2014).[78] Further, the writers sampled content from UN fieldworkers' stories. When UN field consultant Derk Seegar spoke on his experience negotiating with warlords, the writers of the show used that information to create the character Titus Andover (see Kripke and Boyum, 2013). The United Nations collaborated on such content from the position that their input was mutually beneficial: the show received a sense of authenticity, and the UN was offered a platform to highlight the realities of what *Revolution* depicted.

In that the UN workers wanted to raise awareness of the realities of others, collaboration promotional texts emphasized how the show depicted realistic moments occurring throughout the world today. In particular, UN personnel used the language of fiction meeting fact to describe the collaboration. For instance, one of Seyedi's blog posts was titled, "From Science-Fiction to Reality: A World Without Electrical Power" (Seyedi, 2014a). Pernille Ironside, chief of UNICEF's field office in Gaza, stated that the show's "fictionalized context…bridges the gap between" fact or "actual conditions" and fiction (Warner Bros., 2014a). Ironside added that *Revolution*, in its depicted challenges such as educational access as it relates to a lack of energy, "is entirely realistic." For the UN, *Revolution* offered the opportunity for fans to become, as the UN's Public Information Under-Secretary General Peter Launsky-Tieffenthal put it, "more aware of the *real* conditions for people around the world who do not as yet have access to electricity" (Social Good Summit, 2013b, emphasis added). Kathy Calvin, CEO of the UN Foundation, summarized succinctly when talking with the writers: "This notion of fact

meeting fiction is powerful" (Warner Bros., 2014a).

For *Revolution*'s creative team, the collaboration and its resulting content offered the perception of "facting" their fiction, and so it is not surprising that—whether or not a conscious, strategic choice—they took up this framing. In the various channels through which actors and creators discussed the collaboration, they highlighted the "actual" and the "real" aspects of depicting what they learned from the UN. In particular, participants on the South by Southwest panel, "Shining a Light," constantly reiterated the words "real," "reality," and "really" to describe the world beyond *Revolution*, which these actors and producers tried to portray. For instance, when asked how the collaboration influenced the content of the show, co-executive producer Trey Callaway stated: "Every bit of information that is very real, that we get from the UN, we are able to apply directly to the show" (UN Foundation, 2014). He added that, "as much as we can do to push ourselves a little closer to what is real" (UN Foundation, 2014), the writers felt better about their responsibilities as cultural producers giving their audience a quality product.

Actors involved in the show and the collaboration's promotional events also reflected on this sense of depicting reality. David Lyons, for example, put it during the South by Southwest panel: "We talk about sci-fi, but it's nonfiction" (UN Foundation, 2014). During an interview after the panel, Lyons continued, "we call this science fiction, some people, one in five people, call this nonfiction. This is their life" (+SocialGood, 2014b). He opined how entertainment venues often depict lives of others without really understanding what that life is like. Instead, he exuded pride in the collaboration offering "a semblance of truth in our fiction." Here Lyons offered his own character's story arc as influenced by the collaboration, when in a flashback General Monroe's wife and newborn

die in childbirth: an occurrence attributed in part to the lack of electricity. Lyons concluded the interview with a hope that he would continue "to see that truth echo in our storylines," because "those little pops of reality in a TV show are hard but they hit home" (+SocialGood, 2014b). Lyons incorporated the same language of science fiction versus nonfiction, and similar reflections on "truth" and "reality," to explain the value he saw in the collaboration.

The UN collaborators recognized this discursive integration on the part of the actors and writers and, at least on the surface, showed enthusiasm at how the collaboration could affect those involved. Bahareh Seyedi stated, "I was personally very touched by the way the *actors* themselves were *affected* by the process of *creating* the TV show, *based* on the realities that people live," adding that an effect of their collaboration included "triggering something in the individuals themselves" (UN Foundation, 2014, Seyedi's tonal emphases). This stated relationship, between the process of creating the fictive universe and thinking about the realities of others, mirrored the comments above as well as the comments from interviewers and audience participants. An audience member during the South By Southwest Q&A, for example, also remarked on how the show did "a great job of creating this *fictional* universe that is *reality* for so many people" (UN Foundation, 2014, tonal emphasis in original). In these promotional materials, therefore, we see how the instrumental focus to build awareness of UN campaigns potentially resonated by getting people to think of global realities while creating (and watching) this fictional story.

Digital Social Practices Grounding Reflections

However, the story of sudden *loss* is still science fiction. A permanent (or at least fifteen years and counting) loss of energy—and the loss of a society such energy helps produce—does not represent reality. Instead, it is a speculative universe for reflecting upon how "we" might deal with losing the object world built around electricity and which "we" are dependent upon. Therefore, most documented comments from people involved with the collaboration, and exposed to the United Nations' fieldwork involvement, approached this experience from the perspective of energy dependence and fears of energy loss. By examining how people responded to the collaboration, I argue that the universe of the dystopian narrative, in Seyedi's words, "triggered" a sense of energy and material dependencies in one's own life and subsequently acted as a part of the grounding through which the collaboration resonated. In the promotional materials, comments offered by actors and writers of *Revolution* suggest an investment in the universe of the show's narrative—first and foremost, a world of lost technological dependencies—and how the collaboration was subsequently considered through that investment.

Supplemental texts from Season One suggest that the impetus of the show was to transform (or "revolutionize") the familiar. That is, a global loss of energy was a means to depict, for a U.S. audience, familiar elements of the United States turned on its head. Kripke saw the series as "a *Lord of the Rings*-style adventure tak[ing] place in a transformed American landscape" (Warner Bros., 2013b). His initial vision for the series involved a sword fight in front of a Starbucks (Warner Bros., 2013a). J. J. Abrams described the visual details as offering a relatable, familiar look filtered through the "what if" question of a world transformed. Set Director Matthew Sullivan emphasized

this changed landscape: “We’re in a world that nobody’s used to, and everyone has had to learn again how to live their daily life” (Warner Bros., 2013b). In all, these examples suggest that the show was conceived less as a world without power and more as a world without naturalized social practices; lost electricity was an efficient means to depict such a world. Therefore, the creators were not overtly concerned with the contours of energy per se.

The creative team’s discussions about the UN collaboration and their show’s impact on peoples’ lives were first a question of lost electrified objects, and only after a consideration of energy resources themselves. For instance, at the 2013 Social Good Summit Conference, which takes place in conjunction with the UN General Assembly, Launsky-Tieffenthal asked Abrams how aware the writers were of the realities of energy poverty when they started *Revolution*. Abrams answered:

> When Eric Kripke, who created the show, first talked about what he wanted *Revolution* to be, we discussed a lot about how technology—we were so reliant on technology that, if it were to go away, how much of what we know to be society might, might collapse. And meeting with you is very helpful in terms of beginning to understand that we actually had an opportunity to, to help people understand the reality of, of, of the world we’re in, and what would happen if that power were to go away. (Social Good Summit, 2013b)

Abrams’ comment suggests that technological social practices guided the vision of the show, and that only later did they consider in-depth the implications regarding energy access or the source of technologies’ “power.”[79]

Their own everyday experiential base of electric-powered technology, already a primary topic of conversation, therefore influenced the creative teams’ comments when reflecting on the UN collaboration. For instance, Michael Schneider, who moderated the South by Southwest Panel, directed a comment to David Lyons: “I’m sure you’ve thought

about this quite a bit…what it must be like, or what it could be like, if we were to suddenly lose power. How would you, sort of, cope with that?" (UN Foundation, 2014). Lyons' comment folded previous discussions—on the social practices they are all dependent upon—back onto the new, UN-influenced framing of energy access as lost power. Lyons therefore had "absolutely" reflected on this sudden loss, and that "when we first started [the show], that was, that was the main topic of conversation with everyone involved" (UN Foundation, 2014). Reflective of Lyons' comment, Billy Burke, during an interview after the South by Southwest panel, referred to the "constant dialogue" on set around how they would deal with this or that technological void (+SocialGood, 2014a). Lyons' comment that such dialogue was about energy access, however, does not compute with other discussions about how the show was initially conceived. Instead, it suggests that those early conversations on lost technological objects became understood, ex post facto, as the same as the reality of energy access for others. The collaboration moved the conversation from hypothetical discussions on sudden loss and what could happen to "us" to conversations on the projected reality of others grounded in *Revolution*'s hypothetical scenario. For instance, as Burke reflected on the universe of the show, he considered how it depicted "a world [without] the means that we're all so used to today" (+SocialGood, 2014a).

When producer Trey Callaway mentioned his conversation with a UN representative via an email he read on his smartphone, Callaway was overcome by the dissonance between his life and those of others and how the show "can really deliver the strongest punch in trying to get these [kinds of] messages home" (UN Foundation, 2014). He stated that it is the micro, everyday, human elements of people "trying to *connect*, in

the darkness" that registered with an audience (UN Foundation, 2014, emphasis added). Callaway repeated this theme on the DVD special, embracing the collaboration "so that we can forge that kind of an emotional connection with the audience" offered by tapping into realistic elements (Warner Bros., 2014a). Most of his examples, however, referred to contemporary devices that stand in for connection because of contingent social practices. For instance, he recounted a story in which a woman in a war-torn country could not make a phone call.[80] The juxtaposition then encouraged the creators of the show to integrate the UN collaboration back upon their pre-established conversations about social practices. These social practices were then seen as dependent upon certain resources. In another DVD feature, Callaway commented on the "incredible capabilities" of our cell phones, devices that "our kids completely take for granted" and "that our parents couldn't imagine" (Warner Bros., 2014b). Co-executive producer David Rambo interjected that these devices "connect us all," and it is that idea of connection—of feeling emotionally connected to the UN stories, of attaching the capability of connection to specifically electric devices—that stood in as a naturalized human desire, but a desire understood via particular social practices. Energy-as-electricity infrastructures "connect us all."

In addition, interviewers asking members of *Revolution* about the collaboration also reflected on the dependence of electricity in their own lives. For instance, when moderating the South by Southwest panel, Schneider commented that simply watching the series illustrated "how fragile…even our society is, and dependent on electricity" (UN Foundation, 2014). In another instance, Billy Burke and Tracy Spiradakos were interviewed the day after the UN Season Two Premiere. After answering a string of questions about the series itself, Burke and Spiradakos fielded questions about the

collaboration. One of the interviewers ended the conversation by stating: "Well your show definitely makes us think about [dependence on energy], how we take it for granted, we definitely do" (Billy Burke Fanpage, 2014). Here we see how the *Revolution* theme of dependence and reliance on energy reverberated.

The United Nations' interest in the show was dependent upon the base plot, not necessarily these situated details that influenced perspectives on how to read the collaboration. Instead of a fiction context actually reflective of the world, the "energy poor" world became refracted through *Revolution*'s fictive storyline of global and sudden loss. Instead of the realities of energy poverty guiding the actors, creators, and others' emotional responses, the act of creating the universe of the show triggered their responses on energy's role in their own lives and, hence, how they engaged with the collaboration's political efforts. The whole "fact meeting fiction" refrain functioned the other way: that the fictive world of sudden loss is implanted onto facts of the world and framed how to understand that reality.

This thematic—of collaborators and viewers projecting the speculative consequences of a world without power onto their own experiences—continued in content produced by the United Nations. The UN-produced PSA, "United Nations: The Mission Continues," was featured on the *Revolution* DVD as well as on the Action 4 Energy website. The PSA opens with images and narration that emphasize how modern cities are powered by increasing amounts of energy. Images of electrified night times, power grids, and an up-close Spaceship Earth image of electricity pulsating with an aurora overlay the opening narration: "It takes energy, and a lot of it, to light the world for seven billion people. Electricity flows by the megawatt to our modern cities, to power

our businesses, our institutions, and our homes" (Warner Bros., 2014c). Right before the visual dramatically closes to black and then resurfaces on a villager lighting a single spark in the darkness, the narration situates its story of Nepalese villagers within the viewer's dependencies and fears: "We depend on it. And we take it for granted. That is, unless we don't have it." The rest of the PSA situates the UNDP as "shin[ing] a light" on one particular project, a micro hydropower effort, which aids Nepalese villagers' development aspirations (Warner Bros., 2014c). In this UN-produced example, mediated social practices of the modernist subject—its desires, its dependencies, and its potential loss—ground the arguments for universal energy access.[81] The concrete sticking point is the invested viewers' own felt, experiential dependencies. If, as other actors have commented, Billy Burke cannot live without his smartphone, then lighting the night for others to join on the progress narrative of energy is the next justificatory step.

Conclusion

The UN-*Revolution* collaboration raises questions regarding the assumed role of energy resources in relation to a series of interlinking social challenges. The stakes are quite high at the level of the Millennium Development Goals, a global framework that helps formulate policy initiatives and will have direct impacts on people's lives. At a narrower, more specific level, the effect of such campaigns as the Alliance for Clean Cookstoves in part relies upon the circulation of knowledge and (financial) support for such campaigns. While there is great value in such information, there are also implications for how these campaigns are discursively framed, articulating certain associations with energy access while not emphasizing other aspects.

Namely, grounding the collaboration in the audience's dependencies and fears is limiting because it elides discussion of energy access as an issue of social equity. In a separate project, Bahareh Seyedi collaborated with musical group Linkin Park to promote a video game, "Recharge," and its accompanying campaign "Power the World." In a discussion of the campaign, Seyedi stated how energy issues also raise the question of social equity and justice. Beyond simply giving energy to others in the world, Seyedi said, we must consider the unequal distributions of energy, in which twenty million New Yorkers consume as much energy as 850 million sub-Saharan Africans (Social Good Summit, 2013a). Such a comment was conspicuously absent in the *Revolution* collaboration. This chapter argues that *Revolution*'s emphasis on our world, and the fear of its loss, is a key structuring element for both how the collaboration developed and how people understood its import. The UN-*Revolution* collaboration did not get to questions of energy distribution, at least in part due to a dystopian frame that invites from the audience a reflexive response to securing energy access in one's own life. Fear of loss and desire of maintenance influenced perspectives of the campaigns combating energy poverty.

In the discursive production of the modernist subject, where progress is promised along a linear narrative, energy remains a promising center point. In this rhetoric, energy stabilizes the world you both control and desire to move through. In the texts analyzed above, we are (once again) facting fiction. However, it is the television show, specifically as it was articulated with the United Nations, which produces facts and realities. The collaboration "facts" the fictions of energy's promises: the modernist teleology of linear progress, of reason, of en/light/enment. By claiming these promises as a fiction, I do not

mean to suggest that people are not "really" suffering, or that increased energy access will not have real, material benefits in people's lives. What I do question is the assumption that increased energy is deterministic in this improvement and, perhaps more directly, that human development is necessarily defined by a projection of particular practices dependent on particular levels of electric energy consumption. This adopted framework disregards energy geopolitics while producing them, all based on a naturalized assumption of what it means to progress.

People who want to have less consumption on the deliberative table for energy futures need to put forth a dual effort. First, they need to be able to counter the refrain, ubiquitously espoused, that energy expansion is a social justice imperative. Second, they need to offer viable energy futures without merely dismissing this social justice argument that legitimates energy expansion. On the one hand, dismissal ignores the persuasive appeal of such arguments as well as the very real concern that limits on energy production, specifically on fossil fuels, will have a negative impact on developing countries. On the other hand, these social justice arguments require counter arguments that conceive of energy production not simply as tied to social practice, but also tied to geopolitics. In particular, postcolonial critiques, in which energy production is understood in its contexts of globalization and regional specificity of power relations, are paramount for moving beyond a universalized, teleological understanding of energy production. For instance, Rajan (2011) discusses how efforts at development are often constrained by the legacy of colonialism and the developed world's demand for imported oil. How can energy futures discussions better account for social justice issues in relation to neocolonial practices entangled with development issues? Tackling how such

geopolitics, and the social production of geopolitical relations, also tie into the fears and desires of those heavily invested in contemporary energy regimes may prove to be an even stickier rhetorical challenge.

Notes

[60] Kripke is known for the success of his long running series, *Supernatural* (2005 – Present).

[61] There are many ambiguous missteps to the series. One of them is the delayed response of Monroe to try to turn the power back on. Monroe is in the car with Miles when Ben calls Miles to warn him about the impending blackout. It takes Monroe many years to finally act on this knowledge that Ben knew something. If there is logic to the time lag, it relates to Monroe's increasingly erratic search for (political) power, which only now manifests in his search for (electric) power and the weaponry that could be at his disposal.

[62] In April 2015, it was announced that a four-part digital comic series would be produced, released every two weeks in May and June 2015, in order to offer closure to the series.

[63] Along with a Twitter handle "Relocate Revolution" @Need_Revolution, an online petition site (http://www.thepetitionsite.com/553/454/200/revolution-season-3/) continues to receive signatures and viewer comments on the desire to bring it back (last accessed 8 April, 2015). However, the main culprit fighting against the show, besides borderline ratings, were the economic factors, as mentioned here: http://seriable.com/revolution-season-3-story-another-network/. Concomitant with the expenses of the show was the inability to feature much by way of product placements. The dream sequence in Episode "Dreamcatcher" allowed for a rather inventive cameo by Bud Light, and The Tower in Season One includes Apple computers, but otherwise there is little opportunity for brands to situate themselves within this universe. This scenario is a particularly difficult one in the contemporary television climate of cost-cutting measures and cheap reality television (Campbell et al, 2015).

[64] This site has about two hundred fan fiction stories dedicated to this theme: http://www.thegoodshipcharloe.com/fan-fiction.html.

[65] It was not necessary to proactively access these texts to experience the collaboration. For those viewers who only watched the show on the NBC network, *Revolution* informed viewers of their collaboration in the final shot of the series, which featured the UN logo, stated that 1.3 billion people live without electricity, and told people to go to the Action 4 Energy website to learn more and "help power the world" (O'Bannon, Grellong, & Beeson, 2014).

[66] These creative initiatives started with an episode of "Law and Order: SVU" in 2009. For details about CCOI projects, see UNCCOI (2014).

[67] The consultations drew attention to universal energy access as a central development goal, offering suggestions on how to push forth energy issues as one of the Post-2015 Millennium Development Goals (UNDP, 2013). While such suggestions included highlighting sustainable sources and universal access, the World We Want survey merely offers the goal, "Reliable Energy at Home." This phrasing, which diminishes some of the key issues related to energy access, may suggest reasons why it only ranks as the eleventh most voted issue out of sixteen. Voters, totaling seven million people and representing 194 countries, were asked to select six of the sixteen issues as the most important (United Nations Millennium Campaign, 2014).

[68] In addressing the fifth MDG in a few outlets—combating HIV/AIDS, malaria, and other diseases—Seyedi repeated a statistic that more people die from indoor pollution due to cooking methods than these other diseases combined, and this statistic underscores the UN Foundation's campaign, "Global Alliance for Clean Cookstoves." When mentioning the 3.5 million deaths per year from toxin exposure due to such indoor cooking, Seyedi also explained how this disproportionately affects women and children, and then added that a lack of energy means your kids cannot study at night, and that pregnancy complications are "mainly due to not having electricity in the health-care facility" (UN Foundation, 2014). See: http://www.unfoundation.org/what-we-do/campaigns-and-initiatives/cookstoves/.

[69] In a similar study, Pezzullo (2006) examines the articulation between activism against toxins and "sexy" film stars in fictive accounts of toxic community litigations.

[70] Similar to Harvey and Knox's (2012) discussion of the "enchantment of infrastructure" as the constant grasping for a stability that reproduces instabilities, the enchantment of *illumination* combines both modernist disenchantment and fear of its loss. The benign everydayness of contained industrial light may be understood as modernity's disenchantment (Schivelbusch, 1983/1988). On the other hand, electricity and its sources constantly reenchant the world as well (see Anshelm, 2010).

[71] I purposefully use this phrase to invoke "follow the papaya" (Cook et al, 2004), which calls for analyses to follow the object of inquiry (see Marcus, 1995). The show is not interested in its electric object's political economy so much as its whitewashed mobility.

[72] Aaron specifically mentions having worked for Google in the pilot episode. Later episodes are less specific, but in any case, Aaron's work experience is immersed in the digital world (note Pittman Digital in episode, "Dreamcatcher" [Edlund, Grellong, & Dawson, 2014]).

[73] As mentioned in the description of the show, since the nanites are constantly absorbing power, electrical devices are never really shut off but are in a perpetual holding

pattern. We later learn that a select number of secret flash drives hidden in these pendants can shut down the nanotech and briefly reignite electric power, and that Randall Flynn remotely controls these devices to track them from time to time.

[74] Maggie also reflects on her own loss in the previous episode:

> You want to know the reason why I keep this [smartphone]? Because somewhere inside are the only pictures of my kids. Birthdays, first steps, their whole lives, and I don't have a single photo to hold in my hands! I spend hours staring at this *stupid* thing, because it's getting harder and harder to remember their faces. (Kripke & Beeson, 2012, emphasis in original)

Other characters reflect similarly, but it is Aaron Pittman who stands in as the character suffering the most from loss.

[75] Many other religious references abound. In episode 1.2, a preacher can be heard stating:

> And that's why God caused the blackout, friends. Why he wiped away our cars, and planes, batteries and spark plugs, computers and phones: because we built ourselves an Electric Tower of Babel. We had power, but no truth. Followers, but no family. (Kripke & Beeson, 2012)

Religion remains a key theme throughout the series, as born-again themes extend into the cleansing moment of the blackout for such characters as Tom Neville, Titus Andover, and President Davis. Further, Aaron is our Job. The night of the blackout was his anniversary, and at the moment of the blackout he is the conqueror of this world, celebrating with champagne and riding in a limousine. His loss is a loss orchestrated by a god figure, which he created. In a Faustian bargain, his own conquering of the ambient environment has altered the environment into that which destroys him. Such religious overtones are unsurprising when compared to Kripke's more popular show *Supernatural* and its Christian theology themes (Valenzano III & Engstrom, 2013).

[76] Electricity remains unexplainable at times, as with the proliferation of crazy ants and their potential attraction to electrical devices (Mooallem, 2013). But this instability also reinforces the promise and perpetual seeking of control.

[77] Media theory has recently turned to how consumers also produce content in contemporary participatory media (e.g., Bruns, 2008). However, the blurring of boundaries further suggests that producers of content similarly enact a consumer role. In *Revolution* we see these blurred distinctions. Executive Producer Trey Callaway joined Season Two and self-identified as a viewer of Season One. Jon Favreau, who directed the pilot and often participated in the special features of the show, has also referred to himself as first a viewer of the show, and only thereafter to his role as co-executive producer (Warner Bros., 2014b).

[78] Other UN blog posts included how *Revolution*'s typhus outbreak is more common without electricity access as a containment mechanism, and also associated the turmoil in real-life refugee camps with a lack of energy (Thomas, 2013; UN, 2013). These blog posts and others are also hyperlinked from the NBC website when a viewer clicks to

"find out more" (NBC, 2014b).

[79] A comment by Kripke suggests the collaboration offered something he sought for the show. Complaining during an interview about the problems with Season One, Kripke stated how "this is a really fascinating world, and people would evolve in all sorts of interesting ways." He felt that in Season One they did not adequately explore these "documentary elements of this world enough." He added that they are "really looking for storylines that give us that" emphasis (Davis, 2013), and the UN collaboration was indeed one such opportunity.

[80] It is ambiguous whether it was an actual story or a hypothetical one.

[81] The *Revolution* narrative frame, of a target viewer's fear of loss, recirculates in other UNDP materials. On their Action 4 Energy website, one of the headlines reads: "Could *you* live with the lights off?" (http://action4energy.org/, emphasis added). The image has five male stick figures, with four including a hovering light bulb above their heads and the fifth with a hovering crescent moon. A common refrain, that about one in five or 1.3 billion people live without electricity, surrounds the image. As such, the UN does not merely mistakenly adopt this framework, but openly incorporates it.

CHAPTER FIVE

CONCLUSION

This dissertation's goal was to theorize energy rhetoric and, in mapping out some of its empirical features in media case studies, to explore some implications for energy futures discussions. The introduction laid out articulations between energy and media, energy and modernism, mobility, and movement, and energy and rhetoric, associations through which energy resource discourses situate energy resources as the unleashing of the world's energetic capacity. Chapter two emphasized the rhetoric of fossil fuel company advertising, arguing that these companies construct layers of mediation with energy as the grounding and ignition for the mobility systems that support one's movements and define one's energetic self. Chapter three emphasized the promise of an energy source that would shift the mediating source of ignition while maintaining the logic of energy development. And chapter four highlighted the fear of lost dependencies on electricity as well as the persuasive force of humanitarian development logics that tap into this sense of dependency, security, desire, and fear. All three cases are grounded in a politics of common sense in which expanding energy production is conceived as a social and human good.

Defining energy resource production as the unlocked potential of the world and of humanity has implications for energy resource politics. Energy rhetoric articulates energy

resources as the mediating life force that animates universalized social practices. This rhetoric creates a universalized, energetic, automobile subjectivity that legitimates the increased production of energy. The case studies suggest that a lack of specific mediators—of mobility systems, and of the energy infrastructures that support them—means a lack of what it means to be human. This discursive form of energetic determinism articulates a causal connection between energy access and greater freedom, defined through unfettered movement or hypermobility. This mediating function also encourages thinking about that which energy resources animate and not about energy practices' own materiality: oil spills, coal extraction, uranium mining, and the work of labor associated with such processes.

In the remainder of this conclusion, first I will summarize major themes that occurred across these case studies. Then I will explore implications for research and energy futures discussions. I divide these implications into research areas that this dissertation's environmental communication implications speak towards: cultural studies, rhetorical theory and criticism, and energy politics. Last, I will offer some guiding questions for further study.

Summary of Major Themes

This section summarizes three major themes throughout the cases: one, the articulation between mobile practices and energy resources; two, the exertive and spiritual qualities of energy resource as mediator; and three, the attributes of energy resources' rhetorical modernism.

Theme One: Linking Energy Resources to Mobile Practices

Rhetorical theory and criticism rarely turn attention to examining the energy resource base of the practices and objects that sustain the social world. For example, while critics talk about "communicative spaces" like cities, memorials, or cars as rhetorical, the same attention is not given to the mobilized resource base of these spaces of engagement (Blair, 2001; Endres & Senda-Cook, 2011; Gallagher, Zagacki, & Martin, 2012; Packer & Oswald, 2010; Sloop, 2009). Criticism regarding the rhetoricity of the car, for instance, often assumes the energy resources that make the car system's functioning possible. Including energy resources into rhetorical criticism about spaces in which social practices occur suggests paying attention to communicative spaces as contexts that are frequently energy intensive. Media texts on the topic of energy resources highlight what it means to live in a world, defining energy as the grounding and ignition for action, specifically in harnessing energy resources' capacity for work in the world. This dissertation focused on such energy resource texts, suggesting that these textual performances resonate with subjects moving through an electrified, digital world by articulating that relationship, or calling forth linkages between one's everyday experiences and these practices' energy resource base.

The first theme across case studies, therefore, is the articulated link between energy resources and hypermobile practices in and through mobility systems. In chapter two, oil company advertisements emphasize the relationship between energy resources and the mobility systems they ignite by foregrounding the centrality of movement in one's bodily experience. These are bodies on the move and bodies defined through movement, in rhythm with the systems and energy resources animating all that movement.

In chapter three, regarding *Pandora's Promise*, the film's protagonists make humanitarian arguments for constant 24/7 electricity access while the visuals depict nighttime scenes of electrified cities. This imagery functions to situate these social practices of electricity as the universalized desire of the whole world. Contrasted to its satellite imagery of Hurricane Sandy's path as synecdoche to climate chaos, the film's global depictions of an electrified world are meant to argue for a) the inevitability of the world wanting what you have; and b) solving the existential threat of climate change without losing one's bodily practices, practices that articulate energy as (global) progress. In chapter four, *Revolution*'s dystopian world depicts the lost grounding of the contemporary, modern world. This content can resonate with how one's own bodily experiences depend on electricity, as evidenced in responses to the United Nations collaboration. Reflections on one's dependence on the iPhone juxtapose with commentary on others lacking electricity, the phones they power, and the subjectivities they empower.

Theme Two: The Energetic as Energy Resource Qualities

The second theme across case studies involves the types of qualities associated with energy resources. These cases offer three primary qualities placed onto energy resources: a potent force; a force that ignites the work done in the world; and a force that circulates as a spiritual presence.

Energy functions as a key mediator of the modern world across these cases. This mediation function is defined via energy resources' potency. Kinsella (2005) identifies potency as one of four master themes in nuclear discourse, and we can see the theme of

concentrated (and channeled) power across energy discourses (e.g., Mitchell, 2011; see n.1.9). In the oil company advertisements, energy resources are named as enlivening the object world, from transportation to medical devices, as depicted in Shell's "Sound of Energy" advertisement. In *Pandora's Promise*, nuclear power characterizes the ultimate concentration of the power of the world, the power of science, and the combination's "power to save the world" (Cravens, 2007). *Revolution* consistently conflates the search for political power with the quest for a return to electricity; for instance, a poster for the series included the tagline, "15 years after the blackout…power is everything." Such power plays, particularly in General Sebastian Monroe's search for electricity in Season One, revolve around seeking electricity to harness its militaristic power or potent force.

Each case study emphasizes energy's dictionary definition, "the capacity to work," in which this capacity contains immense potential as evident in the work it does in the world today. The work in *Pandora's Promise*'s modernization theology centers on the human that manages the world. Nuclear energy's potency is mastered and controlled through scientific discoveries and progressive technological developments. Therefore, it is the human's capacity to exert its technical knowledge that unleashes the capacities of the nuclear genie, not simply unlocking the power of the nuclear Pandora's box but containing this force and putting it to work for humanity. The main thematic in the oil company ads is how they organize your movement in space, assembling or mobilizing your world, such as illustrated in ExxonMobil's "Egg" (ExxonMobil, 2014b; see the introduction chapter) or detailed in the everyday activities of Shell's featured individuals Leni, Elcimar, and Madame Lu. *Revolution* focuses on all of this work suddenly grinding to a halt, as lampposts, cars, and electric grids lie fallow. In this context, the UN

collaboration shows energy "doing work" in their success stories, such as the Nepalese village. The UN justifies the work of electricity through presence (their efforts) and absence (*Revolution*'s narrative).

Energy, as mediator of the potency of the social world as we know it, takes on a spiritual quality. In each case study, energy resources are attributed with a mediating power, but in a human-centered theology in which humans build the world through unlocking the world's energies, attributes analogized to spiritual capacities. While this religious symbolism is less pronounced in the energy company advertisements, these campaigns do heighten the immersive and ubiquitous presence of fossil fuels that we do not see, but should believe in; seeing (social practices) is believing (the power of energy) functions as a recurring theme of each ad campaign. Additionally, ExxonMobil's use of the aurora is a spiritual depiction of energy as metaphysical. As referenced in chapter four, Park (1997) offers a philosophical history of light in which illumination was seen not as a metaphor but as a literal instrument of God's power. The light displays of the aurora, an earthly event in which one can see this instrumental power, suggest such spiritual connotations; when *Revolution* or *Pandora's Promise* depicts the celestial glow of electricity (or nanotechnology), it also turns to the image of the aurora. The numinous powers of energy pulsate in and through imagery of an electric glow, or these light motifs in each chapter. Such spiritual symbolism is particularly evident in *Pandora's Promise*, as the modernization theology heuristic attests, as well as in *Revolution*, where the counter to electricity, the malevolent nanotechnology, are referred to by the writers as the character, "God." To the latter, when the unlocked and controlled energies of the electric world are lost, the supernatural elements of the show's dystopian world, controlled now

by the external trickster deity, nanotechnology, stand in as contrast to the electrified world under human control, or electricity's human-centered theology. Chapters three and four both highlight the containment aspect of the recovered modernist narrative, in which spiritual powers are harnessed through the modernist channels of electric currents.

Theme Three: Rhetorical Modernism's Universalized Attributes

The rhetoric of the case studies recovers parallel mythologies, specifically offering universalized discourses I label "rhetorical modernism" in the introduction chapter. Such rhetorical modernism takes form, first, in evolutionary narratives arguing technological and energy determinism and hence calls for development, and second in symbolic themes such as One World imagery.

The first subtheme under rhetorical modernism is that of evolutionary narratives with their teleological origins and historical progression as well as the required commitment and mobilization to see this progression through (Johnson, 2006). *Revolution* garners its name from the premise that to suddenly lose electricity would mean the toppling of the central tower of modernity: that losing power—metonymic in the power button symbol of the opening credits—would transform everything. The UN collaboration encourages support for a linear stage model of development when it utilizes this articulation between energy and evolution. The oil company campaigns all highlight how they mobilize the world and see through a progress narrative, geared around movement and mobility. Petrobras is explicit on this evolutionary role when they state, "Petrobras monitors all this evolution" (Petrobras, 2011b) while functioning as a stable presence for continued evolution into the future. The oil companies argue that they are

focused on this "evolution" to prepare and provide for movement today and into the future, and this managed evolution reinforces a desire for overcoming these challenges in the name of human movement. Finally, *Pandora's Promise* emphasizes evolutionary discourses' forward trajectory of history, if one that does not always follow a straight path. In its emphasis on unintended consequences and a faith-based commitment to staying the course, the film argues for the constant process of (re)making the teleological promise assigned to such things as energy production. In addition, the film visually depicts a revolving and evolving globe. Visualizing modernism and evolution as a steady march of greater and greater electricity use throughout the world, the film's argument follows that the forward motion of history is inevitable, and so it is up to us to commit to it and manage its evolution.

The second subtheme under rhetorical modernism is its universalizing components, primarily illustrated in the case studies' global visual tropes. One World imagery and themes intersect with the humanitarian rhetorics of development as evolutionary human uplift. Energy remains the modernist narrative of a world progressing, or moving forward through history. The actor who plays Kim in the Shell advertisement of the same name blogged about his experience, which included this reflection: "From a marketing and advertising point of view, I couldn't fathom why Europe or the US would air an ad featuring Asian talents. But I'm sure they had their reasons" (Cheong, 2010). This dissertation argues that at the center of those reasons is an argument for the universality of the energetic qualities, capacities, and desires of all people, attributes unlocked in and through the supply of energy resources. The mobile human subject is the universalized protagonist, and energy and mobility infrastructures

the universalized source that ignites that subject's energetic potential (or converts potential energy into kinetic energy). The cases offer globalizing discourses of the world on this trajectory: of forward moving progressions of the modern world through greater and greater energy access and technological development. The explicit satellite images of the globe, both in *Pandora's Promise* and in the UN collaboration with *Revolution*, reproduce development discourse's universalizing tendencies.

Implications of Primary Themes

In the communication field, the area of environmental communication has primarily taken up the charge regarding energy resources as a communicative topic. As explained in the introduction chapter, such research often emphasizes rhetorical strategies used around particular sources of energy, but gives less consideration to the rhetorical persuasiveness of "energy" as it exists in the world. This dissertation furthered understandings of rhetorical strategies in particular cases, while considering such texts within a rhetorical materialism concerned with how texts enter into the flow of producing subjectivities governed in particular ways towards energy futures (cf. Sloop, 2009). Environmental communication, often turning to materialist theories of communication, is well positioned to further consider how energy exists as a material and discursive force in the world (Rogers, 1998).

In this section, I offer some implications of the ways in which these discursive case studies conceptualize energy resources and, as such, how inquiries related to environmental communication scholarship and energy rhetorics suggest implications for critical cultural studies, rhetorical theory and criticism, and energy politics.

Critical Cultural Studies

A critical/cultural communicative emphasis on energy resource discourse suggests further analyses of such discourses' often utopian promises, an examination of the production and reproduction of norms through these discursive promises, and the circulating effects of such discursive practices. Energy resources, as characterized in this dissertation's case studies, embed within and animate cultural objects. Cultural theory often turns to the agency and affects of cultural objects (e.g., Brown, 2004). I also argue for the importance of noting the persuasiveness of mobilizing the resources that ignite these objects. This section calls upon critical/cultural communication scholars to engage in energy resource communication in three ways: one, to break down the universalizing discourse in order to critique it and suggest alternative, emergent pathways; two, to place object-oriented ontologies in conversation with rhetorical modernism; and three, to encourage spatialized energy productions among cultural studies' interests in the circuits of culture.

First, turning to the critical cultural practice of articulation also highlights how universalizing discourses are a contingent discursive strategy over the contentious framing of reality. Breaking down naturalized associations attributed to cultural objects is important for energy futures. To be alive is to be in relation and extend out into the world, and for the world to extend back into animate forms. Something alive can cope and survive as long as there are relations. Attention to the individual as a locus also draws attention to human relations with food, water, sun, and air. Indeed, life sustains itself through the relations of human-food, human-air, and so on. Within this context of relations, the logic of the iPhone is that it connects us to our relations with people. But to

then suggest that it is the iPhone "that connects us," as David Rambo of *Revolution* does, and not the capacity for connection that manifests in many different ways including the iPhone, naturalizes the cultural object. That in turn normalizes the means of connection, which are often energy-intensive. Particular uses and mobilizations of the world easily map onto the animate world's capacity for relationality, a conflation that justifies particular, energy-rich practices. Furthermore, analyzing the universalizing language of energy rhetorics, via the mobile practices that such language tries to tap into, will benefit from self-reflexivity on the part of the critic so as to not reproduce the universalized ontologies one examines. Bodily experiences are indeed not the universals one might conclude from Lakoff and Johnson's (1980; 1999) work, or from hypermobile discourses as found in media texts on the topic of energy (cf. Cozen, 2013). De-essentialist proclivities in critical-cultural work would do well to extend further into universalizing assumptions regarding the digital world of connective media devices and infrastructures (e.g., Gates, 2013).

Second, object-oriented ontologies, or posthumanist perspectives that start at a different point than the autonomous individual human, add tremendous political value to numerous research areas but should not dismiss the rhetorical reproductions of the humanist subject. Research in environmental communication has explored what it means to speak of nature-cultures (Plec, 2013). This area has explored, for instance, what it means to have a body in a world of hybrids instead of the supposedly hard boundaries between nature and the human (Alaimo, 2010). Turning to energy resource rhetoric suggests that communicative practices not only suggest the blurring of such boundaries but also suggest the reinforcement or suturing of these boundaries. In turning to energy

discourse case studies like the ones here, we can see how energy resources, as a mediating animating presence, discursively function as the bridge that does not merely connect the human to nature but, in naming this relationship as a connection, distinguishes the two as separate entities that then have the capacity to connect. This reproduction of the automobile individual human subject, detached yet in relation to nature, produces a sense that, while embedded in the world, humans are both contained entities and managers of that world. Eco-modern discourse on the "anthropocene" suggests that people are influencing the world and, in addition, that there is such a thing as the individual "human" that acts on the world. Autonomous human agency, in sum, is just as reinforced as it is challenged in discourse, with implications for how we communicate lifeworlds and the interplay of human-earth (Killingsworth, 2007). Research that explores both rhetorical modernism and object-oriented ontologies may suggest fruitful avenues for further explorations regarding the political implications of various means by which agency is situated.

Third, within cultural studies' turns to various circuits of culture, such as representation and production, energy resource discourse suggests a useful avenue for further inquiry. Pezzullo (2008) charges cultural studies to explore its linkages to environmental communication and criticizes cultural studies for largely marginalizing the environment by either avoiding consumption issues or ghettoizing the topic. Pezzullo (2013) takes up these calls again with a particular focus on energy regimes, offering a series of thought-provoking questions including: "What are the emergent structures of feeling that will enable or constrain reflexivity about interconnectedness, limits, and ecological imaginaries?" (p. 304). My project suggests that we can see some of these

constraining imaginaries at play in energy rhetorics such as the preceding case studies, particularly as energy discourses articulate with a mobility structure of feeling (Thrift, 1994). With Pezzullo (2008) calling on cultural studies to recognize its latent interest in how, e.g., environments spatialize and temporalize, Pezzullo's latter focus on energy (Pezzullo, 2013) points to resource production as an inherently spatial concept, existing materially in the world and extending over space. For instance, Mosco (2014) argues that the era of cloud computing is also an era of massive computational server farms endlessly drawing on electric power, citing a report in support of coal that suggests the age of Big Data will also be the age of Big Power (Mills, 2013). Energy production creates differential processes, and energy rhetorics (re)produce spatial production in land use policy as well as differentially mobile subject positions, not a flattened universal ontology (Cresswell, 2010; Massey, 1994; Massey, 2005; Shome, 2003).[82] Further, discursive frames suggest certain possibilities and not others (Endres, 2009a). This frame of possibility then persuades in the context of how that "makes sense" with prosthetic bodies attached to the iPhone and other electric mobiles. However, that is not to say that either the spatial productions or the representations of them are natural, universal, or total, but instead that they are relational, invested in power, particular, and could be otherwise. Cultural politics, in sum, must include understanding the persuasiveness of mobilizing the resources that ignite our cultural objects.

Rhetorical Theory and Criticism

Energy-resources have a geography. Practices that revolve around energy extraction and consumption build spaces of production, circulation, and so on. This

spatial component is undertheorized by turns to material rhetoric. While we turn to spaces of engagement, and the relationship between words, bodies, and places, what of the uneven relationship between a space of energy consumption and its spaces of extraction (Endres & Senda-Cook, 2011; Gallagher et al, 2012)? A globalizing sense of place should also point us towards energy flows, as should the particular characteristics of material rhetoric's spaces of engagement, in that these spaces under analysis are often energy-intensive (Massey, 1994, 2005; Wiley, Sutko, & Becerra, 2010). Further, theorizing rhetoric's materiality often includes theorizing the energetic. Conflating rhetoric, mediation, and energy has implications, in that each term becomes a conduit for the "real" emphasis. Condit (2010), for instance, writes about the rhetoric of DNA, which de-materializes the material world. The "clouds" of computing, the invisible DNA of the lifeworld, the energy of modernization, and mobility systems, and human movement: each material entity is rhetorically constructed as ethereal and, hence, the key drivers but not the focal points of the social life world (Condit, 2010; Schaefer & Durham, 2007; Gehl & Cozen, 2015; Mosco, 2014). Turning to rhetoric's materiality would do well to further turn to questions of how energy resources are rhetorically constructed as a presence that engulfs a thing more than a thing itself. These emphases on things (as animated objects/bodies) also reinforce a sense that de-bodied things are immaterial—itself producing material effects. Ignoring energy resources' materiality takes their presence (and presencing) for granted.

I draw two implications from the articulation between rhetoric and energy, one that utilizes rhetorical theory's language of energy, and another that critiques this language. First, in that energy resources are always a dynamic of power relations, there is

an immanent need to rechannel the *rhetorical* energy that naturalizes expanded energy-source production as a universal good and a desired (and feared) object. Harold (2004) theorizes the rhetorical prankster, jamming with various tools, through the image of the sabot that does not merely thwart but channels and redirects "energy flows" (p. 197). The productive capacity of rhetorical work is in the mobilization or channeling of flows for discursive and material change. Turning to energy resource futures, what alternative spatial productions and bodily experiences can counteract the common sense, universalizing language, and elusive and ambient qualities of current energy-source discourses? Drawing from Henri Lefebvre, I argue that energy futures need to consider alternatives in the spatial and rhythmic, or temporal, components of spatial practices in order to build new worlds. Rhetorical efforts at redirecting engagements in energy resources will also need to build new spaces and rhythms (Lefebvre, 1974/1991; Lefebvre, 1992/2004). What productive antagonisms might develop out of the universalizing articulations around contemporary energy futures discussions (Laclau & Mouffe, 2001)? While movement efforts against the Keystone XL pipeline, or toward shutting down coal plants, or for fossil fuel divestment are all potentially fruitful efforts, they need additional strategies that not only critique but also produce alternatives to patterns involving social practice and energy demand. Political antagonisms against energy's hegemonic universality—antagonisms that address increased energy production as a social good while producing spaces (and times) that attempt to achieve social justice through practices that demand less energy, not simply attacking fossil fuel efforts—remain necessary.

Second, what mythologies are reproduced in rhetorical theorizing of social

change? It is important to keep in mind the structures of feeling from which we theorize rhetorical ecologies (Edbauer, 2005). Do academics' social practices, immersed in energy-dependent mobility systems and rhythms, lend to particular modes of theorizing rhetoric in terms of the energetic?[83] Social and rhetorical theories are at minimum influenced by their cultural and historical context (Wander, 1984). I argue that contemporary crises and concerns in energy production, on the one hand, and self-reflections on mobile practices, on the other hand, concurrently influence, in part, the language of energy in rhetorical theory. For those rhetorical theorists interested in the energetic, rhetorical action, and social change, paying attention to the material basis of energy resources suggests how such theorizing is materially grounded in the (common) academic's own mobile experiential bases. Theorizing of immersions and ambience both points us toward useful discussions but, as all rhetorical theories go, enables and constrains our modes of thought. I suggest for others to consider the importance of the audience's bodily and habitual experiences as they resonate with such discourse, as well as to be self-reflexive in this process. To engage in a critical project on the continuous expansion of energy extraction also calls upon critical reflection of what we mean when we talk about energy, rhetoric, and the work done in the world.

Energy Futures Politics

Linking environmental communication and politics can point research towards energy resource discourses and how they rhetorically support energy futures policies. The cases in this dissertation suggest rhetorical strategies by which energy futures' logical frameworks are assembled, universalizing the desires not of individual sources but of the

"energetic capacities" attributed to energy resources. Analyzing discourse at the level of "energy" and not simply individual sources offers implications for policy by illustrating the rhetorical logics and theories of how energy exists in the social world. The rhetorical process by which the desire for energy production is naturalized as the primary means for extending a good quality of life across the globe favors certain political possibilities over others. Interest in deliberating less energy production may stem from a desire to challenge a whole host of power relations as they exist around energy production, such as colonial histories continuing in the present of energy consumption and production (see Rajan, 2011, for oil-related examples; for nuclear energy examples, see Endres, 2009b; Hecht, 2010). Such deliberation may advocate for, by way of one example, shifting practices in terms of the manufacturing and waste streams of digital objects. Borrowing from Shove and Walker (2014) as discussed in chapter two, political efforts that get at the level of social practice will go far in terms of social justice, both for the consumer utilizing such digital objects and the communities surrounded by their e-waste, the latter very much a product of planned obsolescence (in quantities of waste) and the geopolitics of consumption (in localities of waste). For such political interests, a key issue is how to produce alternative logics to this link between increased energy production and human progress.

To ignore the striated world of energy politics encourages what I term a "Bohemian Energy" perspective. Drawing from Ross' (2004) analysis of the artistic ethos of 1990s San Francisco, I suggest following a Bohemian perspective on energy futures, in which energy access is taken as a social good, and we merely need to make our sources cleaner. Bohemian Energy does not account for political perspectives on energy

developments or the ways in which shifts in capitalism also mean shifts in resource requirements. Various energy developments reflect the ways in which changes in society, specifically around automobile prostheses, mobilize justifications for fossil fuels *plus* other forms of energy for electric-mobile hybrids. Bohemian Energy points not so much to alternative practices as to the shifting requirements of mobility regimes. In other words, I argue that the proliferation of natural gas, nuclear, and so on are as much, if not more so, about new requirements in electricity production powering a mobile world as they are about ecological concerns surrounding oil and coal. The universalized desire for mobility, in turn, functions as a rhetorical premise that justifies policies for an "all of the above" strategy. Alternative means of movement, or of fuel sources other than fossil fuels, play out within an all of the above strategy (including fossil fuels) of meeting an assumed expanding demand, where "common sense" future projections justify developments of today. Such implications particularly play out in chapter two but are also evident as consequences of the energy access arguments from pronuclear advocates and from the United Nations. Requirements for new resource extractions, therefore, suggest a process more fruitfully conceived as a political issue producing power relations than as an unquestioned good. Further research politically engaged in energy futures would do well to extend this Bohemian Energy framework to analyzing arguments for alternatives to fossil fuels that, in effect, encourage the adding, more than replacing, of extractive practices.

Conclusion

Meaning attached to objects is the political realm of struggle. In this dissertation's case studies, energy resources are conceptualized as the animating, de-material presence that fills the world with meaning: that which offers meanings attached to objects, but not as objects themselves. The universalizing humanitarian rhetorics of energy resource discourses suggest that it is the animating presence that, in this animation or its realized capacity for work, is unequivocally good and, in turn, justifies modernization projects around energy production. The cases highlight the discursive struggles in trying to mobilize particular actions that can supply this (deemed good) quality of life.

In all I hope to have offered, in the previous analyses of such conceptions, a contribution to cultural theory, rhetorical theory and criticism, and energy politics. Energy resource discourse speaks to central questions regarding how reality and human subjectivity are produced through rhetorical practice. While I am of the mind that the normative aspect of moving away from such a heavy reliance on fossil fuels is primarily a worthy endeavor, questions arise from such an emphasis. For instance, how do we address the persuasive appeals of fossil fuels as the drivers of the mobile modern world? How do we address the rhetorical logic and deterministic discourse of energy development? How can we rethink the speed of rapid deployment—of energy regimes for a post-carbon energy future—without simultaneously legitimating accelerated fossil fuel development? In other words, how do discourses of rapid deployment legitimate "all of the above" strategies in which energy, iteratively constituted as an unquestioned social good, demands further and further expansion? Further, how can such alternative futures move beyond faith in grand narratives of progress? In turn, what defines "unintended

consequences?" It is my contention that an emphasis on energy resource rhetoric can add not only to energy politics discussions but also to informing how scholars address such questions as well as theorize the rhetorical, the object world, and the human subject as a rhetorical process.

Notes

[82] By way of an example, to assert subjectivity through mobility systems is to essentialize the colonialist subject position of Baudrillard's (1986/1988) *America* (cf. Kaplan, 1996). Baudrillard suggests that one can only know astral America from a particular vantage point—that to drive is to learn more about America, in its movements and speeds, than anything else. I argue that such a perspective does not teach Baudrillard more, but it does frame what he learns. The perspective of movement, via the mobility system of the car, suggests an experience of the world via particular mobile practices that reinforces his own resonances and, in turn, theories. Energy resources may persuasively reinforce the centrality of movement to life, but to then suggest that mobility systems and their energy requirements are central to life occupies the imperialist space between body and oil, body and oil politics, and body and conquests of space (and time). In sum, Baudrillard's movements over and through the circulating rhythms of America are not devoid of historical conditions or the first-order production processes of fossil fuels.

[83] Pezzullo (2013) lands a similar charge that academics should critically examine our own practices, such as conference traveling.

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