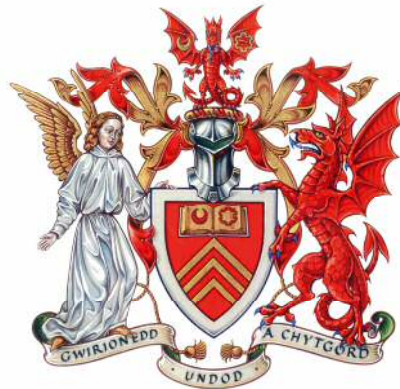

IMAGES OF ELECTRICITY:
PERCEPTIONS OF LOSS AND
SEMIOTIC COMMUNICATION OF RISK

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SCHOOL OF PSYCHOLOGY

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I dedicate this thesis to my family who made me who I am today.

На моя Мозък винаги до мен, готов да ме защити. Благодаря ти за
любовта, подкрепата и че си моя камък!

На най-прекрасната майчица, моя силна опора. Благодаря ти за
доверието и безкрайната обич с която ме заграждаш!

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че си ми винаги на среща!

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мигове и през по трудните. Благодаря ти, че ми даваш едно рамо и
си винаги там, готова да ме слушаш когато имам нужда!

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Abstract

Electricity is a tool used by people and the basis for life in a technologically advanced world. From production to consumption, electricity is an important part of, and has a great impact on, everyday life; and yet despite its prevalence, electricity remains a largely *unseen* phenomenon of both nature and nurture. This thesis is situated in the social sciences' conceptual context and will explore to what extent electricity is not only a part of our lives, but also how and what it changes in relation to our perceptions of the world. The particular focus of this research is on the *images of electricity as created by individuals but circulated in and interpreted by communities and societies*.

As electricity is unseen, all communication regarding energy and electricity (just like any other abstract idea) is achieved primarily through the use of images (including visual, narrative and performative types of images). There is a great variety of theoretical models that can enable in-depth analysis of these images and reveal human perceptions of electricity as well as the influence these perceptions can have on human decision-making processes, behaviors, and social interactions. Images produced in times of turmoil due to a catalyst event are particularly poignant at excavating the *unseen* and *unconsidered* and provide opportunities for study, which cannot be conducted at other times. In this, thesis two case studies are presented and analyzed, namely Hurricane Sandy (2012) and Bulgarian Energy Protests (2013). Specifically, the emphasis is on interpreting images from these two cases as signs - iconic signs and/or symbols - and on the consequent transformations of their elements when created and used in different social contexts. The analysis of the empirical data is twofold: *first* thematic and content analyses followed by *second*, a semiotic analysis.

The semiotic approach to studying images of electricity has not been attempted so far as extensively as it could – or indeed, should - be and it is used in this thesis to offer an alternative way of approaching electricity research and a different understanding of how electricity can shape or influence our views, values, and actions. In other words, the major focus of the study is on images of electricity produced in times of turmoil, which are further analyzed as signs that are integrated into communication between individuals, within communities, and in a society and understood through the use of shared codes and contextual knowledge/experience.

Thesis Statements

Declaration

I, Luba Petrova Pirgova, declare that no portion of the work presented has been submitted in substance for any other degree or award at this or any other university or place of learning, nor is being submitted concurrently in candidature for any degree or another award.

Signed (candidate) Date

Statement 1

I, Luba Petrova Pirgova, declare that this thesis is being submitted in partial fulfillment of the requirements for the degree of Ph.D.

Signed (candidate) Date

Statement 2

I, Luba Petrova Pirgova, declare that, except where indicated by specific reference, the work submitted is the result of my own independent work/investigation and the views expressed are my own.

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Statement 3

I, Luba Petrova Pirgova, hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organizations.

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Introduction

Electricity is a tool used by people and the basis for life in a technologically advanced world. From production to consumption, electricity is an important part and has a great impact on everyday life. Often electricity is seen linked to engineering or physics, technological innovation or development, but there are many social science aspects that can and should be studied to better understand the role of electricity in our lives. This thesis is situated in the social sciences' conceptual context and will explore to what extent electricity is not only a part of our lives, but also how and what it changes in relation to our perceptions of the world. Particularly, the focus of this research is on the *images of electricity as created by individuals but circulated in and interpreted by communities and societies*.

Images are physical or abstract imprints of a phenomenon. Images can reflect values, ideas, and beliefs that are shared by most members of a certain community or society. Images can reveal perceptions of phenomena that are not always realized as existing on a conscious level, which is very often the case with electricity. These images can be *visual* as in photo or video materials, *narrative* as created in and by narratives about electricity-related topics (interviews, stories, news articles, etc.) as well as *performative* as integrated into ritual re-enactments. Images produced in times of turmoil due to a catalyst event are particularly poignant at excavating the *unseen* and *unconsidered* and provide opportunities for study, which cannot be conducted at other times. That is why such images became the core corpus of empirical material considered in this thesis. These images were explored in the thesis through analyses of the various aspects associated with the image production, perception, interpretation, and exchange through a variety of communicative strategies. In the case of electricity related turmoil, images can help reflect on the integration of technology in everyday electricity-related practices and highlight the production and consumption of objects and ideas in addition to electricity as a phenomenon.

As electricity is unseen, all communication regarding energy and electricity (just like any other abstract idea) is achieved primarily through the use of images (including visual, narrative and performative types of images). There is a great variety of theoretical models that can enable in-depth analysis of these images and reveal human perceptions of electricity as well as the influence that these perceptions can have on human decision-making process, behaviors, and social interactions. The focus of this thesis, however, is on their interpretation as *signs* - iconic signs and/or symbols - and on

the consequent transformations of their elements when created and used in different social contexts. This research aim determined the choice of semiotics as a lead analytical method. The semiotic approach to study images of electricity has not been attempted so far as extensively as it could – or indeed should - be and it is used in this thesis to offer an alternative way of electricity research and a different understanding of how electricity can shape or influence our views, values, and actions. In other words, the major emphasis of the study is on images of electricity produced in times of turmoil, which are further analyzed as signs that are integrated into communication between individuals, within communities, and in a society and understood through the use of shared codes and contextual knowledge/experience. The study includes representations of electricity as well as abstract ideas to which electricity is connected such as safety, security, comfort, home and public spaces and places, etc, all of which affect how people perceive their physical and emotional surroundings.

Electricity loss can foster a catalyst-event that would nudge people to produce and communicate their perceptions of electricity without a prompt from an interviewer. This thesis will present two case studies that describe such events. These events represent two types of disaster situations that encouraged the production of electricity-related images. The first event is considered a natural disaster while the other is a man-made one. These two events were selected because they illustrate two different ways electricity can be lost – quick in a moment or slow over an extended period of time. The quick loss of electricity is exemplified by the natural disaster situation caused by Hurricane Sandy, which made landfall on the shores of the United States in October 2012. The slow loss of electricity is illustrated by the man-made situation in Bulgaria, which lead to the Energy Protests in the spring of 2013. The empirical materials used to study these two cases include online texts, photographs, and videos in addition to in-depth interviews conducted several months after the events took place. The analysis of the empirical data is twofold: *first* thematic and content analyses followed by *second*, a semiotic analysis. At the end these two cases are compared before conclusions and further research suggestions are drawn.

The research questions for this thesis are as follows:

- ✓ *How do people respond to loss of electricity?*
- ✓ *How do their personal (or group) perceptions influence their responses?*
- ✓ *How can we use visual methods and semiotic analysis to study perceptions of electricity loss?*

The dissertation is structured in a way that best demonstrates the scope of empirical data and theoretical findings. *First*, a literature review that aims to define the term *electricity* and explores the transformation of its meaning across academic disciplines as well as the term *image* as it is viewed in the context of various studies. The literature review is an exploration of existing studies of electricity, energy, and climate change where visual studies were used for the whole or part of the analysis. The critical presentation of the academic research up to date serves to identify any gaps in knowledge that this thesis aims to fill as well as to present a better case for the limitations and assumptions that underpin this research. *Second*, the field methodology as applied to both case studies with considerations of the limitations. This methodology chapter includes ontological and epistemological assumptions as well as information about the obtaining, storing, and coding of the data. *Third*, two chapters are presented to describe in more detail the empirical data used in each case study. The description of the data is accompanied by thematic and content analyses as well as further discussion of the main themes arising that constitute the basis for the second half of the thesis. *Fourth*, the semiotic framework of analysis is presented with particular attention to the classic theories that are used for the further analysis of the data collected for both cases. This chapter, which reads as a literature review-methodology chapter, builds on the analysis of the thematic and content analyses chapters in order to describe the theories used for the next layer of the analysis and particularly those related to the semiotic approach. *Fifth*, the two data cases are re-evaluated using semiotic analysis. *Sixth*, a comparative chapter concludes the main body of the text presenting the connections between the two case studies with reference to the field and analytical methodologies as well as important findings and theoretical contributions the thesis presents. The thesis concludes with suggestions for possible further research opportunities the data sets afford. It also comments on some other gaps remaining in relation to the study of images of electricity that need further consideration.

Chapter 1

Literature Review: An Exploration of Concepts and Current Research

“The electric light is pure information. It is a medium without a message.”

-McLuhan's (1964: 15)

Introduction

Electricity is everywhere around us, both man-controlled¹ such as the electrical grid we use to power various appliances in everyday life as well as environmentally occurring such as thunder and lightning. As a phenomenon that is so prevalent in everyday life, electricity remains a largely unseen phenomenon of both nature and nurture. Despite its invisibility, due to its importance, electricity has been an object of study across academic disciplines and with the use of a variety of research methods. This literature review will examine prior studies of electricity and the methodologies used before focusing on the affordances of visual methods and how they can be used for the study of images of electricity. There is a broad spectrum of publications that study electricity from a variety of perspectives, but this review is limited to include only academic literature as directly relevant to the research goals of the thesis. Therefore, even though the scope of the literature review appears to be particularly broad, the publications were carefully selected to reveal the different ways in which they define, contextualize, and analyze terms such as *electricity* (in Part I of the review) and *images* (in Part II).

Perceptions of Electricity in General: Analytical Frameworks

Part I of the literature review will discuss perceptions of electricity in general by *first* presenting three analytical frameworks that relate to electricity and examine how it can be studied as a) light, b) relation to spaces, and c) reinvention of communities. *Second*, will be presented as a very broad summary of how electricity is studied within various academic disciplines. This summary will serve to illustrate the existing research of electricity-related images within the various academic fields and to highlight commonalities and differences in analytical approaches to the study of electricity.

Electricity as Light

Electricity refers to a very complex concept. It is ‘an invisible flow’ that is studied using the human senses of sight, hearing, smell and touch to explore the ‘symptoms’ that identify its existence (Lutzenhiser et al. 2009 and see Pink 2011b, 2012). Light, the crackling of electricity running through a socket, burning of a blown

¹ The term man-made is referring to human-made, but it was deemed appropriate to keep the original terminology as to allude to a large body of published works in which it can be found. This is not a gendered assumption that maleness comes as standard, but rather the appropriate terminology from the time when the man-made theories were first developed.

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AN EXPLORATION OF CONCEPTS AND CURRENT RESEARCH

fuse, use of various appliances or feeling an electrical shock can all identify that electricity is present. As Harold Wilhite specifically writes, “people do not consume energy per se, but rather the things energy makes possible, such as light, clean clothes, travel, refrigeration and so on” (Wilhite 2005: 2). Even mathematical studies of electricity focus on explaining theoretically the ‘symptoms’ of its presence in a given situation such as electrical currents. As this is a thesis that will be focusing on the images of electricity, the analytical framework that will be presented in this section is that of the study of the ‘symptom’ of *light*.

Light identifies the presence of electricity, but what electricity *is* and what it *means* can change over time. As Cubitt suggests, “the medium of light can and perhaps must be thought apart from its messages [...], not only the meanings but the very experience of light is negotiated, struggled over, dominated here, resisted there, subverted and remade.” (Cubitt 2013, 5). That is to say that there should not be any other meaning attributed to light other than to signal that electricity is passing through, but in reality, light and electricity are imbued with other meanings that are constantly negotiated and evolving.

The concept of negotiation presupposes social involvement, which means that light has strong social and cultural structures that should be further considered. Bazerman demonstrates these social and cultural structures in his study of the discourses that surrounded Edison’s patenting of the electric light. The study serves to demonstrate the intertwining of social, cultural, political and economic factors that influenced the inception of the electric light over the four-year period of 1978 to 1982 as evident in jokes, slogans, commands and other means of communication used (Bazerman 2002).

Within this conceptual context, we can also consider the definition of ‘light’ as a *signal of information*, as a *message* and as *channel* offered by Eco. In his words:

“To say that light is a medium is a refusal to realize that there are at least three definitions of ‘light.’ Light can be a Signal of information (I use electricity to transmit impulses that, in Morse code, mean particular messages); light can be a Message (if my girlfriend puts a light in the window, it means her husband has gone out); and light can be a Channel (if I have the light on in my room I can read the message book). In each of these cases, the impact of a phenomenon on the social body varies according to the role it plays in the communication chain.” (Eco, 1986: 139)

The various definitions of light help explain how *light* can be seen to represent progress and development as well as danger and regress. Light can be used to define both a level of comfort (Shove 2003) as well as discomfort (Bijker 1997). For example, Wiebe Bijker's study of the fluorescent versus incandescent light bulbs and level of comfort, or lack thereof, shows how social groups can imbue an artefact with meaning so that the artefact may be seen to represent a concrete idea, or in this case that fluorescent light bulbs present discomfort due to their brightness. Moreover, both Bijker and Shove illustrate how social or community groups can form around certain electricity-related artefacts and how social groups can then become identifiable based on consumer behavior or ideological views related to those artefacts.

Electricity in the Mechanic Reinvention of Community Space

Electricity shapes people's notion of the mechanical structure of a community. The urban space was restructured with the introduction of 'the modern city-machine', or one which is 'powered by electricity' and 'charged with dynamic movement' (Cavallaro et. al 2004; 170). Electricity allowed individuals' access to spaces as well as in time. For example, with the introduction of the light bulb, underground/basement living became possible as well as further night endeavours. "The historical function of the city as a map of sociopolitical hierarchies and a repository of collective memory defined in the stability of sites, monuments, meeting places and neighborhoods began to give way to a new urban topography, in which coordinates of home, self and community would have to be plotted in new ways" (Cavallaro et. al 2004; 170). This interpretation stems from a geographical perspective of the changes electricity allowed in urban development, but there are other ways in which electricity mechanically impacted the community space.

Modern machines powered by electricity, such as telephones and computers, allowed the establishment of new *cyberspaces*. Cyberspaces "are set free from the limitations of bodies, the restrictions of the past [they hold] out the hope for a new, better world; indeed, it is a new and better world for those inside it" (Cavallaro et. al 2004; 249-250). Inside the cyberspaces exist the *cybercommunities*, with their own laws, practices and rituals. These are virtual communities free from geographical limitations where *identity* is a fluid, changeable, concept. "Virtual space is a transformational device, where the imagination is encouraged [where one may] escape from the social order, or the will to improve it – the two complementary drives of utopia" (Cavallaro et. al 2004; 249-250). In other words, in relations to mechanics, electricity has enabled the creation of utopian-like virtual communities.

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Virtual communities in the internet era can be created for both long-term communication or as a response to a particular event. In the first instance, these are communities that are formed based on a wide spectrum of shared interests, values or ideas, while in the second one a community is united over a single issue such as a certain political action or a single event such as a natural disaster. In any case, the existence of the virtual communities in our time makes the social context of each event even more complex to understand and interpret. As a result there have been many academic publications that examine virtual communities both synchronically and diachronically and even more that focus on the themes of disaster representation and the media as well as social movements and the media (McEntire 2007; Cottle et al. 2012; Franks 2013; Haddow and Haddow 2013; Oates 2013; Castillo 2016). This thesis will not engage with these two fields of academic study because the focus of the work is on images of electricity specifically and how perceiving electricity as signs can afford new insights into people's perceptions. By engaging with these two fields of inquiry, the focus may shift to how images of electricity are created and changed by the media in relation to either natural disasters or social movements.

Socio-Cultural Reinvention of Communities

While the virtual communities are free from geographical or other restraints, the real communities experience quite the reverse. In the real world, electricity brought with it a set of shackles, thus 'enslaving' the individuals within those same communities while providing opportunities that were not there before.

There are many anthropologists who have studied the effects electricity has upon a community when it is first introduced, most notably is a book by Tanja Winther, 'The Impact of Electricity: Development, Desires and Dilemmas'. In her book Winther argues that electricity has had a profound effect on social relations, communication, and development. "People's 'current styles' are, in a literal sense, the results of a technological system's scripts and the shifting social, cultural and material context in which electricity was introduced" (Winter 2008; 239). Her study was conducted in Zanzibar, at the village of Uroa, where she explored the immediate effects after electricity was introduced, the historical and spatial development as well as the local and international discourses surrounding sustainability and spirituality in a context relating to electricity.

Further, on a socio-cultural interpretive level, Winther suggests that “long-term values, such as equality, solidarity, modesty and respectability, continue [but] people reproduce and articulate these values in slightly shifting ways at present” (Winther 2008; 157-160). Material objects have become infused with symbolic meaning thus in certain aspects transforming long-term values into these acceptable at the time. For example, when a woman is getting married she will not receive an electrical appliance as a wedding gift because the norm is that man is the owner of household appliances. There are technical, social and cultural constraints on what kind of materials a woman can own in Zanzibar, including the gendering of electrical appliances (Winther 2008). However, since electricity also brings respectability as a symbol of development,² every man tries to ensure he can secure this status for his family.

As energy becomes a symbol for economic development within which there are certain social status associations, it is to be expected that securing energy could also be seen as an active ingredient in economic, political as well as socio-cultural dynamics of human societies globally.

Images of Electricity within Existing Academic Research

There have been no specifically-focused studies of the *images of electricity* to my knowledge that has been published thus far, but that is not to say that images of electricity do not exist in many fields of research. There have been, however, some considerations of the topic in publications, whose main focus was elsewhere. In a way, they can be seen as an indirect outcome of research conducted with another purpose. This section will provide a brief review of publications, where images of electricity were considered even if placed in a different research context.

It is important to emphasize here that this short and very rudimentary, but critical review focuses on academic disciplines that are chosen to portray the ‘electricity spectrum’ and to illustrate aspects of electricity from the five main academic branches of sciences, or *Formal Sciences, Natural Sciences, Social Sciences, Humanities, and Professional and Applied Sciences*³ (Smart and Elton 1978, Donald 1986, Sinclair and Muffo 2002, Hyland and Bondi 2006; Davies et al. 2010). That being said, interdisciplinary research is breaking the boundaries between disciplines and some of the examples provided may be analysed across the various disciplines thus defying single categorization. However, the ‘hard’ to ‘soft’ sciences continuum will be assumed

² This development is also evident in better health care and well-being.

³ For Professional and Applied Sciences references, particularly in relation to electrical engineering, please see: Biggs and Company 1890; Dyro 2004; Ghosh 2004; Andrews 2009; Bakshi and Bakshi 2009

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as a way to organize the following sections of the literature review, while keeping in mind, that the examples provided are only used to illustrate an image of electricity within each of those scientific areas.

First, in some of the *formal sciences* such as computer sciences, mathematics, and statistics, one of the main goals is to describe how the world works theoretically with the use of various quantitative strategies. The formal sciences approach is then often linked to numbers, equations and formulas that attempt to measure and classify electricity and describe how it fits in our understanding of the world. For example, Noether's Theorem is a mathematical formulation of the laws of conservation of energy and the symmetry to which they are connected as devised by Emmy Noether, while Alan Chalmers shows how electricity on the Earth's natural surface, as well as man-made charges, can be measured (Noether 1915; Chalmers 2015; also see Byers 2005). From these and other studies within the formal sciences the image of electricity that comes across is one that is quantifiable, or in other words, electricity can be depicted as a series of equations and probabilities.

The *natural sciences* are the *second* area that will be explored along the discipline spectrum. Some of the sciences categorized within this branch are physics, chemistry, life sciences (ex. biology), earth and space sciences. Similar to the formal sciences, the natural sciences are also frequently grounded through mathematical equations or formulas. The natural science approach examines laws that are derived from the equations and formulas of the formal sciences, such as the conservation laws, in part based on the Noether's Theorem. However, dissimilar to the formal sciences, the natural science approach attempts to explain electricity and energy as matter or as a substance beyond matter, so long as it satisfies the laws of physics, chemistry etc. (Marcet 1832; Rolfe and Gillet 1868, Bakewell 2006, Darwin 2007, Kholmetskii and Misservitch 2007, Muri 2007, Singer 2008; Wayne 2009). The image of electricity within the natural sciences is then also one of numbers, equations, and probabilities but with the inclusion of real-life examples thus existing in the realm between theory and possible application.

The *social science* approach is the *third* one highlighted here. This is a discipline that uses both qualitative and quantitative approaches to study electricity and energy. While none of the studies have been directly on images of electricity, there have been studies on the social implications of natural science experiments, such as the rise

of curiosity culture⁴, the mechanic reinvention of the community space in the virtual realm as well as the socio-cultural reinvention of communities as shown by anthropologists such as Tanja Winter and her study of Zanzibar. The social science approach also includes studies of political and economic implications of electricity such as the debates and policies surrounding energy security, climate change, and environmental concerns as well as how these policies shape our perceptions, describe our needs, and influence our decisions in relation to energy consumption. (Cavallaro 2004, Wesley 2007, Bjornebye 2010, Müller-Kraenner 2008, Winther 2008, Vries 2009, Graber 2012). The social science approach suggests a perception of the images of electricity that are influenced by the political, economic, social and cultural context in which those images are both created and used as part of the communication process.

The *humanities* area of the continuum contains disciplines such as history, literature, religion and performing/visual arts to name a few. The humanities branch includes the study of human interpretation and imagination, even when not grounded by mathematical equations, physical laws or fenced in by social structures and expectations. The humanities approach allows the discussion around images of electricity to move into the realm of imagination and faith, as for example the use of electricity in literature, in ritual, in stories as well as in relation to spirituality and religion where electricity can be used to signify other meanings that are not connected to its physical properties both in theory and in practice as well as the real-life effects for both individual and communities (Stolow 2008).

Images of electricity are reflected in everyday life and practices as can be seen in the work done by the Energy Biographies group in Cardiff University (for an overall synthesis see Henwood et al. 2015).⁵ The team studies energy practices as existing across multiple spaces and through the complex interplay of personal histories as well as social and technological developments of energy systems. Their research highlights the influence that social, environmental, political, economic and personal contexts have on the perceptions of energy and electricity as well as how those perceptions influence energy use as part of everyday practice (Shirani et al. 2013, 2015a, 2015b; Butler et al. 2014; Parkhill et al. 2015; Groves et al. 2015).

The various scientific approaches presented briefly in this section helped paint different pictures of what images of electricity can be identified within the various

⁴ Curiosity culture refers to the Renaissance and early Industrial Revolution when Tesla was making his inventions and scholars were electrocuting frogs to see if they can make them come back to life. (Muller 2010; Mee 2012)

⁵ The final report is freely available on the energy biographies website: <http://energybiographies.org/our-work/our-findings/publications/>. Please see for further information on the project and its results.

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disciplines and what relationship, influence or effect electricity may have upon the individual and/or society. Some of the studies listed thus far within the various disciplines will be revisited later in the literature review because without specifically focused on images of electricity studies, or ‘direct studies’, available to model upon, these ‘indirect studies’ present opportunities for engaging more critically with research done in similar areas.

In summary, this part of the literature review discussed the concept of the images of electricity as present across a selection of academic disciplines. From this collage can be seen that images of electricity are already evident, albeit as a subtext within other research done in on topics such as energy and electricity. The following quote can serve as an illustration of the most of the current academic attitudes:

“It’s odd that electricity has been so neglected because it is everywhere in our bodies. Ions flow in and out of our cells. Voltage pulses speed down our nerves. We are, in effect, walking electrical networks. The importance of electricity is well understood when it comes to the nervous system and the heart – think of the electrical defibrillator⁶ pads used to revive someone after a heart attack. But in many ways, we remain stuck in an eighteenth-century mind frame, aware of the electrical signals that course through us but oblivious to the ways in which they could play a subtler, and more profound, role in our development” (Graber 2012).

In other words, so far electricity has been understood in mathematical terms, engineering, social science and humanities by the extensive study of the ‘symptoms’ of electricity whereas a by-product of the analysis in the different disciplines, images of electricity do begin to emerge. Images can also be studied directly and particularly, for this thesis, the images of electricity are researched by utilizing visual methods and semiotics in an attempt to achieve a new understanding of those images.

Images

Productions of images and the images themselves for a long time have been a part of the various field and analytical methods of qualitative research but the growth of media and digital technologies in recent years made visual data more readily available. In addition to the increased availability of data, we can observe an increased interest of researchers into the ‘visual.’ The ‘visual’ has developed into a term imbued with new

⁶ Defibrillator is defined as “a lifesaving machine that gives the heart an electric shock in some cases of cardiac arrest.” For more information, see British heart foundation website

and complex nuances. The following quote from Sara Bragg serves as a very good summary of some of the various views that exist when attempting to define the ‘visual’⁷:

“Some, for instance, focus primarily on the photographic or cinematic image (Evans and Hall, 2001), some embrace other technologies such as medical or scientific imaging (Struken and Cartwright, 2001), and other expand the field of ‘the visual’ to include architecture, environment, clothing and body adornment (Emmison and Smith, 2001). Sometimes the term is applied to distinctively aesthetic practices such as sculpture, craft, fashion, design, fine art, video, and performance art (Rampley, 2005; Barnard, 2001), or to explore the newer forms of graphic novels and computer games; at other times, it is the ordinary, every day, or domestic uses and contexts of images that are held to supply their significance (Frosh, 2003; Murray, 2008; Rose, 2006). Mirzoeff (1999, 2002) aligns visual culture – ‘the tendency to represent things visually that are not themselves visual’ – with the postmodern and its crises of representation and authority; an interdisciplinary, tactical understanding that may more readily accommodate recent emphasis on material or spatial cultures and on ‘sensory’ methodologies that extend beyond the visual (Pink, 2006)” (Bragg 2010; 88-89).

As can be seen from the quote above, the visual consists of both that which can be seen, smelled, heard, tasted or touched as well as that which remains only in the realm of the imaginary, the abstract, the non-representable by physical means. Due to the large scope of what can constitute the visual and how it is used as part of communication, Muller argues that visual data requires different methodological tools than other forms of data that reflect the unique aspects of visual sources. (Muller 2003, 22). “While academic and journalistic texts are based on argumentation and reasoning, visuals follow a logic by association, connecting different meanings that would not necessarily make sense if written down or communicated orally.” (Muller and Ozcan 2007, 287). One of the reasons for the production of those different meanings is the more prevalent individual experience with the ‘visual motif.’ That means that when the visual is studied individual experiences must come to the foreground and particular individual details and attitudes become important when wanting to understand the role of the visual as used in communication.

⁷ First, there is broader visual material that is publicly available, so in order to counteract this broader material that causes an over saturation of images, a new conceptual frame of reflexivity has developed at both individual and social levels, thus enabling a better sense of context. Second, this frame of reflexivity creates new socio-political shifts that, in turn, impact what is understood and how the ‘visual’ is interpreted. However, as this thesis will not argue for a particular definition of the visual, the following quote in the text serves as an illustration of an acceptable one.

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The visual in this thesis is primarily discussed from a qualitative point of view. The qualitative research orientation allows researchers to observe and analyze various forms of human communication, including verbal and non-verbal ones, in order to study how people perceive, interpret and convey meaning. The qualitative field research methods provide the researcher with tools to describe and understand communication as an integral complex of verbal and visual elements, such as participants' reactions, eye contact, and tone when answering questions. The use of images as a part of the human communication is yet another form of conveying meaning that may or may not accompany other forms of verbal and visual communication.

An example of a qualitative method for researching the visual is that of iconography as popularized by Erwin Panofsky. Panofsky argues that iconography is a descriptive method that is based on the associative logic that involves three methodological steps. These steps are 1) description of the data, 2) analysis of the data and 3) contextualization of the data. (Panofsky 1972, 40-41). Evidently, in all three the visual data is at the core of iconographical analysis where the visual is perceived as a source of information that illuminates production, perception and communication of images.⁸ In all three steps, the meanings of the visuals are defined in relation to a particular context and a specific time. (Muller and Ozcan 2007). Even though this thesis is not based on iconographical analysis per se, the three-step framework can be a useful way to present the data collected for this research. The thesis will be presenting two case studies which serve both as the context and as fixed points in time that influenced the perceptions of the people of images of electricity. Thus, when presenting the case studies data later, there will be a description of the data, followed by analysis and contextualization. The method used is not iconography, however, because iconography is particularly bound to historical contextualization while this thesis will be discussing the cultural context of images of electricity as it occurs after and in response to particular events.

As a final note; there are three main distinctions concerning how the visual could be used with respect to communication: visual communication, communication

⁸ Some academics perceive iconography as part of the semiotics branch, but others such as Theo van Leeuwen (*Semiotics and Iconography* 2001) create a clear distinction between the two approaches. "But where Barthesian visual semiotics studies only the image itself, and treats cultural meanings as a given currency which is shared by everyone who is at all acculturated to contemporary popular culture, and which can then be activated by the style and content of the image, iconography also pays attention to the context in which the image is produced and circulated, and to how and why cultural meanings and their visual expressions come about historically" (van Leeuwen 2001; 92) Further, Panofsky (1972) makes a distinction that iconography and iconology operate on different methodological levels. While iconography is a descriptive method, iconology entails interpretation of the images' meanings.

through images and the role of the image in the communicative process. This thesis will present all three of these uses of images in relation to communication whenever present in the case studies.

Defining the Image

So far the terms *visual* and *image* appear to have been used interchangeably in prior sections, but there are some differences that should be highlighted that determine which term is used in what context. An image refers to a particular occurrence of the visual while the visual can be used as both an umbrella term for particular images as well as a theoretical concept. For this thesis, “a focus on images also allows us to connect our discussion with postmodernist writers who play off the two meanings of the word [...] reproductions [and] a mental picture of something not real or present.” (Muller and Ozcan 2007, 374). For instance, Baudrillard (1988) and Deleuze (1989) argue how factors such as technological development and traumatic events respectively, have brought about an implosion of representation and reality. Reality has become to be socially defined and substituted for one that is no longer purely based on everyday experience. Similarly, Gamson et al. (1992), using a political sociology analysis of media images, argues that globalization and image fragmentations have brought about a lack of social reality. Therefore, an image seen in those terms is also a concept that is not grounded in experience or reality, but rather, socially and culturally constructed.

Types of Images

There are two types of images that will be studied as part of this thesis. These are the *primary* type and *secondary* one. A *primary* type image refers to an image that is ‘raw’ (Maini Agrawal 2014; 362). This is an unprocessed and untainted image, which aims to simply capture data. On one hand, these images allow the capture of a static moment in time within the photographic frame, or what could be referred to as an ‘objective’ capture. On the other hand, these primary images could allow the photographer to express and capture his/her perspective and/or feeling at a given moment, or the ‘subjective’ capture.

A *secondary* type of an image refers to a processed image. The processing could be done to “enhance their features for better and precise interpretation,” or to represent/express ideas and meaning that were not captured as intended in the original raw image (Maini Agrawal 2014; 362). Secondary images can be further classified into two categories – *monogenic* images and *polygenic* images. “Monogenic images, also referred to as panchromatic images, are produced from a single primary image by

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applying some changes to it” (Maini Agrawal 2014; 362). These changes could include reduction or enlargement, error correction, contrast adjustments, cropping and so on. All these changes take place in order to extract the maximum from the primary image. Polygenic images refer to images that are the combination, or composite images, of multiple primary images. These multiple images can also be individually enhanced or changed in some way, but not necessarily as in the case of a collage of photos. Polygenic images are mostly images that are taken at different points in time thus creating *multitemporal* images, or “secondary images produced by combining two or more primary images taken at different time” (Maini Agrawal 2014; 364).

Both the primary and secondary images can have a physical form, such as a photo, or could be a mental image. Frequently, a primary mental image is transformed into a secondary image as time passes, the image is transformed and changed in the individual memory as well as in individual psychology and interpretation. A physical image, some will also argue changes inevitably, as for example, light through the lens is different from light in reality.⁹ However, the photographer is usually aware of those changes and can compensate accordingly in order to capture the data intended to record.

In addition to the description of primary and secondary images, image typology can also include the *use of the image* as would be the case with *images in narratives*, *narrative images*, and *image narratives*. *Images in narratives* are images used to supplement or embellish a textual narrative. A *narrative image*, or *visual-narrative*, is an image that tells a story such as the photos on top of a magazine attempting to ‘capture’ the nature of war or a mental image that occurs after hearing a fable of a hero and a villain, while *image narratives* are stories told with the presentation of a succession of images that combined, contain the whole message. Image typology related to narratives shows that the image can be used as part of communication. (Turner 2008; Scheub 2012; Ryan 2004; Barton 2016; Wolf and Bernhart 2006). This review of image typology is necessary for this thesis in order to avoid term confusion in later chapters, where images in narratives, narrative images, and image narratives are all presented and analyzed as occurring within the empirical materials.

⁹ For further information, please see Shcopenhauer and Otto (2010) on the topic of the capture of blue and other lights by accident thus forming a secondary image

Images in Relation to Communication

Once a primary or a secondary, whether monogenic or polygenic, image is captured it can then be used in communication. There are three main ways the image can relate to communication:

- 1 - visual communication
- 2 - communication through images
- 3 - the role of the image in the communicative process

First, visual communication refers to the visual as a *signal*, or a basic form of communication using both literally and metaphorically the idea of sight. What we see determines the messages that are observed, but that sight is dependent on the social, cultural, economic and political context in which the visual is created. For example, in examining cartoons as catalysts for social action Muller and Ozcan (2007) determined that cartoons have to be interpreted within the reception context, which in their study, is 'highly culturally coded.' Without the context, the images can be just images and not serve as a catalyst for social action.

Second, communication through images can refer to the image used as a *message*. The image itself can be seen as the message that forms the basis of communication. Brookes (1990) describes how cartoons can be used as messages to a) illustrate and distinguish identities such as individual, group, national or ethnic; b) for entertainment such as humor, satire or unorthodox discourse technique; and c) persuade and convince the reader of a value or a point of view. When the image is used as a message, often it is coupled with a shift of power from authoritative figures to the cartoonist due to the cartoonist ability to expose or highlight physical or character weaknesses as well as a shift of power from authoritative figures to the observer who through the process of interpreting the image and the message it represents, gives power to those weaknesses.

Third, the role of the image in the communicative process can refer to the image as a *channel*.¹⁰ Teather (1991) wrote a paper that aimed to discuss whether national culture and individual everyday existence can be communicated using factual descriptors or whether other literary forms such as cartoons and fictional books can be used as more accurate channels of communication due to their ability to present the topic in a more vivid and sensitive way. The focus was on comparing and contrasting the immigrant pamphlets produced to urge British people to move to Australia versus a fictional account of a suburb in Australia. The case comparatives showed that the

¹⁰ Signal, Message and Channel as borrowed from Eco's definition of the Electric Light

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immigrant pamphlets were seen to present sweeping generalizations and propaganda while the novel even though acknowledged as fiction was so vivid, perceptive and frank that it caused a public outcry for the way in which it presented the 'reality' of living in Australia. "It maybe that fiction, which draws on archetypal forms of experience-motherhood, adolescence, marriage, to take a few- can transmit the quality of life in specific places and times far more powerfully than other forms of discourse. Such fiction is not ephemeral." (Teather 1991; 482). The novel was perceived to 'flare up reality' and focus on the negative aspects albeit be a work of fiction while the pamphlets were seen to undermine the negative but in the process negotiate the 'truth.'

The Power of Images

The example of the novel that Teather studies can also serve to illustrate the power certain images have, fictional or not. After all, the novel even though fictional poses a challenge to the other versions of the Australian lifestyle presented by the pamphlets thus challenging the authenticity, dominance and the power of those pamphlets. Barthes (1973) develops the theory that bourgeois culture is dominant and preserves its dominance with the images that are reproduced of the culture. These images are depicted as the 'norm' and can influence universal values and belief systems, or as Barthes argues, these images drive the establishment of cultural mythologies and through their reproduction, give power to the bourgeoisie culture. A challenge to the bourgeois culture diminishes its power, just as in the Teather case.

That being said, the extent of influence and power images have over people is a much-debated topic. Some would argue in favor of *visual determinism*, or the idea that images influence feelings, opinions, ideas, values and belief systems of individuals to an extent that arguably removes agency from the individual and gives the power to the image. (photography Bossen 1982; video journalism Perlmutter 1998). In news across all mediums - newspaper, other print forms, television, online, etc.- the visual component is an important aspect of journalism, in part because it is considered a powerful tool for both persuasion and communication of information. (Arlen 1969; Epstein 1973; Tuchman 1978; Messaris 1996; Barnes 2009). On the other hand, Domke et al (2002) would argue against the theory of visual determinism and as they write: "the widely held notion that vivid images often drive public opinion is overly simplistic; in contrast, we posit that images most often interact with individuals' existing understandings of the world to shape information processing and judgments." (Domke et al. 2002). In reference to Barthes, the power is not in the image itself, but the

reproduced bourgeoisie culture that comprises the existing understandings of the world thus framing ‘information processing and judgments’.

Framing of Images and Fragmentation of Meaning

The framing of an image can influence the power of the image in addition to being an important part of the image itself, the message the image communicates, and how meaning is communicated. As a concept, the frame is a term often used by media sociologists. (Tuchman 1978, Gitlin 1980, Lang and Lang 1983, Gamson and Modigliani 1989; Cherry 2012). Gamson et al. write that the “frame plays the same role in analyzing media discourse that schema does in cognitive psychology, a central organizing principle that holds together and gives coherence and meaning to a diverse array of symbols.” (Gamson et al. 1992; 385). The frame as an organizer is also developed by Goffman in his 1974 essay ‘Frame Analysis’. In this essay, Goffman explains that the frame allows people to interpret the world around them through what he terms ‘the primary framework’ that is understood as the ‘norm,’ so individuals do not even realize that they are looking at the world through their frame lens. Goffman also writes that the primary framework can be comprised of both social and natural components and both can be used by individuals for the interpretation of data. In other words, a study of the frameworks can both shed light on the social and cultural context that they help create as well as depict how the frame is used to shape individual experiences.¹¹

There are several different types of frames that can be distinguished, as for example, spanning from single issue frames to frames that transcend a single issue. In many cases, the same event can be studied through the frame/lens of the event in its own right versus the event as part of a series. For example, the Fukushima Accident can be studied as a devastating event caused by natural factors such as the tsunami and the earthquake that was made worse by man-made mistakes and the particular effects of the accident on the Japanese population, or as an incident that relates to the broader issues of nuclear power security, organizational malfunction, climate change, and other environmental concerns.

Moreover, over time, the frame used to define an event can change because framing is a process, a process that influences the construction of meaning. Snow et al.

¹¹ This highlights the usefulness of framing as a connecting concept between cognition and culture. For example, a cultural level analysis shows how political situations or environmental concerns can be seen as ‘framed’, where these frames define the topics as pre-organized and already imbued with particular meaning. This meaning is then decoded, further imposing the individual’s cultural frame, for instance, over the perceivable information. This means that there are multiple interpretations to any given ‘reality’. For more information, please see Morris et al (1998).

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refer to this process as 'frame transformation'. (Snow et al. 1986, Snow and Benford 1988). As the frame evolves dynamically over time, it can be associated with concepts such as narratives, scenarios or storylines. (Manoff 1987, Bennett 1975, Friedman et al. 2010; Lohmann and Til 2011; Glavovic and Smith 2014).

The change of frame over time has invoked the suggestion that there is a fragmentation of meaning and loss of reality that occurs. (Lyotard 1984, Harvey 1989). As with every change, as time passes and the frames change, parts of the original meanings that were framed are lost as new ones are gained. In relation to news media, taking the postmodernist approach, Gamson et al. write that "the preoccupation with immediacy results in a proliferation of fleeting, ephemeral images which have no ability to sustain any coherent organizing frame to provide meaning over time." (Gamson et. al. 1992; 386). Arguably, the divide between representation and reality diminishes over time so the real ceases to exist and becomes a simulation or 'hyperreal' while the unreal can substitute 'reality'. (Baudrillard 1983, 1988).

Perception and Interpretation of Images

Framing impacts perception, but it is the readers who have to ‘open the text’ for interpretation. As Gombrich (1989) simply wrote, there is no ‘innocent eye’ because framing impacts perception, but it is still down to the individual to decode the image and relate it to pre-existing conceptions and experiences. The term most often used in both psychology and visual studies to describe framing is that of the schema, or as defined by Fiske and Taylor, the “general cognitive mental plans, that are abstract and . . . serve as guides for action, as structures for interpreting information, as organized frameworks for solving problems.” (Fiske and Taylor 1991: 665; also Fiske and Linville 1980; Taylor and Crocker 1981; Brewer and Nakamura 1984). The schema, therefore, affects how an individual will decode new data, including visual stimuli such as images of physical and/or abstract concepts. The schema operates using cues that are based on the social, political, economic and cultural environments that surround the individual. These cues guide information processing and construction of values, ideas and belief systems.¹²

The schema makes it appear as though the individual has no agency when it comes to decoding stimuli and Perlmutter (1998) even argues that because of the elitist orientation of visual images in the media, individual reactions are made predictable in relation to particular events, as the events act as the ‘cues.’ Fiske (1987) describes this view as the implication “that television reaches a homogeneous mass of people who are all essentially identical, who receive the same messages, meanings, and ideologies from the same programs and who are essentially passive.” On the other hand, to suggest that the interpreter, or ‘reader,’ has no agency, means that they have no power over the image that is being decoded but as Hall (1982) suggests, people are not ‘cultural dopes’ that you can just pour information in, which is evident from the rise of alternative communication sources and information platforms post internet boom as well as underground movements that challenge hegemony type belief systems.

There have been some specific ethnographic studies that have attempted to make sense of how viewers make sense of visual texts, as oppose to written texts, and the role of agency such as Morley’s 1980 and 1986 study, or Hobson’s research on the meaning of television in everyday life from the early 1980s. Another way to comprehend agency

¹² For further references please see: Anderson 1978; Chaiken, 1980; Brewer et al., 1981; Hastie, 1981; Higgins and King, 1981; Helmsley and Marmurek, 1982; Burnstein and Schul, 1982, 1983; Aberlson et al 1983; White and Carlston, 1983; Anglin and Levie 1985; Belmore, 1987; Higgins and Bargh, 1987; Iyengar and Kinder, 1987; Tourangeau and Rasinski, 1988; Srull and Wyer, 1989; Aldrich et al., 1989; Lau, 1989; Fiske and Neuberg, 1990; Zaller, 1992, 1992a; Mondak, 1993; Kuklinski and Hurley, 1994; Barry 1997; Shah et al., 1999; Watts et al., 1999.

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in processing data from visual stimuli is to study various groups. Age groups such as the elderly or the young are favored, famously with the study of children and Television that Palmer conducted in 1986. Cultural comparative studies also exist that evaluate the understanding of the cultural views of the same visual phenomena by contrasting different cultural views (Liebes and Katzdallas 1990; Livingstone 1990). The common denominator in all these studies and many more is the idea that Katz (1990) suggested of the 'viewers' work', or also labeled the 'conscientious viewer.' In other words, "reading media imagery is an active process in which context, social location, and prior experience can lead to quite different decodings [...] it is frequently interactive, taking place in conversation with other readers who may see different meanings." (Gamson et. al 1992; 374-375).

Using this perspective, Gamson (1992) researched a series of the so-called 'peer group conversations' among Americans who were discussing the topics of affirmative action, nuclear power, troubled industry, and the Arab-Israeli conflict. Through the study, Gamson showed how fluid frames were constructed using media discourse, popular wisdom and experiential knowledge by the groups as a way to make sense of the four topics they were presented with. Prior experiences and knowledge of media discourses were used by the participants to create the framing of the four issues. This is an important point to make because it is the assumption of this thesis that the cultural context could influence people to frame images of electricity in a different way, thereby guiding the meanings associated with energy and electricity, as evident in the case studies that will be presented later.

Theoretical Frameworks for the Study of Images of Electricity

Electricity is invisible unless made visible through the use of mediums different to the naked human eye. Such mediums include, but are not limited to, powerful microscopes or other technology that allows us to break down and see the atomic particles, photographs or other visual reconstructions that allow us to depict an image that is associated with electricity as well as the power of social reproduction of culture and human imagination that may be used to transmit socially constructed messages, meanings, and symbols of electricity.

The medium of capture tends to impact the perception of the concept in question. On one hand, at a very basic level, which sense could the individual use in order to communicate and/or comprehend a given concept, as for example auditory or visual, a touch or a smell. On the other hand, the medium dictates the context in which

the concept may be placed. The medium, therefore, can impact an individual by either providing theoretically either a physical or a mental framework for the interpretation of electricity, and particularly, images of electricity.

Physical Frameworks for the Study of Images

The physical frameworks used for the study of electricity often focus on the real-life impacts of electricity such as how electricity loss can cause disruption to everyday life and services. Physical frameworks can be seen as representations of a *direct* study of the symptoms of electricity and impact. Some of the main themes researched are those of electricity loss, energy insecurity (as related to politics, economy and the topic of climate change) or the risk research context in general as pertaining to power resource development, distribution as well as environmental, political, economic, and social impacts. (Lovins 1976; Anderson and Lipsey 1978; Turner 1978; Pidgeon 1998; Slovic 1998; Pidgeon and O’Leary 2000; Summerton 2004; Leiserowitz 2006; Linder 2006; Chikowero 2007; Horst 2007; Henwood et al. 2008; Pidgeon et al. 2008; Lovell et al. 2009; Manzo 2009; Parkhill et al. 2009; Hargreaves et al. 2010; Rogers-Hayden et al. 2011; Stoffle and Arnold 2010; Devine-Wright 2011; Midttun 2012; Schroeder and Lovell 2012; Lovell 2014).

Energy Security

At a global level, many countries are concerned with their long-term energy supply and if this supply would be maintained at an affordable price. That is why there are increasing amounts of policies passed each year that attempt to address these concerns at both a national and global level. These concerns are categorized in the area or *energy security*. Energy security can be defined as “the ability to ensure that future essential energy needs can be met, both by means of adequate domestic resources worked under economically acceptable conditions or maintained as strategic reserves, and by calling upon accessible and stable external sources supplemented where appropriate by strategic stocks” (Wesley 2007; 113). In other words, energy security is related to the concept of sustainability and sustainable development while promising supply at a reasonable price.

Energy security is a multifaceted concept, which has four dimensions of particular relevance. *First*, energy security could be compromised as the result of physical disruption of the supplies due to natural disasters as well as man-made disasters such as infrastructure breakdown, social unrest, acts of terrorism, or political action. *Second*, the diminishing long-term effects or depleting physical availability of

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resources which may not make it possible to secure energy for the future, especially in view of growing demand. *Third*, “deleterious effects on economic activity and peoples due to energy shortages, widely fluctuating prices or price shocks.” (UN Publications 2007; 8) *Finally*, disruption as the result of terrorist acts that may cause extensive property damage, health consequences or human casualties.

The result of energy security concerns is the continuous creating and amending of fundamental policy objectives for energy regulation (Bjornebye 2010; 54). Energy regulation, through various policies, aids in creating political, economic, social and cultural shifts not only at a local, but also at a global level (Müller-Kraenner 2008; xi). These ‘shifts’, in turn, help shape our perception of the energy surround us, help define our dependency and need of it and demand our attention and concern.

Electricity Connection to Space and Place

Energy insecurity is connected to the threat of the physical disruption of the energy supply in particular places. This affiliation between space, place, technology and energy is yet another physical framework through which to study images of electricity (Cosgrove 1994; Vitousek 1994; Hommels 2005; Zimmerer 2011). The research done by McLachlan (2009) is an example where the geographical concept of a place is intertwined with the technology symbolism often associated with STS (Science and Technology Studies) and used to study the Wave Hub Case. The case illustrates the stakeholder responses to renewable technology development and how those responses are influenced by the symbols associated or represented by both the type of technology as well as the place. In other words, even though the discussion is of existing technology that is associated with an existing location, the affiliations of both the technology and the place can be based on abstract individual perceptions. “In particular, the interest here is in the multiple and potentially conflicting symbolic interpretations of both place and technology and how these can explain differing assessments of why the development does or does not ‘fit’ in a particular location.” (McLachlan 2009; 5343). These locations were imbued by the participants with notions of economic vulnerability, ownership status, a source of materials and/or natural (in both senses of the word) habitats. This, in turn, raises the issues of sustainability and significance of the electricity produced as well as environmental, political, economic, social and cultural status for the local or regional communities.

The McLachlan paper is an example amongst many studies in existence that present a top-down approach to the research of energy because of the focus on the

stakeholder responses rather than the everyday consumer (Zlatev 2012; Hiteva 2013; Hiteva and Maltby 2014; Grozdanov et al 2014). This differs from the perspective of this thesis where a bottom-up approach is favored. The bottom-up approach is characterized by the individual perspectives coming to the foreground of the inquiry. That being said, the discussion about the importance of place, technology and symbolism is at the core of this thesis.

The research by McLachlan is one of many that explore the relationship between technology, place and symbolism. Earlier, Cresswell (2004) defined the 'place' as a location imbued with meaning that may be derived from individual identity or a sense of belonging. Cresswell, amongst others, argued that such identity can be a driving force that guides which renewable programs individuals will support and which they will disavow, especially in the case of wind farms that are an intensely visual concept that changes the landscape (Devine-Wright 2009). That being said, Cresswell makes a distinction between the terms 'place' and landscape.' The place is described as participatory while the landscape is seen as an observatory, or the individual is inside of or connected to as opposed to - removed from.

A change to the electricity supply such as loss of or building of a new resource site can change how people view a space. This change can occur with the shift of the status of a space from landscape to place or vice versa. For those who want to maintain the identity of a space, the image of the place is maintained through the re-emphasizing of historical or aesthetical aspects of the location (Hubbard et al. 2004). On the other hand, no place can be maintained with a static image because the image of the place changes constantly, and so does the connection between technology and spaces. Any change to the place that overtly challenges the established identity of a place within a community is seen as 'out of place,' 'not fitting' and unacceptable (Jess and Massey 1995; Pasquetti 2000; Brittan 2001), and yet, widespread noticeable changes are happening more and more.

Two of the main reasons for those changes are technological developments and globalization. Globalization is seen as the main catalyst for the 'speeding up' of time-space (Massey and Jess 1995) that allows for technology to be distributed faster and further around the world. Globalization is often described as the cause of the erosion of strong place identities in favor of more fluid global ones. Massey and Jess (1995) argue that in order to include the globalization processes, 'place' should be redefined to include the perceivable and that which can be experienced as well as the context in which it is positioned on a global scale. In other words, place is not only about

geographical boundaries, but also identity with respect to positioning to the wider world.

Mental Frameworks for the Study of Images

In addition to physical frameworks, there are also mental ones that can be used for the study of images. The mental frameworks utilized in the study of electricity can be primarily identified in psychology, sociology and/or anthropology based research. As explained on page 22, while the physical frameworks could be seen as the *direct* study of images of electricity, the mental frameworks can be seen as the *indirect*. This indirect approach tends to focus on several areas which can be listed as: the individual and the relationship to the self, the individual and the relationship to a group and/or society, and group to group communication.

Emotion and Energy

In the case of the individual and the relationship to the self, there is a commonly upheld belief in psychology that individual awareness is processed independently from emotional stimuli (Pessoa et al. 2005). Particularly there are many studies of fear as an emotional stimulus that causes 'involuntary autonomic responses' (Ohman et al. 1995), beyond the focus of attention (Vuilleumier et al. 2001), and indeed may not even relate to the conscious (Morris et al. 1998; Whalen et al. 1998; Liddell et al. 2004). As a result, fear is argued to exist in a highly automatic and subconscious fashion that is separate from awareness or attention. I would argue that energy and electricity awareness is similar to but not necessarily connected to the perception of electricity. Often, participants are not aware of their energy use or electricity in their surroundings unless an emotional stimulus such as fear is applied. Fear of energy loss or fear of coping post-electricity deprivation brings out subconscious images of electricity and energy people have. The emotional stimulus does not have to be negative as for instance feelings of attachment to a place or space can also help bring out images of electricity as discussed in relation to wind energy development research (Gipe 1993; Thayer and Freeman 1987; Lee et al. 1989; Thayer and Hansen 1988; Upreti and van der Horst 2004; Devine-Wright 2005a).

Visual Methods and Place-Related Electricity

Emotions are only one of the approaches to studying mental frameworks of images of electricity. There is visual anthropology research conducted by Sarah Pink (2012) that focuses on the sensory aesthetic associated with the home and specifically,

domestic energy consumption as evident in ‘everyday practices, experiences, and creativities’.

Pink uses a method she developed where she allows the participant to take her around their home while she films both the interview and the space (see also Pink 2004; 2006; 2007; 2009). This method allows her to study the interaction between the participant and the space as well as to capture a visual dimension of the interview that is non-existent in an audio recording. “It involves particular attention to the textures, sounds, and the visual dimensions of home, how participants create atmosphere in their homes – as such, how they make their homes feel 'right' and what they do about it when someone or something messes this up.” This method also allows Pink to study how individuals perceive and describe the aesthetic in relation to the home. Her 2012 study particularly focused on the aesthetic of a home as related to energy consumption and attempt to bring electricity use to the foreground, or as a conscious reflection of the participants with regards to the role of electricity in the home.

Pink situates her methodology in relation to the material culture approach that Miller (2001) established where “the making and experience of the home as a multisensory environment was likewise integral to how self-identities are constituted through everyday life practices.” Researching energy through an understanding of everyday practices is a well-established approach in social sciences that is often underpinned by the practice theories developed by Alan Warde, Theodore Schatzki and Andreas Reckwitz (Warde 2005; Schatzki 1996; Reckwitz 2002; also see Shove and Warde 2002; Shove 2003; Gram-Hanssen 2008; 2011; Nicolini 2012). Simply put, practice theory presupposes that everyday practices are the basis of the analysis because “practices are the source and carriers of meaning, language and normativity” (Schatzki 2001: 12). In relation to energy studies, an analysis focused on electricity consumption allows the researcher to better comprehend the role of electricity in the home, social and material environments as well as in relation to the formation of self-identities that are based on those practices.

The methodology developed by Pink also has several limitations. The dependency on everyday practices to study electricity excludes all instances of energy interaction that are not habitual as well as ones that the participant is not aware of but engages with irrespective of this. Moreover, the multisensory approach can be ‘too interpretative’ in both recording as well as analysis at a later stage. The interpretative nature of the recording can appear in the video framing, the interview framing as well as the framing of the place that limits interpretation to the physical for the most part. The

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interpretative nature of the analysis reflects the flaws of the recording as well as the imposition that the multisensory is experienced in a similar way by different people. For example, in her 2012 study Pink invites the viewer to ‘imagine’ the cold running through the participants fingers as well as to comprehend the spatial proximity between the entrance and the thermostat neither of which can be accurately reproduced from a visual image as both require the viewer to be present in the room whilst the recording was being made. That being said, the video tour does enable the researcher to study the sensory home as an experiential place by providing more data than a transcript on an audio file may contain (Pink 2012).

Visual Methods as Drivers of Dialogue

Practice theory-based research is not the only type of research that has used visual methods to study energy and electricity. Public perceptions of energy have also been studied by engaging with the methods of photo-elicitation as well as by using various visuals as a driver for discussion.

Visual and photographic materials such as cartoons, illustrations, computer animations and so on, are considered as effective means of making technologies and scientific processes more comprehensible to the public as well as a means for researchers to study public perceptions of energy and electricity (Bauer and Gaskell 1999; Moscovici 2000; Wagner 2007). Flynn et al. (2006) suggest that visual images encourage ‘imaginability (and memorability)’ of various technologies. Cartoons and satire as an art form are frequently linked to technological developments as a go-to ‘medium of expression’. Electricity and aesthetics also have much in common spanning from site placement of wind turbines to a challenge toward corporate monopoly and an examination of the improbable (Marzio 1972). “But the technological revolution of the twentieth century, particularly in the field of electrical and electronic appliances, has jarred both the artist and the comic. The comic can no longer spoof the ‘impossible’ in an age of limitless achievements, and the artist has inherited a whole new range of subject matter that refuses to lend itself to the aesthetic rules of the past. The result has been a curious meld of art and humor [and] a world where time and improbability has been re-defined and re-shaped” (Marzio 1972; 315 and 322). Art as a medium can combine technology with satire, but also with emotions such as rage, disillusionment, or despair. The art schools that use machines and technology as a medium of expression most often are Dadaism, Futurism, Surrealism, Pop and Minimal arts. In these art schools, machines and technology as art are used for 1) illustrations, 2) organic parts of

a landscape, 3) curiosities, and 4) depictions of lifestyle (Marzio 1972). Many of the fanciful art creations have even inspired real technological developments.

Visual images can also facilitate communication and elicit responses that situate social acts in time: past reflections, current motivations and future aspirations (Divine-Wright 2009). In other words, the visual representations such as drawings, artworks or architectural designs of buildings can be seen as ‘external, material representations’ of social motivations and practices (Radley and Bell 2007; Henderson 2007). For instance, currently nuclear power is often described as encompassing “symbols of scientific and technological hubris and of environmental destruction” (Joffe 2003; 58), but that was not always the case. As both Gamson and Modigliani (1989) and Rifas (2007) describe, pre-1989 in the USA cartoons were used to support nuclear power development with comic book publications or animated episodes such as ‘Our Friend the Atom’, but later it was also through the use of animated television series such as the *Simpsons* that similarly challenged popular positive views of nuclear energy.

In 2009, Divine-Wright conducted a study that utilized visuals, or ‘image-based tasks’, as a way to explore images of electricity related to the UK electricity network. In the study, Divine-Wright asked participants to draw and/or associate visuals with energy network and network changes in a bid to understand perceptions of policies based on the increasing of the development of renewable energy sources. “The results of the association task and group discussions revealed that not only were the workings of the network largely unknown, but also that the institutions responsible for management, operation and upgrade of the transmission and distribution network were invisible or unclear” (Devine-Wright 2009; 365). Despite the lack of direct knowledge participants projected, the visual methods allowed for an understanding of the symbolic associations attributed to particular symbols such as the electricity pylon for example. Pylons were often used as symbols of electricity, the energy network or the national grid system, and were also discussed as an emblem of organization, creation and sharing. Often negative connotations were added such as ‘carelessness and sort of ruthlessness ... that is imposed on the countryside’ due to the pylons being unable to blend with nature as well as the sharing and transgressing of electricity that crosses physical and social boundaries. These symbolic associations can allow the researcher to study individual perceptions of the electricity grid that people have despite their lack of knowledge, but perceptions that nonetheless dictate social beliefs, values, and actions that may be undertaken.

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The theoretical framework Divine-Wright uses in the study is that of SRT, or the theory of social representations, which helps highlight symbolic associations, in this particular study, of network technologies. SRT is an approach to understanding how social knowledge is constructed. A definition of social representation is that which “pervades daily conversation and the mass media, is used by individuals in order to understand and act upon society, serves them as a reference frame for their thoughts and decisions, and colors their imagination” (Moscovici 1984, p.952). ‘Imagination’ is key when trying to study electricity because, after all, electricity is invisible to the naked eye and through imagining it, is the only way people can ‘see’ it. It is through the study of the imagination that researchers can better understand the symbolic and affective dimensions associated with energy and electricity (Joffe 2003). One of the ways to research imagination is through the sourcing of visual images from the participants.

Apart from the Divine-Wright study, there are very few other studies that source images of electricity from the participants. Most distinctive is the research done by Qualter (1995) on the study of children and their perceptions of electricity. In this study, the children were asked to identify and draw a picture of the presence of electricity, ‘where electricity starts’, and its connection to energy using appliances in the home. There are also studies that illicit a collage from the participants from provided photos, or photo ordering (Leggett and Finlay; 2001). What all of these studies have in common is that they are all conducted in experimental environments or controlled research area where the participant is prompted to draw or create a visual of some kind by a researcher.

The visual data for this thesis are unique because even though a large portion of the data are participant created images, they are naturally occurring ones provoked by a catalyst-event, rather than by a researcher in a lab. The visual methods employed in the thesis also include the use of images as prompts to provoke other data during interviews in addition to thousands of gathered visuals online that *are* data to be analyzed. Visuals *as data* comprise a big component of this thesis and will hopefully provide a new means for studying images of electricity by allowing the visual representations of electricity after the catalyst events to express individual and community perceptions of energy.

Final Considerations for the Study of Images of Electricity

Thus far, the literature that was reviewed described how electricity is studied in various academic disciplines. Because of its invisibility, researchers focus on its symptoms or occurrences or on its appearances in the perceptions, interpretations and

imagination of the human beings. The existing research has given rise to specific discipline-based ‘images of electricity’ that are informed by the particular methodological approaches within each discipline. Images of electricity are evident indirectly in academic research even if so far, and despite the growing visual studies field, images of electricity have not been fully explored. The few studies that elicit visuals as a source of data are conducted in a controlled setting where the empirical materials result from prompts by the researchers and present an analysis that follows a thematic and/or content approach.

This means that there is no sufficient exploration of the topic and that the academic understanding of electricity-related images is still in somewhat uncharted realm. This lack of study concerns both data collection and their analyses. The data collection approach thus far has the limitation of the boundaries created by the previously used methodologies for eliciting visual materials, and data analyses are sometimes curbed by the insufficient data sets. Insufficiency, in this case, is defined not so much in quantitative terms but with regard to types and categories of data collected. Particularly in relation to images of electricity, this research gap also pertains to diversifying of theoretical approaches that would be more relevant to this specific topic and possibly identifying the ones that would provide a theoretical basis for multi-layered and multi-modal forms of data interpretation.

Despite affordances of visual data or its continued and increasing presence online or in art, research that elicits images from participants is still rare even if there has been a growing interest in the use of visual methods (Radley et al. 2005; Gauntlett and Holzwarth 2006; Mamali 2006; Radley and Bell 2007; Wiles 2012, 2012a). One of the reasons for this is arguably that there are no uniform frameworks on how to analyze images. Some argue for ‘textual-based’ approach¹³ while others argue that image analysis should be more fluid (Savoie-Zajc 2005). In both cases, once the image is analyzed, the data is presented using a thematic approach. This thesis will engage with a thematic approach to presenting the data, which will then be augmented by further analysis using the semiotic framework. Because of this approach to data analysis, the thesis has an unusual structure, and the methodology chapter is split into two. *The first* methodology chapter will provide the ontological, epistemological and methodological basis for the case studies of the thesis, which would enable a thematic presentation of

¹³ A textual based approach is one where the image is analyzed using a structural framework, most often borrowed from linguistics or a similar discipline for example. This thesis uses certain aspects of structural approaches to the thematic and content analyses as well as the semiotic ones, all the while maintaining an interpretative focus.

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the data. *The second* methodology chapter will follow the two thematically analyzed case studies in order to build the second layer of analysis, namely semiotic analysis that will then be applied to the data interpretation.

Chapter 2

Field Methodology

'The next best thing to knowing something is knowing where to find it.'

-Samuel Johnson, (1709-1784)

Introduction

The two methodology chapters of this thesis describe the research process that relates to data collection (Chapter 2) and theoretical analysis of these data (Chapter 5). This first methodology chapter focuses on the field methods in general and considers their relevance to this research. The chapter serves to provide not only the background information on field study, but also to help situate the type of evidence this thesis proposes to use in order to address both what is being investigated and how this evidence was collected. Subsequently, in Chapters 3 and 4, the specific field methods used are described and systematized. The descriptions include more details of evidence gathered, question types, participant selection procedures while the systematization consists of thematic and content analyses. After the themes arising from the content analysis have been discussed, the second methodology chapter (chapter 5) will be presented, which will describe the choice of the semiotic approach used in this thesis, as well as its main characteristics that make it appropriate for the second layer of analysis of the empirical materials for both case studies. In other words, while this chapter (supported by chapters 3 and 4) describes the field methods and highlights limitations and assumptions that underpin the thesis, the second methodology chapter will show the analytical tools, or what theories and why those theories are used to analyze the data gathered in the field.

This methodology chapter presents the information relevant for understanding the field methods used for the thesis. As such it is structured to *first*, describe the ontological and epistemological assumptions in order to explain how the data gathering process is positioned theoretically. *Second*, as these assumptions have a direct impact on the research design of the thesis, the research design is described accordingly. *Third*, the last sections of this chapter engage with the topics of participant protection, a brief ethical discussion, safety and other considerations.

Ontological and Epistemological Assumptions

Every researcher has certain ontological and epistemological assumptions that play a key role in the entire research process. This thesis is no exception. The research design and the research questions for this project reflect constructivist-relativist ontology and a cultural constructivist epistemology, as described in the sections below.

Ontology: Constructivism and Relativism

Ontology refers to the fundamental debate about how things exist, or as Gruber writes, “an explicit specification of a conceptualization” (Gruber 1993, expanded in 1995). The ontological approach that underpins this thesis is at the juxtaposition of constructivism and relativism.

In the constructivist ontology, reality is constructed in the mind of each individual, and it is in this approach that the mind is a builder of symbols. “Language, meaning, symbols, culture, discourse – all the subjective phenomena at the heart of the constructivist ontology – remain vital components of ‘why’ analysis because constructivists presume human intentionality.” (Klotz and Lynch 2007; 16). This ontology allows us to see the world as a sum of experiences based on individual perceptions. These perceptions arguably cannot “exist outside the inscription of community with its processes of relationship, differentiation, interaction and subjectivity,” (Kincheloe 2005; 100) which is why in this perspective the concept of a ‘true self’ cannot be isolated. However, as the structure of reality in this ontology depends on human mental activity and is reflexive of individual cognition, some of the research questions that can be addressed reflect an interest in human perceptions, or *who, what experiences* and *how* are these experiences *interpreted*.

The relativist ontology also assumes that the world is contextual and internal, but the role of the individual mind is not as in focus as it is with constructivism, but rather its byproducts. For instance, Mosteller defines relativism as “the nature and existence of items of knowledge, qualities, values or logical entities non-trivially obtain their natures and/or existence from certain aspects of human activity, including, but not limited to beliefs, cultures, languages, etc.” (Mosteller 2006; 3) So, any research and investigation would need to consider the questions of *who*, but also *where* and *when*.

Epistemology: Cultural Constructivism and the Human Imagination

At the epistemological level, constructivism and relativism intersect in the *cultural constructivist approach*. (Scott et al. 1992). The constructivist epistemology assumes that knowledge is the by-product of human-made constructions (Budd 2009; 24) with a particular focus on *how* and *why* knowledge is constructed. Reality exists in some absolute form, but the meaning, perception, and interpretation that result in *knowledge* are always a human construction.¹⁴

¹⁴ Radical constructivism sees the process of constructing knowledge as dependent on individual experience and not necessarily on what ‘actually’ occurred.

For this thesis, however, that is not enough. The relativist ontology was chosen in addition to the constructivist one because it helps highlight the notion of *context*. Context is just as important for the production and interpretation of knowledge as is the constructivist process itself. *Cultural constructivism*, in particular, assumes that both knowledge and reality are associated with the cultural context in which they exist. As Scott et al. (1992) write “cultural constructivism emphasizes that all human activity is mediated by cultural artefacts, which themselves have been constructed over the course of human history.” (Scott et al. 1992; 191). In other words, cultural constructivism presupposes an interaction between the individual and the cultural context in which the individual exists, which both directly influences the individual’s perceptions of reality and knowledge acquisition while simultaneously accepting that it is the individual themselves that shapes the meaning of the cultural artefacts that he or she surrounds themselves with.

To use an analogy, as I understand it, reality and knowledge can be equated with a *jigsaw puzzle*. The ontology and epistemology serve as the frame of the jigsaw puzzle, and the research questions are what enable me as a researcher to uncover the pictures on each individual jigsaw piece. Each research question, whether one that starts with *who, what, when, where, why* or *how*, can provide a clue as to the picture the complete jigsaw will uncover. Even if one cannot see all the pieces of the puzzle, once enough pieces are turned over, one can speculate as to what the picture on the jigsaw will be – a bird, a deer, etc. Part of the reason why one can *see* the whole picture of the jigsaw puzzle even with many unopened pieces is due to the incredible power of the human mind, and specifically the human ability of *imagination* (Garrett 2008).

Imagination is a ubiquitous term that encompasses a variety of phenomena. As defined by Spinoza [translated in Garrett] imagination is:

“[T]he affections of the human Body whose ideas represent external bodies as present to us, we shall call images of things, even if they do not reproduce the figures of things. And when the Mind regards bodies in this way, we shall say that it imagines.” (Garrett 2008; 2).

This definition, as analyzed by Garrett, depicts *imagination* as a tool through which to experience sensation as well as images that may or may not have a physical form. Imagination is both a form of knowledge and a medium through which to process knowledge. Another way in which to view imagination is that it “may refer to the scenes that we construct in our minds as we read a novel, or to the lustful, angry, or

frightening thoughts and images that occasionally enter into our consciousness [...] an unconscious process, an unconscious potentiality.” (Modell 2003; 126). The various definitions of imagination have in common a view of the *image*, as an idea that surpasses the realm of the physical and the conscious and blurs its way into the abstract and subconscious. Imagination has been linked to the concepts of perception, of memory, and of interpretation. All three of these concepts are involved in the imagination process, or how the imagination is formed, but also none of them can exist without imagination in the first place.

Further, imagination can be seen as both socially influenced and individually constructed. For example, Anderson (2006), in *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, argues that society can influence people to invent what their community is, what characteristics it has, who are excluded from it, and what position they may hold in it. Similarly, Mills (2000) suggests that on an individual level, there can be a “quality of mind essential to comprehend the interplay of man and society, of biography and history, of self and world”, or what he calls the *sociological imagination*. (Mills 2000; 4). This sociological imagination allows individuals to study society using the constructs they have accumulated, but as interpreted at an individual level. In both of these instances the process of imagination influencing social thought or action is at the blurry border of the physical and the abstract, or how the community that is formed physically can be shaped by the images one has of that community as well as the blurry border of the conscious and subconscious, or the conscious versus instinctive understanding of intricate social processes that constitute the sociological imagination.

The prospect of imagination is particularly important for this thesis, where all the research questions examine the concept of electricity, which even though it has physical characteristics, is invisible and as such *imagined*. But how does one study human imagination, perception, interpretation?

Research Design

The core questions as stated earlier in the thesis are:

- ✓ *How do people respond to loss of electricity?*
- ✓ *How do their personal (or group) perceptions influence their responses?*
- ✓ *How can we use visual methods and semiotic analysis to study perceptions of electricity loss?*

These questions frame the study through the notions of loss of electricity as a means to provide a context in which to study individual perceptions of energy and electricity. As electricity is invisible to the naked eye, humans employ their imagination to fill the gap between the physical aspects of electricity and their perceptions of it. The human imagination can take a variety of forms and result in the creation of physical, abstract, conscious or subconscious images that influence individual thought and behavior. That is why this thesis sets out to explore the affordances of visual methods as a way to study the invisible concept of electricity through representations that are part of our everyday existence.

In order to address the core questions, the first step in the research design was to choose the type of research that would be most useful.¹⁵ In this case, the research deemed most appropriate was that of *multimodal research* applied in selected *cases*.

Multimodal Research

Multimodal research can be understood as a) multiple field methods used to study the same phenomena from different angles, b) multiple layers to the analysis of said phenomena. This chapter is focused on the field methods only. For the multiple layers of the analysis, please refer to Chapter 5.

Multimodality, according to Kress, is not a theory, but rather, a theoretical framework to be used when conducting research. (Kress 2013; 19). As Gibbons (2012) writes, “multimodality, in its most fundamental sense, is the coexistence of more than one semiotic mode within a given context.” (Gibbons 2012; 8). Modes, on the other hand, are much more difficult to define, even if one is to take the semiotic perspective. Some have tried to categorize modes using a sensory schema, basing the mode categories on the five human senses of touch, smell, taste, auditory or visual. However, this categorization system is rather rudimentary and crude because it both excludes the many nuances present even in a single mode as well as the existing relationships between various modes. (Forceville 2006). For example, the most discussed mode is the visual one, which seems to be able to exist through many others and to encompass written, pictorial and in some cases auditory communication for instance. Forceville does provide a list, which is by no means exhaustive of possible modes that exist, which include but are not limited to: “(1) pictorial signs; (2) written signs; (3) spoken signs;

¹⁵ For some core texts on research design and methods please see: Jones 1992; Denzin and Lincoln 2000; Groat and Wang 2002; Booth et al. 2003; Cresswell 2003; Collins 2004; Silverman 2004; Kermode et al. 2006

(4) gestures; (5) sounds; (6) music; (7) smells; (8) tastes; (9) touch.” (Forceville 2006; 382).

Regardless of how one defines and categorizes the various modes, most researchers agree that multimodality is part of everyday existence. (Gibbons 2012). Multimodal research specifically, as Kress writes, “draws attention to the many material resources beyond speech and writing which societies have shaped and which cultures provide as means for making meaning.” (Kress 2013; 19). Kress views modes as socially constructed, culturally embedded resources used for representation. As such, multimodal research simply aids in highlighting ‘the distinctive affordances’ of the various modes for understanding social values and beliefs. (Kress 2013; 19). Kress also stipulates that even though language holds a prominent place in communication, representation, and interpretation, multimodality helps show alternatives for meaning making and modes of expression that are different from the dominant convention that place language at the center of scientific inquiry.¹⁶

Affordances of Multimodal Research: Making the Abstract Visual

Due to the nature of the images being studied, namely that electricity has no direct physical form, using multimodality as my framework would enable me to include data beyond the restraints imposed by the conventional understanding of language communication. More to the point, multimodality would allow me to include a wide array of visual methods as to enable me to make electricity ‘seen.’ In this case, the visual infers to both a technique as well as an aspect of methods used. As Jones, Santos and Mesquita (2011) write, “the worth of visual methods is often posited in terms of not reproducing existing narratives, of decentring and even of re-thinking fundamental issues of research practice, such as construction, representation, and meaning.” (Jones et al. 2011; 266). In other words, employing visual methods provide an alternative to the already existing data about electricity and enable a diversification of the methods used in an attempt to study electricity, a concept that is only visible through one’s imagination. These various methods, when juxtaposed can allow me to uncover different angles or verify individual perceptions.

My research is based on a wide array of modes as well as a variety of methods that can be used to study electricity, such as visual, written or auditory signs as present in both visual and narrative data. The visual permeates most of the modes and through all

¹⁶ For more information on multimodality, please see the work of scholars in Cardiff University and in the Institute of Education such as Dicks et al. 2006; Dicks et al. 2011; Domingo 2011; Hurdley and Dicks 2011; Domingo 2012; Jewitt 2012; Adami 2013; Dicks 2013; Bazemer and Kress 2014; Jewitt 2014; Kress 2014; Kress et al. 2014

of the methods and yet there are inherent difficulties in researching the visual due to its changing and interpretative nature. The visual in this thesis is both raw data and used as prompts during interviews. Studying the representations of electricity in the visuals as well as narratives allows for a more holistic view of images of electricity as occurring within the narrative as well as visual based modes. The research design utilized in this thesis then incorporates a variety of modes and/or methods in order to enable me to triangulate information in an attempt to validate people's perceptions of such an abstract concept like electricity.

Triangulation

There are four basic types of triangulation as described by Denzin in 1998. First, there is *data triangulation*, or studying a wide range of data resources. Second, there is *investigator triangulation* or the use of multiple researchers. Third is the idea of *theory triangulation* that requires the use of several perspectives to make sense of the collected data. Finally, there is *methodological triangulation* that acknowledges the use of different methods in order to study a single notion, as in this thesis – images of electricity. (Denzin 1998; Patton 2002). As Huber-Warring (2010) advocates, researchers should use more than one triangulation procedure in a research, an advice that was adopted in this research as the thesis employs all but the investigator triangulation approaches.

The term *triangulation* has undergone many critiques that apply to all four basic types of triangulation. One of the fundamental critiques includes the imagery invoked by the triangulation terminology in relation to navigation. The navigational metaphor can be argued to present the idea that all paths to the destination are equal in both type and quality as for instance the example of three highways meeting in one city. That is why it must be noted that triangulation in this thesis refers to using multiple sources of data, methods, investigative and theory techniques, which do not have to be equal in strength but that rather complement each other allowing the researcher to make the most of the empirical research. Another fundamental critique of triangulation is the assumption that corroborating findings are a key validity criterion. Sometimes findings will not be corroborated, and those differences can just as well enrich our knowledge as would validation through collaboration. (Huber-Warring 2010).

The argument that supports the need for all four triangulation categories is that one data source, one researcher, one theory and one method each have their strengths and weaknesses, but by using multiple in each category, they may be selected so that each complements the strengths of the others and provides support where weakness may

arise thus making the study all in all much more reliable (Patton 2002; Taylor et al. 2006; Lather 1986; Henwood et al. 2004).¹⁷ “The use of triangulation can give the researcher added confidence in his/her research data and findings [and] to corroborate findings and the chance to see things from a different perspective.” (Denscombe 2010; 349). The ability to *see* data differently can enable the researcher to enhance the validity of the data.

Of course, some of the drawbacks of triangulation must also be noted. On the practical side, more methods and different modes mean more time and energy spend on the research as well as for developing the skills needed to conduct such a study. On the research side, the data analysis becomes more complicated with each additional mode or method level added and there is always the risk that instead of triangulating, or corroborating, the different types of data will provide contradictory accounts. (Denscombe 2010). That said triangulation is about testing knowledge, not about reaffirming it. So having contradictory accounts may actually prove to be just as useful in gaining knowledge about a topic, just as it would have the data corroborating.

In this thesis, the triangulation is implemented by the use of various methods that help uncover individual and community perceptions of energy. These methods include both field methods for the collection of data such as conducting narrative interviews, collecting newspapers or downloading online visual materials as well as analytical methods such as analyzing the data first using thematic and content analyses followed by semiotic analysis. This, of course, highlights the triangulation limitation of this thesis, which is an individual project, thus limited in scope and reason.

Case Study Research

A research design then that can incorporate multimodal research would provide for the opportunities to triangulate, and that would allow me to best answer the research questions is that of *case study research*. Case studies allow the researcher to use more than one method in a particular area to triangulate otherwise difficult to study topics.

For the study of electricity, the case study approach is especially prudent when one considers the concept of *loss of electricity*. There are two ways electricity can be lost. The *first* is when electricity abruptly stops due to a *catalyst event*. This event can be political, technical or environmental, as for instance a natural disaster that disturbs the energy network or a malfunction in an electricity producing plant. These types of events are categorized by their abruptness, which causes the energy disruption. These

¹⁷ For specific list of weaknesses and strengths of triangulation please see Taylor et al 2006; 235-236

catalysts can occur locally or regionally and are frequently constrained by some geographical border to the affected area. The *second*-way electricity can be lost is when electricity is slowly reduced, or *strangled* out of existence through the use of political, economic, social and cultural factors. Unlike the catalyst way, the energy strangulation loss can occur locally (very rare), regionally as well as globally. Moreover, the strangulation way presents a more gradual disturbance that is also less homogeneous. In other words, not all people that are affected are affected in the same way at the same time as would frequently be the case with the catalyst event at the moment it occurs. Also, as the effects of energy loss are gradual, the disturbance is felt with less of an impact than would be with an abrupt energy loss event.¹⁸ These two possible energy paths, a *fast* [catalyst] and a *slow* one [strangulation], will be analyzed by studying two case studies that exemplify each energy path.

The following section will expand on the choices for case studies and will discuss the specific methodology applied in the field for data collection.

Case Study Selection

Once the case study research design was selected, the practical selection needed to happen. As mentioned in the previous section, there are two energy paths that can result in loss of energy – a fast and a slow path. In order to reflect both energy loss paths, I needed two cases – one for each path. These cases would allow me to study both phenomena side by side. Even though my cases are not comparable¹⁹, I wanted the samples to be of equal weight in the thesis. For that reason, I chose both of my cases as ones that had a regional as opposed to a local or global impact. Having the events on a regional level was deemed appropriate as catalyst events generally do not occur on a global level and energy strangulation does not affect local areas, but rather tends to spread on a regional level. Furthermore, local level studies tend to feature a singular community, while for a global level study, as a Ph.D. student I would not have the appropriate resources, including time and money.

Regional case studies also provide rich data samples²⁰ that can be validated through the use of varied samples within the region. In regional case studies, there is a

¹⁸ Each path will be expanded in its relevant case study chapter

¹⁹ They are not comparable because they have different characteristics and they were chosen to represent the two energy loss paths that in reality cannot happen simultaneously. Temporally they are different – one is a moment in time, the other is a short or long process. Behaviourally they call for different strategies of adaptability or incorporation of disruptions in what constitutes a ‘normal’ daily life, and yet, strangulation can become norm, which makes these cases even more different. The impact of both cases is different also – local to regional for moment in time and regional to global for strangulation.

²⁰ For more information on sampling strategies please see: Breakwell et al 2012; 470

shared mentality and common meaning making space of the event, but there are also individually identifiable communities. Having the case studies as part of the research design, allows me to have a rather diverse sample from which to draw my participants while also exemplifying regional disturbances and an overturn of events in everyday life for so many affected individuals. A local sample, by contrast, would have affected a singular community with similar views, values, income and social status, thus constraining the data I can expect to collect. Sampling the different communities can provide different or complementary versions of the event, which in turn help the validity of the results. Complementary data can help strengthen a hypothesis, but juxtaposing arguments can provide an insight into the social world that could have been previously overlooked. In other words, an abundance of rich data can be expected from a regional case study either way.

The two specific cases selected to exemplify each energy loss path were associated with the impact of *Hurricane Sandy* in the United States 2012 and that of the *Energy Protests* in Bulgaria 2013. Both of these cases are from countries considered part of the developed, and thus energy depended world, and they both fit within the compromised energy security framework selected for this project, albeit be it for different reasons. In the United States as a catalyst event, Hurricane Sandy reaped much destruction and mayhem on the 29 of October 2012 thus leading to an abrupt energy loss following the disaster event. *Hurricane Sandy* allows me to illustrate a case where loss of electricity occurs *fast*. In Bulgaria by contrast, government policy and management over the years have resulted in the perception of destabilization to energy security, in addition to escalating energy prices, which lead to massive protests between February and April of 2013. The Bulgarian case presents a slow energy strangulation process that has occurred over many years, but which was voiced during these protests. As such, the Bulgarian case allows me to illustrate a case where loss of energy occurs *slowly*.

In other words, the cases we selected to present the two major types of energy loss (fast and slow) caused by two major types of events (natural disaster and a man-made one). An additional argument for the selection of the two cases was provided by their relatively sharp and clear characteristics when impact of energy loss is discussed. Finally, the selection was motivated by the fact that both cases provided very rich response samples to support in a convincing way the field and analytical outcomes of this research. Rich response samples refer to samples chosen for the abundance of data they can provide, which makes them reliable without the need to have many samples.

(Edwards 2011).²¹²² The two data-rich cases were chosen for this study – Hurricane Sandy and the Bulgarian Energy Protests – enabled me to study production, perception and response to images of electricity on both the macro (group reaction) and micro (individual reaction) levels tied to a specific event and disruption to energy security.

Phases of the Field Research

The design for the field research for both case studies consists of two empirical phases. Phase I consists of an online data collection of media articles, photo galleries as well as video footage. Phase II includes qualitative semi-structured interviews with members of the communities affected by the events as well as representatives of case-related organizations such as charitable organizations, religious institutions, and political parties. In some cases, these types of interviews are termed elite, but I will not use this term due to its additional connotations. (Brivati 1996; Dexter 2006).

Phase I

The empirical data in Phase I is comprised of online visual and textual data as well as newspaper print resources from the two case sites. They can be summarized as follows:

Online Data

In order to gather reliable data, the cases were chosen as current event cases, and data was recorded online while they were still occurring. The online data collection allowed me to gather ‘raw,’ ‘spontaneous’ data, or data that has not been analyzed through the media or through individual perceptions to the extent it would have been if I collected it few days later or only relied on the recollections people have of the events. This type of data also permitted me to record multiple mediums of data ranging from verbal and auditory to visual and written.

As both events posed a certain amount of danger, online media recordings ensured my safety as a researcher while providing me ready access to the data seconds after it was recorded. In some cases, I also had access to live feeds online, so I could observe the events for myself as they were unfolding. Examples of live feeds would be the live satellite maps projecting the path of Hurricane Sandy and some of the protests. Unfortunately, I could not record these feeds for later analysis, but they served to help

²¹ For more information on sampling strategies please see: Breakwell et al 2012; 470

²² Rich response sampling can be based on a single strong person like a gatekeeper or expert that helps inform the direction of the study. Their inside knowledge opens up possibilities for the researcher that may have been missed prior. Rich response sampling is seen as reliable and helps explain why 2 cases are enough.

me understand the events better. As a result, the collection and observation of online data allowed me to see some of the emerging themes in the data so that I may better position Phase II of my research.

Hurricane Sandy Case Phase I

For the Hurricane Sandy case Phase I, I gathered all online articles published by CNN and BBC on Hurricane Sandy, which are 319 for BBC and 1146 for CNN respectively. From these, I selected a sample of 112, which focus specifically on energy and electricity. In addition to the articles, I collected 485 photos from CNN and BBC and over 30 videos, some of which are life stories or recording of the natural disaster fallout. I did not collect any printed newspaper copies because the material collected online provided a good balance between the visual and other forms of textual narratives, so further material was deemed unnecessary.

Energy Protests Case Phase I

For the Energy Protests Case Phase I, I sifted through over 10 000 images to select and gather the 1047 images that comprise part of my empirical data. These 1047 images include photos, photos with captions, posters, signs and symbols. Most of these images come from many different groups on Facebook. In order to create a balance of the dominantly visual data in the Bulgarian case, I also selected 40 hard copy newspapers that have over 200 articles covering the protests. These newspapers provide me with further textual data for a better balanced visual-textual narrative for the first phase of research.

Decontextualization, Media Selection and Coding Considerations for Both Cases

In both case studies, the aim of the online data collection was to obtain as much data as possible while the events were occurring. The data had to include as many visual representations as possible in addition to providing a narrated context for each case study as per research design. Yet, despite having the context, all images in this thesis when presented will be decontextualised. Decontextualization of the images allows for an unguided presentation of the visual representations as data. In other words, the decontextualization removes context specific frameworks that can be used to interpret the image and perhaps re focus the inquiry toward the disaster or turmoil event, thus leaving the image as a data source that can be analyzed in relation to the theme of images of electricity. Simultaneously, while the selected images are decontextualized

from their original context, they will be recontextualized within the narrative of this thesis.

The media sample selection for both cases also needs to be addressed further. In the timeline in which the cases occurred, the Hurricane Case was first (October 2012), so data for that case was collected as the event was taking place. Since the focus of the online data collection was to be visual representations with some context, online news articles with attached photo galleries were selected. Online news articles in general are posted and updated daily as new information is uncovered and require less processing than other published mediums such as books or other printed materials. This means that online news often are the first place where visual representations are uploaded before being printed in other news papers. Moreover, once photos or other visuals are placed in the online medium, these images can be re-posted, shared, or duplicated amongst numerous online and print postings. That is why, a single online source in the USA was selected, which provided a large enough data sample in order to avoid repetition of images across sites. CNN does have the resources to produce online articles and to obtain new copyrighted images quickly, which is why the images collected from their galleries were over 450. There were other news outlets that had the resources and the sample size needed, but most images were re-posted between news outlets anyway, so whether I obtained them from CNN, NBS or Fox News actually makes no difference to the quality of the visual sample selection because when interpreted in this thesis, all images will be decontextualized and recontextualized as mentioned earlier.

The Energy Protests Case occurred second on the timeline as it was not until 2013. So data collection began with a search of online news articles, but it was discovered that in Bulgaria, online news mediums were limited and they did not cover the protests. Print media was in a similar position and only one newspaper reported the protests, while the rest attempted to suppress the information. As some of the participants explained, this happened because most of the online news media as well as the print media were owned by the political elite of Bulgaria that did not support the protests, (which I could not substantiate or deny). *Presa* was the only newspaper I could find to reflect the protests, so 40 issues were gathered that contained over 200 articles and printed photos relating to the protest. However, as the focus of the Phase I research was to be visual representations, I needed to expand my search in order to obtain a large enough data sample. Since the protests were organized through Facebook, I followed them on the social platform. From Facebook I obtained 10 000

visual representations, which once processed yielded just over 1000 images relevant to electricity in some way.

Once the visual data was collected for both cases, the data processing and coding took place. The coding process was the same for both case studies. The data for each case was placed in a single folder and then one by one, the images were systematically categorized by theme and content into sub-folders. Some of the sub folders were then examined and re-coded into further categories. In some cases, a visual data processing tool *Compendium* was used. The images were placed directly in the *Compendium* program where they were used to create maps in order to see if any further connections and/or meanings could be unpinned. There were no presupposed categories, but rather the categories emerged from the themes and content prevalent in the data. As I was the only researcher to code the data, the coding was likely influenced by my own interpretation of the events, which is why Phase II of the research design was crucial because it is during Phase II some of the coding categories were problematized and informants provided alternate perspectives on the various images used for analysis in the thesis.

Phase II

The second phase of research was comprised of *semi-structured interviews* with affected individuals at both case sites. (Kvale 1996; Adler and Adler 2002; Gubrium and Holstein 2002; Pole and Lampard 2002; Warren 2002; David and Sutton 2004; Gray 2004; Edwards and Holland 2013).

Choosing the Semi-Structured Interview Model

The selection of the interview model itself took some time because of the nature of data sought from the participants, data to be used to complement Phase I of the research.

At first, I considered using an *information extraction model*, which is a type of structured interview. The *information extraction model* as defined by Franklin “constructs the interview as a situation in which the interviewer extracts from the interviewee an articulation of feelings, ideas, and/or knowledge.” (Gergen and Davis 2013; 100). According to this model, all data already resides within the participant and it depends on both the individual personality of the interviewee as well as the skill of the interviewer on how much viable data will be ‘extracted’. This is a controlled interview with ‘scientific objectivity’ at the foreground. Such types of structured

interviews are also easier to code and analyze because every following interview is similar to the previous one.

However, this sort of interview model is highly criticized. *First*, this model is associated with a masculine approach to research thus making any data inherently gender biased.²³ *Second*, in addition to gender bias, the communication of information also becomes biased. By keeping to a strict questionnaire list, one denies the participant their voice, which could potentially provide illuminating data. *Third*, the information extraction model is very rigid because the data one can obtain is from predetermined parameters and it allows no deviation from the questions. The denial of spontaneity as part of the interview process closes the opportunities to discover trends, ideas, etc. which have not been included in the hypothesis that informed the questionnaire design. On the other hand, the interview is a process of question asking and answering between the interviewer and interviewee and as such the rules of the interview are determined by both parties. This means that some structured interviews can provide sufficient opportunities and encourage the participant to take the lead if so agreed by both sides in the interview process. (Mishler 1986; Reissman 1993).

Contrary to the *information extraction model*, or any other type of structured interviews, there is the *open-ended interview model*. (Morgan 2002). The *open interview* allows the interviewer to keep the questions within a theme, but the interview direction is frequently driven by the participant. In these interviews, the interviewer is more of a mediator than an 'extractor' of data. This approach also has its critiques, some of which include frequent deviation from topic, length of interviews, difficulty coding and analyzing, etc.

For this thesis, however, as the interviews came second in my research after having completed Phase I data collection, some structure to the interviews was inevitable and necessary for comparisons thus making open interviews, undesirable. Phase I data helped me inform the direction of the interviews, thus allowing me to create questions for *semi-structured interviews*, as an intermediate form between open and structured interviews. With that, *semi-structured interviews* were selected as the tool of Phase II. *Semi-structured interviews* have the most of the strengths of the structured interviews, but also limiting some of the weaknesses, such as lessening gender and communication bias as well as providing more opportunities for the

²³ Oakley (1981) focuses on the masculine paradigm of how to do research, Keller (1985) - on hard, tough, objectifying as masculine while soft, tear minded, subjective as feminine regardless of who the interview and interviewees are

participants to deviate from the questions and bring up valuable insights without gearing too far off topic.

Types of Semi-Structured Interview Models

Franklin discusses two types of semi-structured interviews – *the shared understanding interview* and *the discourse model*.

The first model, or the *shared understanding interview*²⁴, is where the “interview is seen as [an interpersonal] situation in which the interviewer attempts to gain understanding of how the interviewee experiences aspects of her own life and/or the world of objects and other persons.” (Gergen and Davis 2013; 102). This model of interviewing calls for much more reflexivity on the part of the interviewer as it acknowledges that the interviewer comments, characteristics, qualities and sensitivity will affect the data collected. In this model meaning can be derived through communicative exchange as in the structured type interviews. Further, meaning can also be newly formed as new relations are articulated, new meanings construed, or data are seen in a new light during the interview. For example, the use of paraphrasing and interpreting during the interview process to encourage corrections, responses, and further comments is not uncommon. “The aim is to obtain rich, nuanced descriptive material that reflects the interviewee’s experience of her life world (or some part thereof) and lends itself to qualitative analysis in one or more modes – for example, identifying and categorizing central themes, or extracting core narratives.” (Gergen and Davis 2013; 103). Understanding the participant’s sense of their own life experiences, textures and feelings and ‘facts’ through a process of exchange and empathy.

This is a semi-structured interview model and as such, the questions form a guide rather than a pre-determined set of questions to be asked in a particular order. For instance, asking for clarification and following other paths of inquiries not within pre-selected topics is acceptable within the parameters of this model. This means that each interview on the same topic can be rather unique.²⁵ This uniqueness can also be used to criticize this model as the interviews do not appear to be systematized. The most frequent critiques are that this model is ‘unscientific, unsystematic, and ‘soft’.

The other semi-structured interview model that Franklin discusses is the Piagetian model, or what Franklin refers to as “the *discourse model* where the interview

²⁴ Please see Kvale (1983) for grounding of the method in terms of phenomenological and hermeneutical modes of understanding

²⁵ Where possible follow up interviews or collaborations such as joint data gathering was completed, which in turn resulted in interviews having the same start point, but evolving through a particular case by case situation

is conceptualized as a situated speech event.” (Gergen and Davis 2013; 104). This model is highly dependent on the medium of language and theoretically is sometimes categorized as the post-modern turn in psychology. This model relies on the tapping of underlying knowledge rather than gaining an understanding of the other’s life world. Both the interviewer and interviewee have active roles in what transpires during the interview process, and much more attention is paid to the concept of power and the distribution of power in the interview.²⁶ There is an attempt on the interviewer’s part to eradicate inequality and address dominant to subordinate relations. However, I often use inequality to my advantage in the interview process. Frequently I would purposefully place myself lower than the participant in order to develop a teacher to student relationship, where I am the student and as such subordinate. In such cases, the control over the interview and the knowledge itself is perceived to remain within the participant. The participant then takes the role of teacher, or guide, and proceeds to teach me by sharing his or her knowledge on a given topic. I have found that this technique allows me to ask questions much more freely and to receive longer answers as well as to develop an overall better relationship with the participants.

On the other hand, there are other techniques from this interview model that I do use to complement the shared understanding interview one. For instance, conversational mode exploration of new themes is encouraged and cross connections may develop – one interviewee can say something that is used productively in subsequent interviews with others. I frequently used that technique in my interviewing, when I would, for example, quote a previous participant, while maintaining their anonymity of course, in order to see the reactions in the present interviewee or to see what other data may emerge from the new found topic focus.

In summary, I selected to conduct semi-structured interviews that are part shared understanding interviews, or ‘guided monologues’ and part discourse ones, or the ‘function of interactional context based in the medium of language’.

Interview Structures Used

The interviews that I conducted were divided into four segments. The *first* segment was a biographical interview. In this part, participants were asked about the event they witnessed. What they remember feeling, thinking, seeing, touching, hearing, etc. This part is descriptive, but directly connected to the respective event, and the questions were all open ended. The *second* part was more structured, and the focus of

²⁶ The aim to build on rather than deny subjectivity, to acknowledge the distribution of power based on what is said and when and by who, and to understand how all of those will affect the interview.

the questions shifted from more general discussions of the event to particular questions about energy and electricity perceptions. The *third* part consisted of a series of photographs, or applying the *photo elicitation* method. These photos were used to stimulate further discussion and as such were also divided into two parts – a more general and directly linked to the event part as well as a more abstract one, but specifically focused on energy and electricity. The final, *fourth* segment of the interview was comprised of a word association game, followed by some final concluding questions and opportunities to raise any other thoughts, ideas or feelings. Interviews for both case sites were on average between 40 and 60 minutes each. Further information of the empirical data collected in the three phases is depicted in the relevant case study chapters – Chapter 5 and Chapter 6. (Please see Appendix C for sample Questions for Interviews).

Photo Elicitation

In all the interviews, photo elicitation was used as a technique to drive the discussion further. Harper (2002) defined photo elicitation as “the simple idea of inserting a photograph into a research interview [that may offer] a bridge between worlds that are more culturally distinct” (Harper 2002; 14, 21). The use of visual images and other graphic representations can produce substantive data in areas where communication may be difficult for a number of reasons including cultural differences, communities with low literacy levels, abstract concepts or less-well defined terminology exploration. In other words, visual representations can help “elicit different types of memories, sensations and information than verbal” stimulants (Viccaro 2010; 121). As Clark-Ibanez reflects, photo driven interviews can both evoke taken for granted nuances as well as trigger further discussions and reflections. Further, Clark-Ibanez argues that using photographs can also help reduce asymmetry in power between the researcher and the participant (Clark-Ibanez 2004). Finally, using visual representations can also alter the interview structure and dynamic because as Viccaro suggests, using photos as part of the interview process can both reduce fatigue as well as encourage attentiveness during longer interviews (Viccaro 2010).

There are three primary approaches to photo elicitation: *auto driving*, *reflexive photography*, and *photo novella* (Uysal et al. 2012; 57-58). In the first approach of *auto driving*, the researcher controls the discussion by showing photos or other graphic representations at carefully considered moments during the interview in order to ‘drive’ the discussion with the informant. The visual materials used during *auto driving* are

provided by the researcher.²⁷ The second approach is that of *reflexive photography*, which “entails the interviewees taking photographs and then reflecting upon the deeper meaning of their photographs” (Uysal et al. 2012; 57). Finally, the *photo novella* approach also elicits photographs from the informant, but very content specific ones, in particular, visual representations of daily habits and common events, which are then discussed during the interview. In some ways, the second and third approaches are similar from the perspective of who is taking the photographs, but it is the content and interpretation of the photographs during the interview process that differ.

Photo elicitation is a widespread method as applied to many academic disciplines, including but not limited to sociology, anthropology, psychology, ethnography, education and health. In this thesis, the *auto driving* approach was used in the third part of the semi-structured interviews because of several reasons. *First*, to serve to either provide alternate interpretative perspectives or to verify my own understandings of the visual representations collected as part of the data sample for both cases. *Second*, *auto driving* allows for the interview process control to remain with the researcher, thus allowing me to keep the inquiry focused on images of electricity rather than the turmoil of the events.

Walking Interviews

In the Bulgarian Case, some of the interviews were not conducted in a neutral setting selected by the researcher, but took the form of walking interviews, or walk-alongs.

Walking interviews in general seek to engage the participant in the space or place connected to the inquiry. “Seeing the participant in context (in their home, their classroom, their workplace), surrounded by the material culture of their created space, and possibly interacting with others in that space, offers a wealth of information beyond that obtained, and possibly obtainable, in an interview, providing an ethnographic dimension to the exchange” (Edwards and Holland 2013; 45). The aim is to add an additional meaning to the informant’s perceptions by also analyzing and reflecting on how the informant interacts with their physical and/or social environment. However, walking interviews differ in many regards from more traditional types of interviews and additional ethical considerations must be taken into an account. “Unlike conventional

²⁷ For additional context, please also see Henwood, K., Shirani, and Finn, M. (2011). “So you think we’ve moved, changed, the representation got more what?” Methodological and analytical reflections on visual (photo-elicitation) methods used in the men-as fathers-study.” In P. Reavey (Ed.) *Visual Methods in Psychology: Using and Interpreting Images in Qualitative Research*, Chapter 22 pp 330-345.

interviews, held indoors with a table between the researcher and the interviewee, a *walk-along* often plays out more as a dialogue than an inquiry” (Brown 2014; 223). As the interviews are more as a dialogue, the power relations within the interview shift. The participant is the one who leads the researcher on the walk-along, so there is a certain amount of control over the dynamics and actual movements during the interview in favour of the informant that does not exist in more conventional interviews. On the other hand, the walk-along can open new understandings of the relationship between the informant and the various urban terrains spanning from familiar private places to contested public spaces (Brown 2014; 223 and 226). Other ethical considerations of the walking interviews include the speed of the walk, the conditions of the pavement, whether there is space to walk side by side, to stop or pause for a conversation, the lack of privacy, the ability to record by accident others who have not given consent as well as overall noise and if that could impede communication between the researcher and the interviewee (Clark and Emmel 2010; Pooley 2013).

Using the walk-along interview method in the Energy Protest Case allowed me to better understand the relationship between the protest participants and the urban terrain they transformed into a protest space.

Data Recording

The interviews were recorded using a hand-held Olympus mp3 recorder. The audio was then transcribed and the text, coded as needed. Some of the participants also made their own recordings – photos and video. Especially in the Bulgarian context, participants were encouraged to wear a Sensory Camera, the footage of which is also part of the empirical data for this thesis. As the Sensory Camera was used in different ways in each case study, the details of its use and data will also be provided in the later relevant chapters.

Participant Selection

The participant selection for Phase II in both case sites occurred with purposeful sampling, and particularly, maximum variation sampling (MVS). MVS refers to a group of individuals, specifically chosen to represent a variety of experiences that are related to the topic under study (Maykut and Morehouse 2000). This type of sampling does not provide data that is generalizable or in fact random at all, but rather, it is used to attempt to represent the range of experiences possible as related to the phenomenon of interest. MVS is often used when a large sample is unobtainable, or undesirable, as in the case of this thesis where instead of balance, a larger sample would shift the focus

from the visual to the narrative data. Furthermore, MVS is an emergent or sequential approach. In other words, MVS is an approach where data from the participants can be used to direct the remainder of the study and analysis. That is why this type of sampling is frequently paired with the inductivist grounded theory (Smith et al. 2009), or the adaptive theory (Layder 1998) approaches to analyzing data, where prior conceptions of the data are limited, and the data is ‘encouraged to speak for itself’ (Atkinson et al. 2003; Smith et al. 2009; Willig 2013).²⁸²⁹

The participant sample for Phase II in both cases was the result of an initial introduction provided by a series of gatekeepers, which I already had in place from previous research in both countries. These gatekeepers helped facilitate the first contact, communication, and trust as well as accompany me in the field during the interview process. From there, snowball sampling (Babbie 2016) helped me obtain the rest of the participants required, which were chosen, again purposefully, in order to achieve the richest data possible from a smaller interview sample in order not to compromise but complement the visual materials obtained in Phase I (Edwards 2011; Breakwell 2012).

Hurricane Sandy Case Phase II

The participant sample for the Sandy case is comprised of residents of communities affected by Hurricane Sandy. The participants were chosen by geographical location as well as by roles played pre-, during or post- Hurricane Sandy. 17 interviews (including partials) are part of my empirical data set as well as a lot of participant-generated data, including some that are from individuals who did not allow me to conduct an interview but provided me with other materials.

²⁸ There are very high profile and important revisions to the Grounded Theory approach that are explicitly not in this mould e.g. Charmaz 2008; Henwood and Pidgeon 1996, 2003, 2004, 2006; Pidgeon 1996

²⁹ Here I is worth noting that when engaging with this type of data is very popular currently in academic circles to use grounded theory, which allows the researcher to use the data as the starting point for discussion as oppose to hypothesis testing which is more common with quantitative research. This thesis, however, is based on an approach less known that is referred to as adaptive theory. Adaptive theory was developed by Derek Layder (1998) who argues that grounded theory does not accurately reflect academic research, which begins with the field of knowledge and expertise of the researcher gained through time or through a carefully built literature review. That is why he suggests that one engage with adaptive theory or the analysis of the data as a starting point but reflected through the previously gathered theoretical knowledge of the researcher. As such this next discussion section will piece together the various themes creating “the dialogical relation between prior theory and data collection and analysis” (Layder, 1998; p 169) in order to show the complexity of the images of electricity for this thesis.

Energy Protests Case Phase II

The participant sample for the Bulgarian case is comprised of participants in the Energy Protests. In a protest, there are a finite number of roles an individual can take – an organizer, a participant, an observer, or a mixture of two or even all three of the above. My sample covers all of these possibilities, so there were 7 interviews conducted with members of the public. Further interviews were conducted with police and political figures, which, in a way, represent the other side of this event. There were 4 interviews conducted with people in those roles.

*Summary of Data Collected for Case I and Case II***Table 1: Summary of Online and Interviews Data Gathered for Phase I and Phase II of the Research**

Phase I	Case I: Hurricane Sandy	Case II Energy Protests
Visual and Newspaper Data	BBC/CNN Online	Facebook/Print News
News Articles	1465 [used 102] Online	500 [used 39 with x>200]
Photograph Data	485 [used all]	Over 10000 [used 1047]
Video Materials	~30 [used as needed]	~20 [used as needed]
		x=number of articles in print
Phase II	Case I: Hurricane Sandy	Case II Energy Protests
Interview Data	Occupation/Description	Primary Roles in Protest
1	Business Owner	Organizer/Participant
2	Retired	Organizer/Participant
3	Teacher	Organizer/Participant
4	Child-Shelter	Observer
5	Adult-Shelter	Observer
6	Air Force	Observer/Participant
7	Carer	Participant
8	Comcast Technician	Police
9	Police	Police
10	Blankets for Brigantine	Secret Service
11	Teacher-Stranded	Civil Servant
12	Chemistry Lab Technician	
and also some partial ones:		
13	Journalist - video mostly	-
14	Coast Guard - no audio	-
15	Business Owner - 5 min only	-
16	Amateur Reporter - online	-
17	PCEG Rep ³⁰ - writing only	-

Note: this data will be further discussed in detail in Chapter 3 and 4 respectively.

³⁰ Public Service Enterprise Group (PCEG) Representative

Participant Protection

For the protection of the participants, there was complete transparency. Participants were fully informed about the aims of the research in a clear manner. They were fully informed about the purpose of wearing a Sensory Camera and the data it can provide. Opportunities were made available for them to ask any questions they wanted and if they required any further information at any time pre-, during and post- contact.

Further, appropriate consent forms were provided for all participants. The forms included; a) familiarization form that described the project, followed by b) database information and consent forms, c) detailed project information and participation consent form, d) video and photo release form, as well as e) debriefing form and f) further contact and inquiry form. Please note that for the Bulgarian case all consent forms were translated into Bulgarian accordingly to ensure that language would not be a barrier to participant comprehension.

Data Management

A secure database was created for validation and clarification purposes in accordance with the Data Protection Act 1998. This database can be accessed by both myself and my supervisors. In addition to security, data were imported into the following data management software tools – NVivo for narratives and Compendium for images. The program Compendium is password protected, and Nvivo is located on a password protected computer.

Control over Data

The participants were also informed that they have the right to stop/delete the data from the Sensory Cameras at any time as well as to withdraw fully from the interview during or in retrospect.

Confidentiality

As all contact details are stored in a secure database, which is accessible only by myself and my supervisors, the participants were informed of their right to delete all their information from the database during or retrospectively at any time. All data remains confidential in accordance with British Psychological Society (BPS) ‘Ethical principles for conducting research on human participants’.

The participants were also being informed that in the thesis, as well as in any further publications/presentations, their names will be substituted by an alias that cannot be linked back to them in order to ensure their protection.

If for illustration purposes, an image from the Sensory Camera is used in the thesis, or in following publications/presentations, that image will not have recognizable faces, car license plates or any personal information if no prior authorization has been received. If the image needs to be used subsequently, any data that may lead to identifying an individual will be blurred or barred over using the appropriate software.

Safety and Other Considerations

In order to fully understand my research process, however, in addition to the safety precautions I engaged with, some reflections on my gender, nationality and my 'exiting the field' strategies also need to be discussed. Some years ago, this discussion would not have been necessary for a thesis, however, with the development of 'feminist research', or growth of gender sensitive research, some reflections need to be added.

Gender and Nationality

Feminist research takes into consideration the language and manner of research itself. How the researcher is situated within the research process is seen to have a great effect on both the nature and outcome of the research. Gender sensitive research allows the researcher to consider the concepts of positionality, standpoint and reflexivity of the researcher as part of the research process as a whole (Henwood et al. 1998; Edwards and Mauthner 2012). "Positionality is the result of how one is situated through the intersection of power and the politics of gender, race, class, sexuality, ethnicity, culture, language, and many other social registers that shape who we are." (Villaverde 2008; 109). For instance, my choice to conduct semi-structured interviews instead of structured ones was a conscious decision to limit some gender-specific bias that is inherently associated with structured interviews that are dubbed masculine. Additionally, gender sensitive research takes into an account the gender role of both the interviewer and the interviewee and what effect that role may have on the power relations within the interview process (Villaverde 2008; Young and Skrla 2012).

As part of the research conducted for this thesis, the fact that I was female was very useful for some of the interviews, especially when interviewing elderly women and males. With the elderly women, I could engage in a power relation where they could perceive themselves to be my teacher, my grandmother, my guide. As such they were willing to share their knowledge with me much more freely than other participants. For example, one inquired directly if I had a boyfriend or a partner and if he makes me happy just as my granny would. I gave a response, which delighted her, so she replied with a very long, very private, and very personal tragedy story that was mostly on topic.

That story made the interview process very complicated, but it also provided me with a window through which to understand this elderly women's view of life and meaning-making processes. That then, in turn, made it easier to navigate the rest of the interview.³¹

My nationality and place of residence, namely Bulgarian and the United Kingdom respectively, also played a role in the interviews. They both gave me certain access in both locations, but also an opportunity to build trust quicker with the participants. Being a Bulgarian interviewer in Bulgaria and coming from the United Kingdom to the United States helped for the gaining of access and establishing the researcher-participant bond. For instance, some of my participants in the United States kept asking me questions about the Royal Family and William and Kate's newborn son. Their interest in life 'across the pond' would enable me to create the researcher-participant bond faster because the main pre-interview communication was issued by the participants.

Safety

For my protection, my interview schedule was made available to people who know me but are not part of the interviewing process, with regular communication maintained. Also, as previously agreed with the Gatekeepers, I was with them for most interviews, so I was not alone for any part of the interview process. This was a sensible precaution because most interviews were in people's homes, with people who were strangers to me. Further, prior to the actual interviews, appropriate exiting strategies were discussed and agreed upon with my Gatekeepers just in case anything went wrong during the interview process in accordance with the Cardiff University Department of Psychology Risk Assessment process.

Return to the Field

After the interviews were completed, in addition to the debriefing form, I gave my participants a further inquiry and contact information form. I left my university contact details (and those of my supervisors and of the ethical committee) for all

³¹ That was not always the case. Sometimes creating the bond with participants was too deep, which can make navigating an interview challenging. For example when a death in the family was raised in one of the interviews that was off topic, I had to find a way to bring the participant back into the topic gently, but also, to improve their mood, so that I did not create psychological trauma as a result of ill handled sensitive information. Another example would be of some of the males I interviewed who would exaggerate their participation in the relative case in an attempt to impress me. I have reflected and attempted to compensate for these exaggerations in my analysis. For a better understanding of my own positions, please see Sara Willot's approach as discussed in her chapter in Henwood et al (ed) (1998) *Standpoints and Differences: Essays in the Practice of Feminist Psychology*.

participants as well as an offer to provide them with a summary of the results or a virtual copy of the dissertation after it is completed. Further communication with the participants is still maintained because I will follow up with some further interviews in Phase III, but also as part of good research practice when one leaves the field.

Ethics

Throughout the data gathering process, I have made sure that I upkeep ethical conduct. This thesis has the Cardiff Department of Psychology ethical approval and, as mentioned earlier, ethics were observed with regards to participant protection. In accordance with the British Psychological Society (BPS), I have maintained my participants' confidentiality. One of the protection mechanisms listed earlier is the storage of gathered empirical materials in a secure database that satisfies the Data Protection Act of 1998. Information and consent forms were supplied to all participants and the names of the participants were removed in the thesis. Consent was obtained concerning photos and video materials where applicable, except the materials collected in Phase I from online sources. (Please refer to Appendices A, A1, A2)

All data in Phase I was gathered from freely available online sources, so many of the photos from Facebook, for example, did not have an author. However, as these photos were freely available to the general public, which is how I got access to them, copyright is not an issue. (Edwards and Mauthner 2012).

Conclusion

The focus of this chapter was to present a comprehensive methodology of the field work used for this thesis. The ontological and epistemological assumptions were presented thus situating the field study in the theoretical frameworks of conceptual knowledge as related to constructivism and relativism. The chapter presented some ethical considerations, participant protection practices, limitations, and safety and positionality reflections. The research design, methodology for collecting the empirical data that includes the reasoning behind the selection of the two cases was also described and a brief summary of the materials gathered in the field was also presented. The data collected will be engaged with further in the next two chapters where a comprehensive data overview will be provided as well as a thematic and content analyses for both case studies will be conducted. The data overview, thematic and content analyses (Chapters 3 and 4) will serve as the base for the second half of the thesis that will provide another layer of theoretical analysis of the data gathered during the field research.

Chapter 3

Case I: “Hurricane Sandy” in USA Overview and Data Presentation

‘Hurricane Sandy swept along the New Jersey coastline with a fury that left little in its wake.’

-Lauren Betesh, (Oct. 29, 2014)

Introduction

Having presented the field methods for this thesis, the following two chapters will depict the two case studies of electricity loss as the catalyst-event for the creation and communication with images of electricity. The case study presented in this chapter is that of *Hurricane Sandy*.

Hurricane Sandy is a singular event that occurred in one moment in time but caused rippling effects throughout the remaining structures, natural or man-made, that people relate to. The hurricane caused massive power outages throughout the East Coast of the United States. As people were losing power, they began to reflect on and communicate about why they need energy, what aspects of their ‘self’ and ‘home’ is built upon energy and electricity consumption, and in this case, about the massive knowledge gap that exists.

This chapter is structured to present the connection between this natural disaster and the production of electricity-related images in the overall energy context of the United States. *First*, a background on Hurricane Sandy will be provided in order to situate it amidst other notable hurricanes and place it in the United States energy context. *Second*, existing studies of Sandy will be addressed to outline the context of my research. *Third*, a theory on the forced images of electricity will be presented as well as the modified communications patterns that Sandy helped create. Following those sections, the specific empirical materials collected for this case will be presented in a systematic fashion that includes methods for collecting that influence the type of data gathered, followed by a presentation of the themes that relate to electricity as identified during the process of data systematization. *Finally*, the chapter concludes with a discussion of the main themes within the empirical materials.

‘Superstorm’ Sandy

Over the course of a week, Hurricane Sandy developed from a tropical storm in the Western Caribbean Sea on October 22, 2012, into the largest Atlantic Ocean hurricane recorded in history that cost over 200 lives, \$68 billion and left millions without electricity. Sandy is the second costliest storm to hit the US and the first to cause a power loss on such a mass scale. As such it caused an abundance of images of electricity to be created that reflected the shared and reflected upon energy realities in the post-storm experience.

Sandy started out just like any other storm – a tropical depression, or an area of low pressure, which formed in this case in the Caribbean Sea and was the beginning of the

Tropical Storm Sandy. However, by the 24th of October, Sandy had reached sustained winds of 80 miles per hour and was reclassified as a Category 1 hurricane. This was only the first of several reclassifications that Sandy endured prior to dissipating on the 1st of November 2012 (Langley 2014; 5).



Figure 1: Shows the track of Hurricane Sandy -Reprinted from Langley 2014; 6

As a Category 1 hurricane, Sandy moved through Jamaica, Haiti, and the Dominican Republic. It was on the 24th of October that Sandy made the first landfall near Kingston, Jamaica. The landfall was not enough to diminish Sandy's winds, so the hurricane continued to gain speed until on the 25th of October it was reclassified as a Category 2 hurricane after reaching 114 miles per hour, just prior to making its second landfall just west of Santiago de Cuba, Cuba. By the 26th of October, Sandy was passing through the Bahamas. The two landfalls had their effect on the storm, weakening its strength, so by the 27th of October, the storm was briefly reclassified as a Tropical Storm, prior to being reinstated to a Category 1 hurricane. By this point, it became clear that Sandy would not dissipate prior to hitting the United States east coast and that a third landfall was imminent, but apart from being persistent, nothing with Hurricane Sandy was out of the ordinary for the hurricane season.

Then something unexpected happened. On the 28th of October, "the hurricane meets a cold weather system, which creates more energy, and it starts to change into a superstorm." (Langley 2014; 5). The cold weather system confronts the already moving circular wind mass adding to its intensity and increasing its scale of impact. By the time Sandy reached the United States mainland with a sustained wind speed of 80 miles per hour, it had also grown to a span of over 1,100 miles in diameter. Sandy made the third and final landfall, on the 29th of October near Brigantine, New Jersey, USA. After that,

Sandy passed over New York State and into Canada before finally dissipating (Yuhas 2012; Freeman 2013; Miles 2014; Zerkel 2014).

Sandy was the largest storm recorded to make landfall in the US. Meteorologists even referred to Sandy as a Superstorm as an attempt to denote its size. Hurricane Sandy has many names that are not media related because it was reclassified so many times in order to reflect the change in wind strength and magnitude. Since during its existence, Sandy was categorized as Category 1, 2 and 3 types of hurricane at various times as well as different levels of tropical storms, the terms ‘storm’ and ‘hurricane’ in this thesis are used interchangeably to denote the same environmental phenomenon.

Sandy and Other Hurricanes in the US in the Energy Context

Hurricane Sandy although not particularly powerful in terms of wind speed was unusually large covering a vast geographical space that was costly in both lives lost and money, but that alone is not what makes Hurricane Sandy interesting for research. There is a pre-existing history of hurricane research that can provide an alternate perspective on the impact from Sandy on images of electricity in addition to placing the hurricane and the power loss it caused amidst the US energy context.

Sandy amidst Other Hurricanes: The Cases of Katrina, Irene, and Agnes

The East Coast of the United States covers a vast distance. The southeast coast, which arguably includes the states Texas, Mississippi, Alabama, Louisiana, and Florida on the Gulf of Mexico as well as Georgia, South and North Carolina, is frequently in the path of great hurricanes. The most destructive of which to date was Hurricane Katrina in 2005 (Cutter et al. 2014).

Hurricane Katrina (2005) had two landfalls, one as a Category 5 and one as a Category 3 hurricane. The resulting rainfall and storm surge left over 80 percent of New Orleans and over 90 percent for the bay area underwater and caused over 1500 deaths and an estimated \$108 billion in material damage.

There were four main factors that magnified the impact of the storm. *Firstly*, on an environmental level, the construction of the Mississippi River – Gulf Outlet Canal (MR-GO) drained the marshes thus removing the natural flood defenses around New Orleans. *Secondly*, on a structural level, the New Orleans levee system failed.³² *Thirdly*, on a political level, there were ineffective management and evacuation protocols in place in particular in the event of levee failure. *Finally*, on a security level,

³² This failure resulted in a lawsuit against the US Army Corps of Engineers (USACE) where full responsibility for the failure of the levee was laid upon them by the justice system in an attempt to assign some blame and provide people with closure

once the Hurricane made landfall and people were evacuated, there were no protocols in place to control looting.

In contrast, the area affected by Hurricane Sandy suffered from neither prior environmental degradation nor systematic flood defense failure. Additionally, lessons learned from Hurricane Katrina resulted in improved preparation, mitigation and response to Sandy. Improvements included a more organized political response and a better security in affected areas that was provided by volunteers from a variety of military forces. Contrary to Hurricane Katrina where the focus was flooding, the majority of the trauma caused by Hurricane Sandy derived from the loss of electricity that disrupted everyday routines and communications over a vast geographical area.

The northern part of the east coast by contrast, which is where Hurricane Sandy made landfall, arguably stretches from Virginia to Maine. This part of the coast is less frequented by storms with magnitude and strength similar to that of Hurricane Katrina. There have been only two more notable storms in the last 50 years for different reasons. One of these storms, namely Hurricane Agnes, was notable for its magnitude that could even rival that of Hurricane Sandy; while the other storm, namely Hurricane Irene, was notable for the media frenzy about it.

Hurricane Agnes (1972) with an estimated damage of over \$2 billion was at the time the costliest hurricane to hit the US. Passing through the South East coast, causing tornados in Florida and Georgia, it then traveled up the North East coast. Similar to Hurricane Katrina, Hurricane Agnes caused significant damage due to flooding but similar to Hurricane Sandy, the majority of the damage was in New Jersey, Pennsylvania, and New York tristate area.

Hurricane Irene (2011) also occurred in the same tristate area and is the seventh costliest hurricane with an estimated damage of over \$16 billion. Lessons learned from Hurricane Katrina were first applied in the region with Hurricane Irene resulting in actions such as pre-emptive energy blackouts, preparation advice, and clear evacuation procedures. However, these actions and the media had the unfortunate effect of causing a panic. The panic then led to water and supplies fights in stores as well as mass money expenditures on 'necessities'. So when Hurricane Irene made landfall in South New Jersey, people were overly prepared for a storm that passed with relatively mild damage and severity for most locations. As a result, many people in the tristate area lost faith in the media as an objective informer for preparations for Hurricanes.

In summary, many storms prior to Hurricane Sandy have made landfall in the US, but the three relevant for this research are those of hurricanes Katrina, Irene, and

Agnes. Each of these storms has a direct impact on how Hurricane Sandy was experienced in the tristate area even if electricity was not the primary concern for any of them. For Hurricane Katrina, the focus of the inquiry was on the flooding and water damage as well as human lives lost. For Hurricane Irene, the focus was on the media frenzy created while Hurricane Agnes was so long ago that it predates the internet and hype in digital communications. However, the lessons learned from Hurricane Katrina provided a better political and social structure in place to deal with both the preparations and the aftermath of Sandy. The memories of Hurricane Agnes provided a point of comparison for those who live in the tristate area and the media frenzy that surrounded Hurricane Irene can help explain certain phenomenon that surrounded Hurricane Sandy – such as the loss of faith in the media as an objective informant.

US Energy Arena and Sandy's Impact

In addition to understanding how prior hurricanes could affect the people in the New Jersey-Pennsylvania-New York tristate area, there is also the energy arena context to consider. In a context where there is a dependency on energy consumption and electricity devices, and their services become extensions of the self-identity, a turmoil event that causes a major power loss would affect people a lot more than in a context where dependency on energy is low. Hurricane Sandy caused a mass blackout, virtually stopping energy consumption on a mass scale for prolonged periods of time. Energy dependent people, such as the ones in the United States in general, reacted strongly to that loss. Part of that reaction was their energy reality as illustrated in the depiction of various images of electricity. Therefore, in order to better understand those images of electricity as produced after Sandy, this section would exemplify the energy context of the United States.

In 2013, the United States generated about 4,058 billion kilowatt-hours of electricity. About 67% of the electricity generated was from fossil fuel (coal, natural gas, and petroleum), with 39% attributed from coal and 27% attributed to natural gas. Further, 19% are generated from nuclear power stations, which leaves just under 20% of total electricity generation to come from renewable sources such as solar, wind, hydropower and geothermal for example.

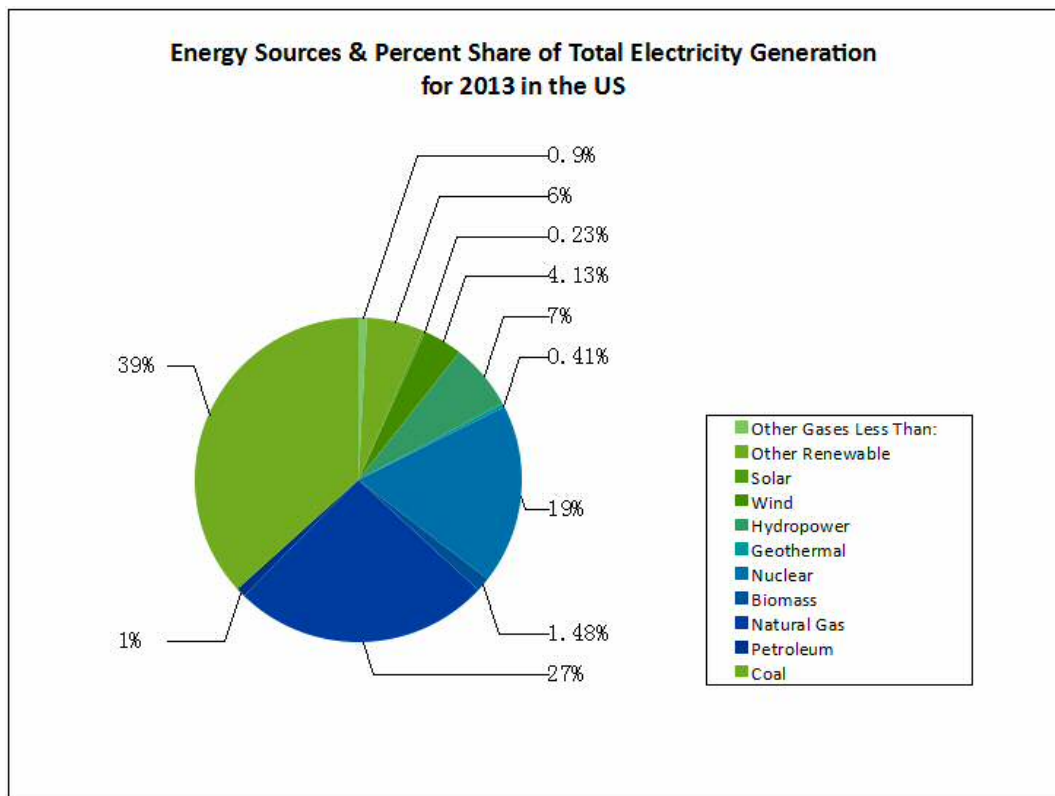


Figure 2 Energy Sources and Percent Share of Total Electricity Generation for 2013 in the US

Note* Data gathered from official eia.gov website

Historically, electricity generation has been on a steady increase since the 1980's; an increase meant to match the increasing energy demand. Energy demand has increased as the result of several factors. *First*, there is a growing population in the United States, resulting in that the increase in population equals an increase in energy demand. *Second*, new technological advancements provide an endless supply of electricity-needing-gadgets for every person, for every household. *Third*, with the drop in prices for technology, greater part of the population can now afford to buy these electricity-needing-gadgets thus also increasing energy consumption. *Fourth*, technology has become a way of life. From luxury, technology and electricity-needing-gadgets have become an everyday necessity. Ownership of technology has become the way to communicate, to declare social status, to connect, to survive in the world. The following graphs serve to illustrate the steady path of increase of installed capacity for energy generation, the actual generation and consumption. All of the graphs were downloaded from the US Energy Information Administration, which is the official website for energy-related queries for the United States.



Electricity (Billion Kilowatthours)		Previous Year				Latest Year
	History	United States	North America	World	Rank	United States
Net Generation		4,100.14	5,003	21,081	2	4,047.77
Net Consumption		3,886.40	4,635	18,501	1	3,882.60
Installed Capacity (GWe)		1,039.06	1,238	5,086	1	1,052.86

Figure 3: Summary of Electricity Generation, Consumptions and Installed Capacity for the US

Figure 3 is the summary of the three graphs below thus clearly showing them to have a similarly reflected increase signifying an increase in consumption, and by extension, an increase in dependency on energy use. The Net Generation graph includes fossil fuel generation, hydroelectric power, nuclear electric power, and geothermal, solar and wind, and wood and waste electric power generation. In the last 30 years, the net generation has almost doubled, but also the graph shows that there is a certain slowing of net electricity generation, which may be due to loss of resources or simply to reflect the same tendency in the Net Consumption.

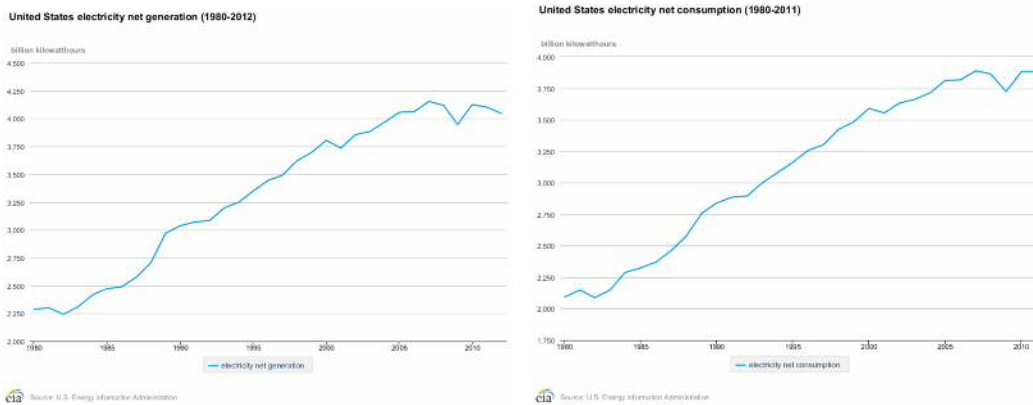


Figure 4 The Net Generation and Consumption Graphs for all of the US.³³

The Figure 4 graphs illustrate an increase of energy generation and consumption over the years. Increased consumption can lead to increased dependence, which if threatened, can lead to possible instability to a large portion of each person's everyday lifestyle. Therefore, this helps explain why if there is a power out, communities in the

³³ Note* Net Consumption is based on the following formula: Net Generation + Electricity Imports - Electricity Exports - Electricity Distribution Losses = Net Consumption

US may react stronger and are more likely to produce images of electricity then if there was a low energy consumption context.

Further to general statistics about the United States as a whole, there are existing statistics about individual states that reflect some of the studies that have been conducted by the government in those areas. The case studies of New Jersey and of New York are both attached in the Appendix (Appendix E) for further information, but will not be discussed further in the text as they bear no direct relevance to this research which focuses rather than on the reality of energy consumption and practice theory, on the images of energy and electricity people generate and what those images can tell us about people's realities.

Academic Studies of Hurricane Sandy: Methods and Topics

Despite Hurricane Sandy's impact and influence on forced images of electricity and modified communication patterns; there has been very little academic research. The lack of research is easily explained by two main factors: *first*, not enough time has passed since the event took place and *second*, not enough historical distance has been established that would allow for people to reflect further on their experiences.

The few studies that do exist are done from two variations of 'top down' perspectives, which are an institutional perspective with primarily quantitative (survey) data or first reaction academic response seminars, conferences and round table discussions. In both cases, the voice of the people has yet to emerge freely.

An example of such a top-down approach would be the work done at Ohio State University by Hongtao Yi and others at the School of Public Affairs. In part, this has occurred because Hurricane Sandy is a relatively recent occurrence. Similarly, it took years for researchers to be able to take a bottom-up approach after Hurricane Katrina.

Most notably a bottom-up project from Hurricane Katrina was the Pat Jasper and Carl Lindhal 'Surviving Katrina Project' in which the researchers went into the field to teach the participants how to collect data and how to conduct interviews. In that project, the data was then generated by the participants themselves in an attempt to generate this bottom-up approach. This study influenced greatly the first phase of my research for both of my case sites where I collected data generated by the participants themselves rather than by provoking responses as was the case in my Phase II of the research. Currently, Lindhal is studying the Haiti earthquake and will be some years before his attention could turn to Hurricane Sandy.

Specifically, in relation to Hurricane Sandy, there were several first response seminars and sessions in academic conferences. These were primarily discussions with no first hand-collected data, which aimed to explore research possibilities in relation to the event.³⁴ The discussions have led to the conception of several research projects that relate to Hurricane Sandy, but they will take many months to come to fruition due to the scale of these research topics as well as the resources needed for their completion.³⁵

Therefore, in summary, the few existing studies I have found are from a top-down perspective, or through the institutions and researcher generated data as oppose to a bottom-up approach, or from the people. Further, none of the existing studies that I have come across *first*, research the links between energy and electricity loss and Hurricane Sandy nor *second*, do they have data on the ‘bottom up’, or the people who have lived through Sandy and their perspectives – both of which are at the centre of this thesis.

"Forced" Images of Electricity and Modified Communicative Patterns

Hurricane Sandy provides only the context, the background, to the actual aim of this thesis, which is to study images of electricity. These images become prevalent in situations of turmoil, making it possible to study both people’s perceptions and how images of electricity are created and shared. In order for these images of electricity to be pushed to the surface, Sandy provided the platform in the post-turmoil arena, but both new methods of communication were developed and communities changed and emerged in new formations, which led to the employment of new dialogue techniques, mediums, and ideas that were transmitted.

Electricity is invisible and intangible leaving communication about electricity to occur through verbal or written expressions and/or visual representations including photographs and cinematic interpretations. The visual representations of electricity can occur ‘*naturally*’, gradually over time, or can be ‘*forced*’, as a result of shock, unusual experience or distress.³⁶ The two case studies selected for this thesis represent traumatic

³⁴ One of these sessions occurred at the 2013 American Folklore Society Annual Meeting where there were two roundtables:

Sandylore Part I: Cultural Knowledge as a resource for Response to Natural Disaster with Kay F Turner (chair), Deenps Bazile, Eileen Condon, Erzuli Guillaume, Christopher Mule and Puja Sahney as well as Sandylore Part II: Assessing the Damage and Recovery with Nancy Solomon (chair), Lisa Colburn, Molly Garfinkel, Ellen McHale and Tom Van Buren.

³⁵ The information was gathered in November 2014 at the next American Folklore Society Annual Meeting and as of early 2016; still no major Hurricane Sandy Projects have published any results.

³⁶ The study of ‘*naturally*’ forming visual representations is more challenging mostly because many of these images are not clearly shaped in the minds of the people who share them. Such a study involves longitudinal research and/or a series of in depth interviews.

events where images of electricity were ‘forced’ into existence. This chapter, of course, will focus on how Hurricane Sandy helped create these ‘forced’ images of electricity.

The ‘forced’ images are much more poignant and easy to identify in the time surrounding the event that triggered them. The development of modern technology allows researchers to gather and to preserve the abundant images ‘forced’ into existence surrounding a traumatic event in time, even if they were not present at the time. A proper analytical interpretation of them can often reveal meanings that are not even meant to be communicated when images are formed but become essential for understanding their influence on relaying feelings, relationships, and life-changing experiences.

For example, one of the spaces where electricity is used most frequently in everyday life is that of the *home* space. Hurricane Sandy fundamentally changed how the home space was experienced from a time period ranging from anything between a few hours to almost a year. To understand one must juxtapose the disruption to home life that Sandy caused to the long-term established image of what a home is. On the one hand, the idea of what constitutes a *home* has occurred over a period of time as the spatial organization of the home is negotiated due to factors such as convenience and power relations of the various family members. (Gregson and Lowe, 1995). On the other hand, traumatic events such as war or migratory processes can influence the image of the home and with it, the role of electricity within the home space. (Gardner, 1993; Langhamer, 2005). Therefore, what a home is, is already determined by long historical, economic, political social and cultural processes, which when disturbed by the turmoil event, in this case, Hurricane Sandy, challenged individuals to reflect on what a home is for them and particularly to this thesis, how electricity helps shape and preserve the idea of the home space as such.

However, any traumatic event that affected the home could be a useful case study, but Hurricane Sandy is a particularly unique one, which is why it was chosen. As the second costliest hurricane in the United States to date, it is also the hurricane that impacted the greatest number of homes. Due to the sheer magnitude of the storm many homes, businesses, public spaces and spaces in between were impacted.

The large scale of impact had several effects relevant for this study. *First*, it was at the third landfall that the impact was the greatest both in terms of lives lost, but also costs for reparations in the aftermath. This can be explained as Sandy did not become a ‘superstorm’ until after it had already made its second landfall in Cuba. In addition to the large scale of the impact, the last landfall site was chosen because as the third

landfall, the storm had been monitored for a few weeks already, which gave ample time for people to prepare unlike when the hurricane made its previous two landfalls. As part of those preparations, people also produced images of energy and electricity, which means that only in the last landfall site were there images of Sandy that were created pre-, during and post- the hurricane sweeping through. In contrast, the previous two landfalls had images of only during and post- the storm.

Second, the large scale of impact created the notion of a *no escape space*. Unlike Hurricane Katrina that even though very severe allowed people to flee the flooded areas, Hurricane Sandy spanned over most of the Eastern Seaboard and Canada. With flights grounded due to the storm and later Nor'easter snowstorms, roads blocked and lack of gas, Hurricane Sandy was perceived inescapable. This meant that people had to live with the abnormalities caused by the storm and find a new daily life and routine. Simply put, the storm was too big to outrun and once it made landfall, too big to run away from in the aftermath.

Finally, due to the scale of the impact, a very large community was formed that defined itself through the shared trauma caused by Sandy, but also the shared strength to help them recover. This community proved very useful because the people in it engaged in much communication (dialogues) with each other thus creating many images of electricity independent of third party prompts. These images emerged due to the effect of the storm on the community that forced it to reflect on energy consumption, need and individual perceptions as well as it provided a very large participant pool from which I could search for participants for my interviews that would later help me contextualize and interpret my findings.

Type of Data Collected for the Hurricane Sandy Case

Hurricane Sandy provides a context, but there are a variety of texts used in this context. On one hand there are image texts such as photographs and videos that can help capture and disseminate thoughts, feelings, and ideas as well as symbols and artistic expressions that can help interpret and represent social values. On the other hand, there are narratives (written or auditory, structured or not) texts that invoke images as well as other image texts, such as tone and movements that allude to a secondary or tertiary level of encoded meanings. In some sense, these texts can be perceived as the building blocks behind the construction of the social reality that resulted from Hurricane Sandy coming to the eastern seaboard of the United States.

The data used in this chapter comprises of a variety of these texts and was gathered in *two phases* in line with the research design. The *first phase* focuses on collecting online articles as well as photo and video galleries from two online news platforms—Cable News Network (CNN) and British Broadcasting Corporation (BBC). While the *second phase* consisted of a series of interviews collected eight months after the hurricane occurred. Both phases are equally weighted in this thesis and to achieve this, the focus was on the images with interviews as clarifications rather than a focus on interviews with illustrations. The following sections will expand on the interview questions used as well as any other criteria applied during data collection.

Phase I of Data Collection: Online News Platforms

Phase one data collection occurred prior, during and immediately after Hurricane Sandy made landfall. Phase one consists of gathering online news articles and video as well as photo galleries.

Online news articles and other visual data were chosen as opposed to print media for several main reasons. *First*, online data is easily assessable and can be gathered with relative ease even when the researcher is at a different geographical location or when wanting to study an otherwise potentially dangerous event such as a hurricane or other natural disaster. *Second*, rather than requesting the images of energy and electricity from participants in a controlled setting, which has its limitations due to the imposed control that limits and can potentially bias their responses; the online medium is a place where people volunteer these images and communicate feelings, emotions and ideas as they occur and in the way the participants want to communicate them. These communications employ a variety of texts, but also a variety of literary styles such as poems, biographical data or to do lists in the event of an emergency. *Third*, as people volunteer data they see fit, there is the potential that more people contribute to the overall data set than would be the case with print media where information is restricted both by the number of people involved as well as the physical constraints of the magazine or newspaper. *Fourth*, therefore, more data is published online on the topic due to the costs and speed involved as well as having the potential to reach a much larger audience relatively quickly across a greater geographical span than it is currently possible with print media. *Finally*, due to the impact of Hurricane Sandy, print media was severely disturbed in much of the affected area thus making print media an unreliable source of information. For example, two of the most prominent newspapers in New York City are the New Yorker and the New York Times. The New

Yorker had to skip an issue that was due on November 5th while the New York Times supposedly released print copies in a smaller print and with a much more localized distribution; I have yet to come across someone who has seen one of those copies. So, in addition to all ideological, convenience and other practical reasons stated this far, print media would not have been a possible choice as a data source due to its lack of existence at the time.

The online data on the other hand, as mentioned thus far, was in abundance. The data for this thesis was collected from two online news platforms—Cable News Network (CNN) and British Broadcasting Corporation (BBC). CNN was chosen as it was the largest American network, which covered the Hurricane Sandy disaster while BBC was arguably the largest network from the United Kingdom (E Biz MBA 2013, Net Top 20 2013). The study of the two networks allows for a comparison of the presentation of the data both visually and with regard to the content of each news platform. An analysis of the CNN articles can be used to demonstrate the perceptions of the hurricane within the society being studied while the BBC articles can be used to illustrate the interpretation of these perceptions through the analytical lens of another culture.

For this study, 1,146 articles from CNN online news were gathered between the dates October 20 to December 20, as well as 319 Articles from BBC online news from the same time period. From these articles, 82 from CNN and 20 from BBC were stratified by having the words ‘electricity + Sandy’. These 102 articles represent the sample directly relating to ‘electricity’ used in this thesis. However, any of the other articles that commented on ‘power cuts’ or ‘loss of energy’ were also added in the sample. In the CNN articles, 365 photos were recovered with 120 in the BBC articles, in addition to about 30 videos containing life stories and biographical data. In other words, the articles selected include written, orally delivered and/or visual components. The texts have been coded using Word Excel until stratified themes emerged as presented at a later stage. The images have been partially coded using the computer-assisted qualitative data analysis software Compendium while the video footage was analyzed without the use of software programs due to the nature of the material.

Table 2: Summary of Online Data Gathered for Phase I of the Research

News Platform	CNN	BBC
All Online Articles	1146	319
Inc. 'Electricity' + 'Sandy'	82	20
Photograph Data	365	120
Video Material	30	N/A

Phase II of Data Collection: Interviews

Phase two data collection occurred eight months after the hurricane when a series of semi-structured interviews were conducted. The interviews, as mentioned in the methodology chapter, were structured in four parts – biographical narrative section, semi-structured energy and electricity focused section, photo prompt section as well as word association section. The biographical section was open-ended, prompting the speaker to recount his or her experiences of the storm, of the preparation, of the aftermath, of any stories heard or of any signs, symbols or messages that can be recollected or anything else the speaker may deem relevant. The semi-structured section of energy and electricity elicited responses concerning various forms of renewables, coal and nuclear and their symbolic associations as well as topics such as climate change and global warming. This section also asked questions regarding consumption of energy in everyday life and the individual perceptions of electricity. The photo prompt section showed a series of photos that are attached in the Appendices (D, D1 and D2) along with the interview questions (Appendix C), which were also split into two sub-sections. The first of these included images from before, during, and after the hurricane with a focus on images featuring electricity while the second contained a series of images to represent various forms of energy – solar, wind, coal, nuclear, hydro – as well as an artistic representation of electricity. The final of the four interview sections was comprised of a word association game that featured the topics raised or additionally mentioned by the participant during the interview.

The sample of participants was selected first geographically and then by social situation, age, employment and role during and in the aftermath of the hurricane. The aim was to represent an array of experiences of the storm that was as wide as possible given the resources available and within the time constraints which were a) imposed by the limitations of the Ph.D. project as such and b) introduced by the sensitivity that the longer time passes after the storm, the more people will forget details surrounding the

storm and their experiences as related. Therefore, the samples selected are rich response samples. The following map illustrates the places where the interviews took place. Geographically, there are eight case sights where interviews were conducted that are indicated by the red dots on the map below, with normally two or three interviews per geographical location.



Figure 5: Map of the state of New Jersey (and parts of Pennsylvania, New York, and Delaware)

Note *: The 8 geographical locations where the interviews took place are indicated by a red dot in a black circle.

The age of the participants also varies, ranging from 13 to 80, as do their occupations. Some are teachers, some are business owners, some are in the military services, and some are home employed. They also experienced the storm in different

ways. Some were simply observers, some were displaced, some were stranded, some were in shelters as well as some that were actively involved in particular services such as those in the military, health, and energy-related ones, and electricity technicians and relief organizers. The following chart presents a summary of the occupation and/or description of the interviewee as well as in which particular city the interview was conducted.

Table 3: Summary of Interviews Data Gathered for Phase II of the Research

Interviewee	Occupation/Description	Geographical Location
1	Business Owner	Seaside Heights (N-NJ)
2	Retired	Seaside Heights (N-NJ)
3	Teacher	Ortley Beach (N-NJ)
4	Child-Shelter	(N-NJ)
5	Adult-Shelter	(N-NJ)
6	Air Force	Collingswood (inner NJ)
7	Care Worker	Collingswood (inner NJ)
8	Comcast Technician	Mantua (inner NJ)
9	Police	Ocean City (S NJ)
10	Blankets for Brigantine	Brigantine (S NJ)
11	Teacher-Stranded	New York City
12	Chemistry Lab Technician	Pennsylvania
and also some partial ones:		
13	Journalist - video mostly	Mantua (inner NJ)
14	Coast Guard - no audio	Ocean City (S NJ)
15	Business Owner - 5 min only	Ocean City (S NJ)
16	Amateur Reporter - online	Ocean City (S NJ)
17	PCEG Rep - writing only	New Jersey

Further to the twelve main interviews, there are five more that are ‘partial’ interviews. They are referred to as ‘partial’ because while the original twelve interviews are recorded with an audio recording device, and some also with video, these five interviews are each missing something. The journalist gave me a very short verbal

interview, which is only recorded on video because the journalist wanted to focus on showing me the types of preparations done ahead of the hurricane. The coast guard member did not want to be recorded with audio but allowed me to take extensive notes of our interview. The business owner from Ocean City could only spare 5 min, but did not mind if I got straight to the point and asked some of my core questions directly. The amateur reporter gave me access to all materials the reporter was posting during the storm online. The PCEG Company Representative declined a face-to-face interview, but instead the representative sent all responses in written form.

A final note about the logistics of where these interviews were conducted and why. The interviews with most of the participants in the sample were completed in the place where they experienced the storm, which would be either in their homes or place of business. However, for those who were in a shelter or stranded, the conditions of their experience would be difficult to replicate and in some cases, dangerous, so the interviews took place in their home or in public.

*Summary Chart of Data Collected For Case I Hurricane Sandy***Table 4: Summary of Online and Interviews Data Gathered for Phase I and Phase II of the Research**

Phase I		
News Platform	CNN	BBC
Overall Articles Collected	1146	319
Inc. 'Electricity' + 'Sandy'	82	20
Photograph Data	365	120
Video Material	30	N/A
Phase II		
Interviewee	Occupation/Description	Geographical Location
1	Business Owner	Seaside Heights (N-NJ)
2	Retired	Seaside Heights (N-NJ)
3	Teacher	Ortley Beach (N-NJ)
4	Child-Shelter	(N-NJ)
5	Adult-Shelter	(N-NJ)
6	Airforce	Collingswood (inner NJ)
7	Carer	Collingswood (inner NJ)
8	Comcast Technician	Mantua (inner NJ)
9	Police	Ocean City (S NJ)
10	Blankets for Brigantine	Brigantine (S NJ)
11	Teacher-Stranded	New York City
12	Chemistry Lab Technician	Pennsylvania
and also some partial ones:		
13	Journalist-video mostly	Mantua (inner NJ)
14	Coast Guard - no audio	Ocean City (S NJ)
15	Business Owner - 5 min only	Ocean City (S NJ)
16	Amateur Reporter - online	Ocean City (S NJ)
17	PCEG Rep - writing only	New Jersey

Data Systematization Summary: Thematic Presentation and Discussion

Concerning the content of this data, the messages conveyed through the various types of texts that were exchanged by the people affected by Sandy are associated with several major themes and sub-themes, which will be explored in the discussion sections of this chapter. However, it must be noted that even though the various themes permeate through most types of texts, some themes are more accented in some texts than in others. This is a reflection of the specific material used to build every text type - words and sentences, still photographs, moving images or a combination of any two or three of them. For example, many of the videos focused on individual life stories, while many of the photos focused on space alteration and destruction. Due to space and presentation of the thesis, many of the specific examples for each theme are provided in the appendices and full videos are attached on a DVD at the back of the thesis. In the main body of the thesis, the themes are presented only to the extent to which to allow for the building of the semiotic analysis of the empirical material further in the thesis.

Phase I Data: Major Themes in Online News, Articles, and Visual Materials

The Phase I data includes the online articles and photographs that were collected from CNN and BBC. Online news articles have several main components. *First*, there are the headlines that bring the reader's attention to the article, so they tend to be catchy and short while using the words that are believed to create the biggest impact on the reader. *Second*, there is the main body of text of the article. *Third*, there are photos used to illustrate a story as well as photo galleries that aim to portray a certain narrative. *Fourth*, there are videos and other interactive links such as connections to further information or other stories as well as highlights. That is why it must be noted that the online news medium is an interactive one that is comprised of various types of text and thus quite fluid. Therefore, the analysis completed of this fluid data is based on how as a reader, I interpret the information I see on each website at the time viewed. As this approach has an inherent bias because my understanding of the situation as an observer of these articles is very different to someone who has actually lived it, Phase II data collection or interviews with people who have lived through Sandy, was seen as absolutely crucial in order to balance out any existing bias that could have been caused within my analysis.³⁷

³⁷ In any work that is interpretative, there is an inevitable lack of objectivity; however, this lack of objectivity does not necessarily lead to bias provided there is an acknowledgement that in all research one's knowledge is partial and situated. This view exists within the epistemological frame of this thesis,

'Trust,' 'Intimidation,' 'Fear,' 'Power,' 'Loss,' 'Measure of Life'

The data from the online platforms revealed several main themes; for more information and specific examples of each theme, please see Appendix F1. The themes of 'trust', 'intimidation', and 'fear' were prominent in the headlines, which could be accounted for due to the headline's role of attention grabber of the reader. All three of these themes can lead the reader to get engaged with the text as fear and intimidation can induce panic, thus the necessity to read the article in order to alleviate that panic, or the trust can create a bond that would also lead the reader to read the news article. The body of text of the news articles focused on the consequences of power loss that include physical impact, dependency, structural divisions of society and the notion of the 'norm'.

The photos embedded in articles served primarily as visual presentations of the major themes in the body and headlines of the text, which the photo stories and photo galleries focused on the themes of understanding the power of power. The photo galleries were abundant with images constituting of the themes of warning, danger and dependency as well as various dichotomies. Further, specifically in the photos that were taken after Hurricane Sandy made landfall, the prevalent themes were those of memories, power and expectations and what role electricity plays in bringing them about or taking them away.

In addition to the printed visual and textual data, the online platforms included spoken word data in the forms of *video news*, where a journalist reports the event, *video life stories*, where people would tell how Sandy affected them personally, and *documentary footage* of what happened. The following example comes from the video life story category that contained primarily personal narratives that recounted the role of electricity as a measure of life and living standards.

EXAMPLE 1: 'Electricity as a Measure of Life'

Electricity as a measure of life often permeated biographical narratives of the experiences and challenges an individual or a community faced as a result of the destructive power of the hurricane. In these video life stories, an individual tells their own story to the camera often accompanied by footage of the place that has been transformed by the disaster. An example is Bill's Story (BBC News) where William

cultural constructivism, which assumes that both knowledge and reality are associated with the cultural context within which they exist, meaning that the knowledge and reality of this thesis will be interpretative regardless of the research design. Having Phase II of the interviews, does not diminish the interpretative capacity of the analysis in Phase I, but rather, allows me to reflect and complicate the matter in relation to my own epistemological argument, by opening my analysis for re evaluation by the participants during the interview process.

[Bill] Carroll tells of his life at the Jersey Shore community of Ortley Beach for the last 50 or so years. The language and gestures show Bill to be an ordinary, average citizen of the United States. There are no class or social status indications, thus allowing for his story to be relevant to all who view it. Here is more detail from the example:

Bill refused to evacuate, so when the storm came, and his house dropped a couple of feet, he managed to flee safely to a neighbor's home. The video follows Bill upon his return at the house, which is so badly damaged and a danger to those around that it must be demolished. Bill has been given some time to decide what he would like to take with him. So he says:

“You want to take everything, but you can't... you know... you.. you are limited in what you can leave with [...] all the [power] tools Johnny, I want everything...anything you can save I want to save, anything possible.” - said as he carries a small mownlower out of a room

The quote illustrates how when it came down to the final choice, the priority was given to the power tools. For him, those electrical tools are needed for the building of a new life elsewhere. He does also take a few frames and memorabilia, but he does not seem concerned that memories stored in items such as chairs, tables or other, would be lost. His greatest worry comes across as to how to take out the washing machine since the doors are shut. These concerns of Bill illustrate the power of electricity items in this man's life. They are more than possessions; they are extensions of his self-identity.

One final note concerning the online empirical materials: there was a slight difference between the CNN and BBC data. The CNN data was much more emotional and full of personalized narratives, while the BBC data appeared to be written in an 'objective' or 'matter of fact' style. The BBC style arguably was used to inform the reader about the specifics of the hurricane while the only emotional narratives were about British citizens being unable to go home due to cancelled flights.³⁸ This would explain why most of the video life stories I collected came from the CNN websites. The CNN data also focused on the idea of returning to the 'norm' or energy consumption available before the storm, where this norm is defined as within the US cultural context of progress and development as connected to electricity use. The BBC data, on the other hand, remained neutral in the aftermath, instead focusing on the practicalities of

³⁸ The CNN data was characterized by the use of more adjectives and descriptors that are associated with emotions such as fear, terror, despair. The BBC data was characterized by listing of data with the appearance of little journalistic involvement and void of emotion.

the relief efforts and rebuilding and the theme of the 'return to the norm' was not addressed.

Phase II Data: Major Themes in Interviews

The Phase II data includes the interviews with 17 people who have lived through Sandy, which were conducted eight months after the event. The structure of the interviews as presented previously in detail (pp 45-48) followed, *first*, the biographical recollection of the event. *Second*, the participant's views on energy and electricity were discussed. *Third*, photo prompt followed by *finally*, word associations were used to provoke further discussion. For a list of guidance questions for each interview along with particular examples that illustrate the themes, please refer to Appendix C.

'Electricity-Dependence,' 'Re-Imagining the Self,' 'Community,' 'Home'

In the interview data there were many themes that overlapped with those of the online news data and some which did not. The personal accounts of the participants focused on how and what they heard about the hurricane and how that knowledge impacted their preparation and/or evacuation plans. Their major concerns were possible flooding or power cuts. In the aftermath, energy loss created mismatching narratives between some of the participants and the energy company as well as having much more widespread infrastructural repercussions. An example of such a mismatching narrative is illustrated below.

EXAMPLE 2: 'Loss of Power During Hurricane Sandy'

Even with the prepared flashlights and generators, there were many power problems that occurred post-Hurricane Sandy. *Firstly*, people were not prepared for prolonged periods without electricity. *Secondly*, those with generators frequently placed them in the basement where they were flooded, or in the attic where they were more difficult to access and refill.³⁹ *Thirdly*, due to insufficient storage, gasoline shortages rapidly emerged.⁴⁰ *Finally*, exploding transformers and downed power lines made the area much more dangerous.

The perception of how the situation of the power problems was handled was very different according to my participants. Some believed that the electric companies were very helpful, and some believed that they were being taken advantage of. For

³⁹ Bucket Brigade stories will be explored in depth in Semiotic analysis chapter

⁴⁰ Not many were prepared with enough gasoline for weeks, so soon the queues starting forming at gas stations, which were in low supply due to both transport infrastructure problems that prevented the gasoline moving trucks to arrive at the stations as well as by the increased demand.

example, one of the participants from Ocean City, who is with Atlantic City Electric (ACE) provider, stated that:

“The electricity ... the electric company was working on it for days, I mean they were working endlessly to get the electricity back on for everybody in town ... um ... mine wasn't out very long cause I live right next to the police station so ... its lucky for me ... um ... cause that's the first thing to go back on.” (Participant Citation).

The participant then further stated that the company seemed to be very diligent and working hard to return energy supplies to the ‘norm’ that existed prior to the storm. The participant then concluded by categorizing the energy company representatives as “wonderful, wonderful people.” (Participant Citation).

Other participants defined their relationship with the electricity company as “bureaucratic bullshit”.(Participant Citation). The next narrative is also from a participant living in Ocean City who had the same energy provider (ACE), and it shows a very different perspective. “You called one person, they said one thing, [...] And then you'd call again, they'd say another thing.” (Participant Citation).⁴¹ At the time, the participant did not have an alternative energy source, but as a result of being told different things by the energy company and their taking of two weeks to fix the problem had forced the participant to consider getting a generator for the future.

The two alternative narratives from two of the participants from Ocean City help illustrate the two main attitudes people felt toward their energy company after the hurricane. None of the participants were ambivalent; they either praised or slandered the energy companies and their reaction post-Sandy. Additionally, the choice of these two particular opinions, of two people from the same city, Ocean City in the example, who share the same energy provider (ACE), also helps illustrate how even within the same area and with the same energy provider, the opinions may differ from person to person.

The participants can provide contradictory opinions but in doing so this ultimately represents only one of the narratives; the other belongs to the energy providers. I interviewed someone from ACE in order to see how they perceived the situation after Sandy.

⁴¹ As the participant described it further, the first time the participant contacted the company, a representative explained that they do not have the proper parts to restore power to his block. The second time the participant contacted the company; they were told that their residence is lower on their list of priority homes.

ACE had a similar experience to its customers regarding preparations. As they are responsible for approximately 545,000 customers across eight counties in southern New Jersey⁴²; ACE engaged in extensive preparations prior the oncoming of the hurricane. *Firstly*, ACE had an *Incident Response Plan*, or the “mobilizing employees, securing utility contractors working on the system, making calls for out-of-state utility assistance, checking material inventories, identifying staging areas, reserving hotel rooms for incoming crews, and retaining additional call center support.” (Participant Citation). *Secondly*, ACE attempted to open communications outside of its standard operating ones that included the making of automated calls to more than 320 customers who are registered in the company’s emergency medical equipment program prior the storm making landfall. *Thirdly*, the company also contacted other customers who were not part of the emergency medical equipment program with encouragements of preparation, and after the storm hit, with news regarding the prolonged restoration. These contacts occurred via various platforms including automated calls, social media, and website as well as the clean-up crews who would arrive at the last stage to already fix the problem⁴³. *Finally*, ACE senior executives also contacted government official daily to both provide updates as well as address any comments and concerns the officials or the constituents might have.

None of the participants were contacted by ACE prior to Sandy, so the initial start of the dialogue was always from the customer side. It was only after the customers contacted the company that opinions divide as to how the company responded or as was stated earlier – bureaucratic bullshit vs. wonderful, helpful people. Additionally, the participants were unaware of any preparatory suggestions the company had offered prior the hurricane, or any updates post-Sandy.

To provide an example of specific problematic regarding the restoration of the energy supply – the time it took for the energy provider to return the electricity service. According to some of the participants quoted earlier, the company was helpful and restored power quickly, but according to others, they were left without power for two (or more) weeks. According to the ACE data, the most power outages at once occurred in approximately 220,000 homes, to which “Atlantic City Electric was able to restore power to all customers whose homes could safely accept service within one week of the onset of the storm.” (Participant Citation). This statement clearly differs from some of the experiences people communicated to me after the storm in the interviews. Both this

⁴² Burlington, Camden, Atlantic, Cape May, Cumberland, Gloucester, Salem and Ocean counties

⁴³ For more information, please see Haddow and Haddow (2013)

example and the prior differing opinions on communication illustrate how different perceptions the energy company representatives had in some cases of their own connection and influence over the customers. These differing narratives also point to a disconnection between the energy providers and the customers, a disconnection that is explored further in the later analysis chapters.

General Images of Electricity: 'Exotic and Unknown, Powerful and Hidden'

The perspectives of the participants regarding energy and electricity were not so much changed as they were brought to the foreground because of Sandy. These perspectives were communicated through narratives as in the examples 1 and 2, but also through the use of a variety of visual texts such as photos and video materials. Example 3 shows a part of the data that was generated using photo elicitation during the interview process. The photos shown to the participants in this section are part of the visual empirical material sample that is also analyzed further in later chapters.

EXAMPLE 3: Photographic Representations of General Images of Electricity

The photos used in the interview to prompt discussion around general knowledge and perceptions of electricity were six in total. There were three photos that represented renewable technologies – one for solar, one for hydro and one for wind. There were further two photographs about nuclear and coal respectively and one artistic rendering of electricity.

The first of photo (Figure 6) showed solar panels on a roof.



Figure 6: Solar Panels on a Roof⁴⁴

Most participants knew nothing about the technology and would frequently just glance over the photographs identifying what was on them. As one participant explained it:

⁴⁴ The photos included in figure 16 to figure 19 were located on copyright free search photo engines located using google search; accessed early 2013.

“Yeah and I know that solar panels and they're not... There is people... A lot more people are getting them around here, but it's still not a priority right now people are just trying to get their lives back together not be homeless any more people are trying to get back to their homes [...] No the electric... There is a lot more to do at your house when your house... When your house is gone it is not just the electric ...no... its everything” (Participant Citation).

In other words, when your home is gone all you can think about is getting it back; but when you get it back, type of energy or electricity is not a priority – it is just there. When electricity is lost, all people want is to return it to how it was. When your home is lost, what you want is your home, the idea of a home – the four walls, the door, the warmth, the lights, the safety, the security, the comfort. Even though the notion of a home clearly involves electricity, electricity seems to fall in the background. Electricity is the background noise to a comfortable life so as long as it is there, people live in their comforts and do not bring forth ideas about where energy comes from, environmental impact or how to reduce consumption.

The photo of hydro energy elicited similar reactions to the solar with the added difference that many didn't know how water could make energy or if it is reliable. As one participant stated, “if it can be done, awesome, [...] if the government grants funding for it then that would be great. But I don't think that will happen.” (Participant Citation).



Figure 7: Hydro Energy Generator Facility

The wind and nuclear photos evoked no further comments apart from recognition while the coal image seemed to remind participants of a barbecue.⁴⁵ For others, coal was a reminder of a fireplace, the heart, the center of the home. This brought forth a sense of luxury and comfort.



Figure 8: Representations of Wind, Nuclear, and Coal Energy Technologies

The final photo, which is an artistic representation of energy titled ‘The Power of Electricity’ provoked quite diverse reactions.



Figure 9: An Artistic Rendering of Electricity titled 'The Power of Electricity'

⁴⁵ Coal Quote: “Looks like a barbecue to me.”

Some saw it as an illustration of 'raw energy.' 'Raw energy' according to one of the participants is stronger than harnessed energy because "a lightning bolt supposedly contains ... 500 000 kilowatts of electricity." (Participant Citation). When asked about further distinction between raw and harnessed, the participant argued that raw is natural, while harnessed is man controlled. For others, the energy depicted was what one would see in a light bulb when it is on or a spark when you touch the light switch and it is not connecting properly. All participants found the image very exciting and interesting, as for example, as stated: "Yeah it looks like yeah, I mean it looks like You know a little bit like when you look at the light bulb, and you know, and it lights up in the middle? [...] So I mean, I guess electricity, energy ... all the basic things like that. Its pretty cool though!" (Participant Citation).

What all six photos serve to show is that there was an evident knowledge gap about energy in general, but also alienation from renewables as foreign and exotic. As many of the participants commented, the knowledge gap is explained with the idea that renewables are not publicly discussed on the East Coast of the US as much as other forms of energy.

Despite the knowledge gap, the photo section of the interviews brought forth the themes of 'dependence', definitions of the 'self', 'community' and 'home' through energy consumption as well as that energy is 'dangerous', 'hidden', 'irreplaceable'. When the participants lost energy, many of them felt as though they had lost a part of themselves, their home, and their reality. For more specific examples, please see Appendix F1.

In summary, the data shows that there are images of electricity that are related to themes beyond electricity use and practices. Electricity is seen to connect to emotions such as fear and angst in addition to feelings of safety, security and comfort. Electricity is linked to notions of self, place and space identities despite the knowledge gap of the understanding of how electricity and energy systems work. Electricity is perceived as a measure of life, and the loss of power can affect individuals greatly, but also the same loss of power can free them from the impositions technology and the distractions it provides and bring about family cohesion and pre-technological simplicity. These dualities of dependence and freedom, progress and hindrance, lack of understanding but necessitating, are what make the images of electricity so elusive and difficult to define.

Data Discussion

Having thus presented the emerging themes in both phases of the research, the following sections will follow from presentation and into discussion. The discussion will attempt to engage the themes that emerged from the data to more abstract concepts that they reflect on. Therefore, this discussion will serve to highlight some of the concepts that emerged from the data and their significance in order to set the stage for the later chapters of this thesis that will further engage with the existing data. The following sections explore the *structure, space and hope* concepts.

Sandy Power Outs and Effects on Structures

During Sandy, there are four main thematically defined structures surrounding images of electricity, namely the *Political, Economic, Social* and *Cultural* ones.

Structures can be defined as organized social realities, governed by a series of rules that create the margins of the reality, and yet, without having a strict, static form. (van Dijk 2013). In a sense, structures are images of reality created by specific guidelines, which are construed through various use of communication methods. Therefore, these realities can be stratified thematically (ex. topic), demographically (ex. gender, age, individual vs. group) or purposefully (ex. a mixture of thematic and demographic structures). The four social realities in this section are thematically identified as the political, economic, social and cultural ones. These realities help identify the contexts pre-, during and post- Sandy in which most images of electricity were created and communicated about.

The *Political Structures* are evident through three main aspects – the election proceedings, the role of politicians, and the government organized response to Sandy. The elections were disrupted by the lack of power since most voting stations are powered by electricity. This was especially well illustrated in photos where the poll organizers use flashlights to light the way for people to sign paper copies of the ballots. The politicians who were already occupying government positions used Sandy as an excuse to solidify their positions, so there was much accent on concern for the victims of Sandy. An example is the following quote: “Buildings on the shoreline are pictured from Air Force One as it prepares to land in Atlantic City, New Jersey, carrying President Barack Obama, who visited areas hardest hit by the unprecedented storm.” The concern and priority of the victims was so great that it warranted the president himself to survey both from above as well as within the situation. This concern, some have argued, were what secured Obama’s second presidency in a presidential race that

before Sandy was too close to call. Further, the government officials showed their concern through personally participating in relief efforts, providing electricity generators to power areas that suffered the most, especially in Manhattan as well as proposing the Sandy Aid Relief Bill.

The *Economic Structures* became clear over concerns of cost, (*who pays, how much and to whom*), brought on by the Sandy Aid Relief Bill, the inability of the stock exchange to function for a couple of days due to loss of power and the various relief/response efforts. Unfortunately, rather than solidifying economic structures, the lack of electricity during Sandy destabilized them. The inefficiency of the relief efforts such as lack of proper communication, or slow response such as the one in relation to both the fire that destroyed 100 homes in Queens as well as the gas shortage resulted in mistrust in both political organization and the stability of the economy.

Social Structures were created in an attempt to establish communications and to respond to those that needed the most help after the power shortage. Organizations such as the Red Cross, the police, and the Marine Corps helped organize relief efforts that were community-based. The need for community spirit became evident and volunteers helped with food/ barbecues, clothes/blankets, clean debris, provide shelter as well as provide ports for charging electrical equipment. As an example, please refer to Figure 10 that illustrates cooperation and sharing of ports for charging electrical equipment.



Figure 10: Photo Obtained from CNN Online Galleries; Photo Copyright John Swords

On a social level, there was a newfound bonding over the American identity. American flags were placed on houses to recall characteristics such as strength, resilience and compassion, which will enable the victims to survive the Sandy ordeal just as the survivors of Katrina have.

Through these socially based efforts, the *Cultural Structures* were further solidified with the bridging of communities over the trauma from Sandy. Relationships with neighbors experiencing the same ordeal seemed to eliminate most of the cultural differences and created stronger senses of neighborhood and local community. These newfound community bonds can be seen in the transformation of the meaning of spaces, the sense of places, the shift from national to regional culture as well as the strengthening of the neighborhood community culture identity. This can be seen through the shared help offered regionally that created a sense of shared local cultural identity regardless if someone was affected by the disaster or not. The following section will expand on some of these themes focusing on the energy and imagining of spaces within the neighborhood communities.

Energy and Imagining Spaces

In addition to imagining a variety of structures, Sandy forced people to re-imagine *spaces*. Images of electricity after Sandy inspired a new way of relating to the *home space* and *the urban space* as well as a new way of defining the *spaces in between* where the familiar was made unfamiliar.

The *home space* is a space that is very much defined by electricity consumption. People use electricity for *survival* (for example, heat or security), and also, for *comfort* (for example, the usage of a variety of electrical appliances that help them free time for leisure activities or that can produce light or alternate living environments). Electricity has enabled the home space to be associated with independence, despite the energy dependence needed for this independence to occur. The feeling of independence, relaxation and safety are possible because electricity consumption has become a taken for granted part of daily routines. Electricity consumption has become internalized, and even the physical home space is construed in such a way as to hide the wiring that enables this consumption to take place. For many, energy is only evident in daily practices or from the holes in the wall that allow for appliances to work.

Sandy challenged the definable home space by forcibly making the unseen components needed for the daily routines of energy use, seen. An example is the following photo (please see photo below) from New York of a building whose façade was completely stripped off as a result of the high hurricane winds of about 135kph.



Figure 11: Photo Obtained from BBC Online Galleries; Photo Copyright Getty

This photo depicts the electrical wiring, which normally is hidden, now exposed to the naked eye. This photo challenges the viewer to ask questions otherwise left ignored such as: "*where does my electricity come from*" and "*what would it mean for me to live without it*". The shock of the photo is brought on by the visualization of the devouring power of the hurricane. The strong winds caused a disruption to daily energy consumption routines by severing the power lines and by enabling of challenges to fundamental meanings of *home*. Associations of *home* with concepts such as safety, security and special structure are significantly shaken when observing an image showing the inner home space exposed and open to the gaze of the outside world.

The exposure of the unseen to be seen is also evident in the spaces outside of the home, or *the spaces in between*, as well as the fascination that this exposure brings. The following quote and photo will serve as an example of this phenomenon from outside of the home space.



Figure 12: Photo Obtained from CNN Online Galleries; Photo Copyright Getty

“The inside of a gas pump is exposed at a closed station that was recently under floodwater on Thursday, November 1, in Hoboken, New Jersey. Superstorm Sandy, which made landfall along the New Jersey shore, has left the state with a fuel shortage due to logistical problems and power failures.”

-Original Description of Image

The picture shows the inside of a gas pump, whose walls have also been stripped by the high winds. The gas pump is an object that is also embedded in daily routine, albeit without the added symbolism of ownership, safety, and identity that are otherwise associated with the home space. In addition to challenging the viewer’s perception of these objects, the examples of the stripped house and of the gas pump both invite further interpretation by showing disruptions to daily routine and inviting questions as to the effects these disruptions might have.

In theory, these observations link to notions of the *uncanny*, or the border between the familiar and unfamiliar. The following photo is an illustrative one, captured by CNN iReporter Jordan Shapiro, of the Williamsburg Bridge. The photo shows Manhattan on one side in darkness, connecting through the bridge to the well-lit Brooklyn.



Figure 13: Photo Obtained from CNN Online Galleries; Photo Copyright Jordan Shapiro

This bridge illustrates the transformation from the familiar or well-lit skylines to the unfamiliar or darkened version of a New York burrow. Disasters and other moments of turmoil, such as Hurricane Sandy, can infer even normal, familiar objects, to become strange, and unfamiliar. What is interesting and evident in this photo, however, is that this unfamiliarity is caused by the lack of electricity on the part of the bridge and in the one burrow, and not by the devastation due to the storm, such as wind or water damage.

The existence of a void between the familiar and unfamiliar is not necessarily a negative one. For example, one of the descriptions of the effect Sandy had on New York City is that of a post-civilization feeling due to the lack of electricity. This feeling is shown through many photographs, but more so in the ones depicting Halloween celebrations. Halloween, or All Hallows' Eve, is a night when children and adults dress as monsters and fairytale characters and engage in a ritual known as 'Trick or Treat', which, in modern times, means children walking from door to door in their neighborhoods, calling out the people with the words *trick* or *treat* and receiving candy. The decorations people use to alter their home and public spaces to invite the Halloween holiday spirit in involve objects such as fake skeletons, witches or zombies along with the more traditional carved pumpkins, straw figures and corn arrangements. These objects aim to create the familiar spaces into unfamiliar and threatening ones because Halloween is one night out of the year when it is acceptable to attempt to scare even strangers. Since Sandy made landfall and reeked devastation two days before Halloween, the storm inadvertently set the perfect post-apocalyptic scene for Halloween to take place. Even if that thought is quite grim, Sandy did enhance the holiday spirit for both children and adults in the affected areas thus allowing through laughter for the transformation of the event into one that brought despair, to one that there might be hope of overcoming.

Hope or the Light at the End of the Tunnel

Halloween was not the only time when people imagined hope. Hope was given through *people heroes*, *divine intervention*, and *artistic expressions* as well as *through having the time to heal*.

There were many people who became heroes – volunteers, professionals or people who were at the right time and in the right place. Firefighters, policeman, Marine Corps and health services are only some of the professionals who sometimes put their lives on the line in order to help those who needed it. Volunteers also helped neighbors or sometimes even traveling to other communities. Specifically, in relation to electricity, do-it-yourself poles and electrical wiring support were erected by people in order to provide a short-term solution to the power outage wherever and whenever possible.

Sandy was also seen by some of the respondents as "proof of God's existence." Some perceived Sandy as the force of nature or a divine intervention into our lives and our consumerist behavior, while for others God became evident during the electrical fire

that resulted in the destruction of 100 homes in Queens when only the following statue of Mary was left standing in parts of the wreckage.



Figure 14: Photo Obtained from CNN Online Galleries; Photo Copyright Getty

As the result of surviving the electrical fire, this statue which is the symbolic representation of the Mother of Christ was infused with additional connotative meanings associated with the role of Virgin Mary as guardian, protector. The statue became a symbol of hope, of survival in disastrous times thus reviving memories of past miracles performed by the Virgin Mother of God during battles or natural disasters centuries ago in Europe. The survival of the statue (perceived as a miracle in itself) was equaled to the survival of the people in the current disaster and provided for a sense of security and protection for all members of the Christian community.

It was interesting to observe how artworks were re-interpreted in the Sandy context, but also how new art pieces were created to reflect feelings and emotions relevant to the situation caused by the hurricane. A variety of mediums were utilized into artistic expressions of fear, damage and a sense of loss as well as compassion and hope for renewal of "our" life, home or neighborhood. Only a few weeks after the landfall of the hurricane school projects began to involve creation of Sandy memorials that included a variety of artworks from drawings and paintings to found-object art, sculptures, stories and poems. Many of the sculptures were created with materials found in the wreckages along the New Jersey shore. Others used fallen trees as a reference to the power of nature. Some in-school residencies involving traditional artists changed their plans in order to incorporate the Sandy events. For example, Eagleswood Elementary School in Ocean County chose to focus their work with the basket weaver Mary May on "Friendship Baskets" to commemorate community unity during the Sandy crisis.

In other words, introspection and reflection over the events were widely achieved through the use of the artistic lens. Another example would be the numerous photographs of people photographing objects or locations that were devastated by Sandy such as the roller-coaster on the Jersey Shore or various sites in New York City. Many of these reflexive photographs had artistic qualities that allowed people not only to ‘see’ the situation more clearly but to also convey powerful messages of re-interpreted concepts and emotion, thus allowing a glimmer of hope of improvement, before paving the path to recovery. (Pirgova 2013).

Summary

Hurricane Sandy was a terrible event for the East Coast of the United States not only because the loss of life was high but because of the drastic disruption to daily routines and practices. The loss of electricity influenced people to face their perceptions in relation to political, economic, social and cultural structures and to establish more clearly where these structures are insufficient or in need for change. Additionally, people were challenged with their perspectives of the home, urban and in-between spaces as was the case in my sample. The change of familiar spaces was more than a transformation that occurred. In fact, there was something that was lost in the process; a space that could not be returned to how it was before the storm and interaction between men and space that was broken.

More importantly, however, people were challenged with a new understanding of their dependency on electricity, the one aspect of their lives that was believed to help in achieving independence. When people felt dependent, that was the moment when the true ‘Power of Power’ was recognized. A power so strong as to have each man, woman and child enslaved to routines, which routines, if disrupted, can bring a sense of chaos and discomfort. (Pirgova 2013).

A fitting way to finish this chapter would be with some of the participant’s words to describe their state of mind after Sandy:

“Sandy it really doesn't... It really doesn't have to do with rebuilding. That's not what rebuilding is about ... You know ... people's lives are forever touched and they will...they will never be the same and they need to rebuild and ...and to try to get back to a normal... So-called life even now and is not happening for a lot of us yet so...[also] As my friends and I say we are broken right now and maybe someday, we will be mended. But... I don't know... I hope so”

(Participant, Seaside Heights)

Chapter 4

Case II: “Energy Protests” in Bulgaria Overview and Data Presentations

“Never be afraid to raise your voice for honesty and truth and compassion against injustice and lying and greed. If people all over the world...would do this, it would change the earth.”

-William Faulkner

Introduction

The second case study presented in this thesis is that of the Energy Protests that occurred in Bulgaria a few years ago. The protests helped amplify individuals' perceptions of energy and electricity and provided a window into their realities. These perceptions took various visual forms that were interpreted by the protesters in the context of a political, economic and social crisis. In other words, these protests served as a platform that enabled the Bulgarian people to portray their feelings and emotions, their perceptions of energy and electricity, their interpretation of the situation, but also as a medium through which I could study those perceptions and interpretations.

The chapter is structured to *first*, explain the nature of these energy protests, the time and space in which they occurred, and their significance for the Bulgarian society. *Second*, the protests will be contextualized amidst the Bulgarian energy situation, other political protests and academic research on the topic. *Third*, the chapter will present and systematize the empirical materials including the type of materials specific to this case study as well as thematic and content analyses of the data. *Finally*, there would be a discussion of the main themes before concluding remarks are drawn.

A Turning Point: Bulgarian Energy Protests of 2013

The Energy Protests that constitute the case study for this thesis occurred between January and April 2013 in most urban areas in Bulgaria. The protests ended with the resignation of the government.⁴⁶ Despite this, the protests were not perceived by either the public or the government as politically oriented, but rather, the sole focus was the energy situation in the country and how the standard of living could not match the expected energy consumption. The political players were only seen as secondary to the larger issue at hand, which makes these protests a rather unique case. The political aspects raised during the protests were perceived as minor contributors to the protest situation and as supporters of the problematic issue of energy availability and price consolidation; a perception made evident in all newspaper articles, individual views online and in interviews where mentioned for the relevant time period studied in this thesis. This was not the case for the protests that continued after the resignation of the government. May 2013 then marks a rather sharp turning point, where the political issues surpassed the energy ones, which is why the protests I am focusing on are only the ones up to the government resignation. I would only mention here that as a result of

⁴⁶ They weren't successful, however, but success and impact resulting from the protest are not the focus of this thesis. The focus is the images of energy that people produced during the protests.

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the Bulgarian Energy protests, the center-right government resigned, and a caretaker cabinet was appointed.

Most protests tend to occur due to a singular catalyst event, but in this case, the catalyst, or trigger for these protests is not easily identifiable. It could be argued that the only steady aspect to these protests was the main theme – problems with the energy sector. These problems rippled through the various political, economic and social structures. The main problems behind the protests can be summarized as follows. *First*, there was a perceived lack of transparency from energy companies and poor political decision making regarding the energy sector. *Second*, there was an existing monopoly in the energy sector and without competition to challenge the prices of electricity, they keep growing. *Third*, the unstable political and organizational environment created a destabilized economy - one that has resulted in the majority of the Bulgarian population receiving wages that are below the accepted national poverty line.⁴⁷ *Fourth*, due to the low wages, people were unable to pay the high prices demanded for electricity and many used electricity not only for light and cooking, but also for heat. *Finally*, for those people who had enough money to pay basic amenities, which were not many, they still had difficulty in participating in technology consumerism, such as laptops, iphone, mp3 players, etc., that are perceived as a measure of social development and progress.

The protests then reflected a process of slow energy strangulation, clamping down on the energy supply by ‘forced choice’ as people were unable to pay the high energy prices and were forced to find a way to reduce energy consumption. The protests erupted when for many there were no further opportunities to reduce energy consumption. In other words, there was only enough money to either not starve to death or freeze to death, but not both. Therefore, these protests were the result of an act of desperation for many of the participants.

These protests included a variety of participants from all types of occupations, educational background and age groups, who were either directly involved or indirectly linked to the protests. Some of these participants also had multiple roles during the

⁴⁷ The Bulgarian National Poverty Line is based at 214 BGN per month (<£100) per person derived from a base line of 77 basic goods and services. According to reports of the World Bank, this means that over 22% of households live below the poverty line officially. <http://data.worldbank.org/indicator/SI.POV.NAHC/countries/BG?display=graph> Unofficially, the number is much higher because the statistics that calculate minimum wage base line are not including renting an apartment or the ability to collect savings to ensure future status. Internal Bulgarian reports suggest that the actual percentage is close to 50% and increasing. www.iskam.website/bgeconomist/Bednostta_v_Bylgariq.docx

protest, which is why I will list them in the following manner keeping in mind that these are general, fluid categories and individuals involved in the protest could and did move between them pending on the situation:

- a) Protest Participants – including organizers, protesters, observers, and disruptors
- b) Police – on duty as well as off duty
- c) Politicians – representatives of political parties, support staff, and energy ministers, among others
- d) Energy Companies – Energo Pro, Cez, EVN
- e) Core “Institutions” – NEK (National Electrical Company, *Националната електрическа компания ЕАД*), Ministry of Energy and Energy Resources, DKEVR (Commission for energy and water regulation, *Държавна комисия за енергийно и водно регулиране*)⁴⁸, etc

The people in categories a) through d) were directly involved in the protests. The Energy Companies, as we will see further in this text, were endowed with anthropomorphic qualities and were viewed not as groups of people working within a structure but as a singular entity with a mind and intelligence of its own. The core ‘institutions’, on the other hand, were only indirectly linked to the protests. In other words, they were linked by their association to energy and as such, the people in the core ‘institutions’ were not made ‘visible’ during the protests unless they also participated and could be placed in another of the categories described above.

Between all of these listed groups of people, or institutions, there were various relationships formed during the protest. These relationships were oppositional, supportive or at least included an acknowledgment of existence by all parties involved with the exception of the core ‘institutions’. It is precisely in the context of these relationships, and particularly in the communication used to describe, interpret and reflect on these relationships, that images of energy can be observed. However, in order to understand these relationships better, first one must understand the Bulgarian context in more general terms. Because both the general context and that of the energy situation in the country are the ones shaping the creation of electricity-related images and provide the framework for their further interpretation.

A Theoretical Perspective on Energy in Bulgaria

There are several contexts that underpin perceptions of images of electricity in Bulgaria. *First*, there is the present energy development situation in the country. The current level of energy development could frame individual perceptions of electricity by

⁴⁸ The name of the commission was DKEVR until 2015 when it was renamed into KEVR

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providing more ready access to certain energy types, which would in turn encourage images of electricity to be more prevalent in relation to the developed energy types as opposed to less publicly known ones. *Second*, there are temporal and special views that can highlight prior protest behavior and help identify possible protest trends in Bulgaria. A previous case from the 1990s is presented in order to serve as a comparison as to what methods of communication could be utilized as part of the protest to communicate images of electricity. *Third*, a second case is presented that serves to provide a comparative perspective concerning the use of social media in the protests, but as there are no prior studies of such an occurrence in Bulgaria, the case is comparative to the Russian Winter of Discontent protests a year prior. *Finally*, there are some comments on the previous studies of the protests where gaps in research are highlighted, which this case study analysis could fulfill.

Bulgarian Energy Development

Bulgaria has a very diverse energy production, distribution, and consumption network with a heavy emphasis on renewable energy resources (Hristov et al. 2010). For example, the table below shows the main energy resources in Bulgaria in 2000, demonstrating a mixture of thermal, nuclear and hydro energy, where hydro energy has installed capacity and ability to produce over a fifth of the total energy. The prevalence of hydro energy presupposes knowledge the participants may have of this type of energy or at least alludes to possible images that may emerge in relation to hydro energy as opposed to, for instance, biomass or geothermal both of which have had limited development in Bulgaria.⁴⁹

Generation source	Installed capacity		Electricity generated in 2000	
	MW	%	GWh	%
Thermal TPP	6,553	49.7	19,791	48.4
Nuclear- NPP	3,760	28.5	18,178	44.4
Hydro & Pump Storage Hydro Plant (HPP and PSHPP)	2,870	21.8	2,958	7.2
TOTAL	13,183	100.0	40,927	100.0

Source: NEC (NEK) 2001a.

Figure 15: Structure of Generation Capacity in Bulgaria in 2000; source NEC (NEK) 2001a

The statistics for thermal and nuclear energy have maintained about the same since 2000. Even though two of the four nuclear reactor sections have been closed, nuclear

⁴⁹ Actually, many of the participants did not know what biomass or geothermal is exactly, but they still had an image of these types of energy and how they are part of ‘Green Energy’ resources.

power still provides slightly less than 33% of total electricity consumption thus placing thermal energy as the main source of energy that supplies the country with about 55% of the total. There have been discussions about the building of a second nuclear power plant, *Belene*, but those discussions have all but ceased. The graph below illustrates the positions of all nuclear, thermal and hydro stations in Bulgaria as of 2013.

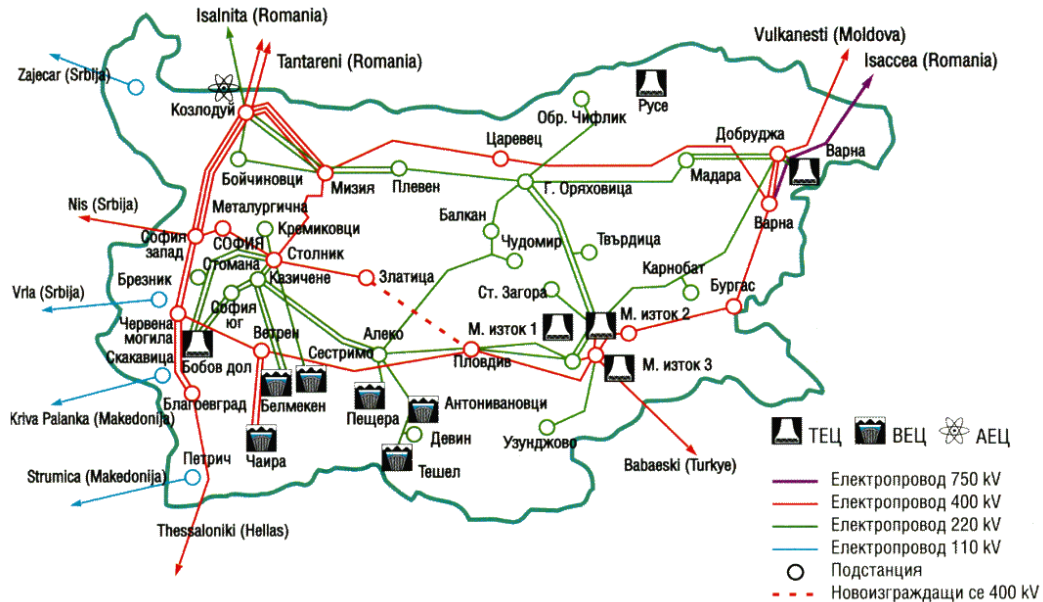


Figure 16: Map of Energy Producing Stations in Bulgaria including Nuclear, Thermal, and Hydro – Geni.org Accessed 17 Feb 2015

This illustration shows that all major energy production stations are not near the main cities. The nuclear power perceptions individuals have vary based on whether the individual lives next to a power station or not. Perceptions of nuclear power are further nuanced and complicated even if one lives within proximity of a station and is aware of how it functions and what consequences it may bring. (Pidgeon et al. 1992; Pootinga et al. 2006; Venables et al. 2008). So, having power stations more visible, or in cities, could impact the type and description of images of electricity participants may perceive or interpret while also acknowledging that these images will be rather complex in nature. Specifically, in relation to hydro energy, at the turn of the millennium, Bulgaria had 50 large reservoirs, and there are 77 hydropower plants, which have a combined capacity of 2870 MW, most of which are located near or in large cities. Over the last decades, other renewable resources have also been developed following vigorous sustainable energy development policies that include those of wind and solar energy. New wind farms were put up in some of the valleys that were not utilized for agricultural purposes, and a small amount of solar power was harnessed. Bulgaria also has other renewable resources such as geothermal, biomass, and biogas (United Nations

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Report 2004). However, as hydro energy production is dependent on water resources, since the year 2000, on average only about 7% of total energy production for Bulgaria are derived from hydro energy and less than 2% from other renewable resources (Mecometer.com, Accessed 2015).

That being said, despite high dependency on nuclear and thermal and still relatively low renewable resource usage, it has been argued that Bulgaria could meet its 2020 national renewable target of 16% as per European Objectives as it already has over 9.5% from renewables (Great Britain 27th Report 2007-2008). The stopping of nuclear station *Belene* in addition to opening to other renewable possibilities such as geothermal energy show a relatively slow but steady migration away from developing harmful to the planet energy sources to more sustainable ones. This also points to the existence of very positive images of ‘green’, ‘sustainable’ energy, or the sustainable energy development programs arguably would not have been so successful.

Additionally, there have also been specific studies on the topics of energy and electricity in Bulgaria, but what they seem to have in common is the top-down approach, or where the company and political interests are prioritized over what people perceive the situation to be (Zlatev 2012; Hiteva 2013; Grozdanov et al 2014; Hiteva and Maltby 2014). This top-down approach is in part because of who owns and develops energy and electricity resources in Bulgaria. All electricity production and distribution in Bulgaria is now privately owned. Many of the private investors also participate actively in the political sphere of the country. In Bulgaria, there are two types of politics – ‘Politics’ and ‘politics’. The first ‘Politics’ with capitalized P refers to all political decisions that directly impact people. These decisions are seen as overt and explicit such as the cost of taxes or school redevelopment programs. The second ‘politics’ with the lower case p refers to political decisions that indirectly impact people. Electricity management is perceived to fall into the category of ‘politics’ ever since it became privately owned. In cases where people perceive ‘Politics,’ any protests or concerns raised are very political in nature and the image of the politicians is one of ‘corruption.’ In cases where people perceive ‘politics,’ the political situation comes to the background and the image of the politicians is of ‘inept fools.’ This would explain why the energy protests were not ‘Political’ in nature but ‘political’ and the politicians who make the actual energy decisions were made less reference to than the energy distribution companies.

This thesis helps fill the gap that exists in studying energy perception in Bulgaria from the bottom up approach as it is based on a case that is less politicized than the ones chosen for most academic research thus far. It is the first thesis to collect visual and narrative images of electricity directly from the participants without guiding their perceptions in one way or another prior to a more conventional interview approach.

A Comparative Perspective on the Protests in Bulgaria in the 1990's

There have been many protests in Bulgaria over the last three decades because, in that time, the Bulgarian society has been in a moment of flux, or perceived as a continuous transitioning and lack of stability. What is interesting, however, is how Bulgarians protest, particularly the widespread use of folkloric elements and theatrical performances as part of the protest movements. In an article 'Symbols and Images of "Evil" in Student Protests in Sofia, 1997' by Iveta Todorova-Pirgova, she wrote how the protests of the 90's "took the forms of ritualized and theatricalized processions, and mock funerals, all to some extent influenced by Bulgarian folklore." (Todorova-Pirgova 1997; 108). I found similar trends in my data of the case study even before analyzing what these folkloric elements could mean and how they could be used as part of the communication process regarding images of electricity.

Moreover, both protests follow a similar pattern of space utilization (similar protest paths), temporal persistence (lasting for weeks on end) and resulting in the abdication of the government at the time that resulted in a break in communication. There are, however, some major differences, the main one being the widespread use of social media in my case study, which was not possible in the 90s protests.

A Comparative Perspective on the Role of Social Media to the Russian Winter of Discontent

The Energy Protests were the first Bulgarian protests where there was widespread use of social media. That is why this section will present a comparative perspective to a protest that occurred under similar politico-economic conditions, but which did not take place in Bulgaria.

'The Russian Winter of Discontent,' a protest that relied heavily on the use of social media, was explored by Sarah Oates (2013) in her book *Revolution Stalled: The Political Limits of the Internet in the Post-Soviet Sphere*. In her book Oates focused on Russia, a country that had a similar transitioning process from socialism to democracy to that of Bulgaria in the 90s.

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The main goals of the book are to assess the effect of the internet on political communication in Russia and to explore how the forms of communication afforded by the online platforms interact with preexisting political and institutional norms. The book’s final chapter, Chapter 7 titled ‘The Winter of Discontent: Elections, Protests, and the Internet in Russia, 2011-12’, explores the protests surrounding the phenomenon known as the ‘winter of discontent.’ These protests followed the falsification of the Russian Election results in 2011-2012. In the chapter, Oates discusses seven factors discussed, which she argues all contributed to the ‘winter of discontent,’ namely:

- “(1) the failure of state “soft” controls that relied on the traditions of self-censorship;
- (2) an online sphere that was freer than traditional mass media;
- (3) an explosion in internet use that erodes the dominance of state-run television;
- (4) a lack of understanding about citizen attitudes and the online sphere on the part of the Kremlin;
- (5) crowd-sourcing;
- (6) online political networks; and
- (7) the role of online social entrepreneurs” (Oates 2013; 165-166).

The factors are explored and defended one by one, forming a very persuasive argument about the role of the internet media in the political sphere in Russia both on and offline.

Focusing on the Bulgarian Energy Protest, Facebook was indeed used as an informational, organizational and communication tool. The information provided includes statistics and data about energy production and consumption as well as comparisons to other countries in the European Union of which Bulgaria is a part. There were also clarifications about who is who, who owns what, or making the energy sector more transparent for consumers to understand. As an organizational tool, Facebook was used to establish meeting points for the protests, or in other words, the practicalities such as where, when and how the next protests will be conducted. As a communication tool, Facebook was used to drive the protest by providing a platform for the exchange of posters and ideas as well as to create a space of solidarity.⁵⁰ All profiles used for the protests were made public and encouraged as many participants as would be willing to upload information, photographs or open new dialogues. Because of the role Facebook played in these protests, it is not surprising that many images of electricity could be found there. Many of these images constitute part of the data that will be presented later in the chapter.

⁵⁰ For more information on the distinctive and complex strategy that can underpin a protest, please see Lofland (1985).

Prior Published Works on the Energy Protests in Bulgaria

Specifically, in relation to the Energy Protests, there have been a variety of books published already. Unfortunately, these books are journalistic interpretations, and arguably border conspiracy theory writing, rather than an academic study of the situation. To illustrate, there are several books that focus on a variety of conspiracy theories. One of them is a book by Kantcho Kozhouzarov (2014), who is mainly a journalist, but also well known for his translations of a variety of books from other languages into Bulgarian, which was published in 2014. This book is written in a journalist tone despite its claims of presenting a political analysis of the situation. The main focus of the book is that the energy protests were ‘staged’ by the Russian government in an attempt to destroy the European Union from the inside. This destruction, he argues, will occur via the Bulgarian economic structure and when Bulgarians are fully dependent on Russia, an argument that he does not support with tangible evidence. Another such book is by Grigor Lilov (2013) who lists many conspiracy theories that are not actually forming a coherent narrative, but rather, a list of ideas, situations or conjectures with flimsy links to one another. The main ‘focus’ of the book is to engage the reader with stories of corruption, real or imaginary, as well as many accusations aimed at particular prominent actors, mostly politicians past and present. In fact, the political protests that emerged following the energy ones, which began from April 2013 until the present day or after the abdication of the GERB government that year, are much more researched and written about (Smilov and Vaysova 2013). This places my thesis in a very particular gap because the energy ‘problems’ the energy protests highlighted and focused on have not gone away and may even be getting worse, so it is my view that another energy protest is imminent on a similar scale relatively soon.

Further Considerations of the Data Collection

The data collected for this study was gathered in two phases in line with the research design. The *first phase* includes the collection of online photographs and other available data from Facebook as well as newspapers. The *second phase* of data collection consisted of a series of interviews that were conducted three months and a year and three months after the protests. Both phases are equally important for this thesis, and they were chosen to complement each other as oppose to one phase supporting the other. The following sections will expand on the particular details of data collection in each of the two phases.

Phase I of Data Collection: Online Visual Materials and Newspapers

Phase one data collection includes a variety of online visual materials as well as hard copy newspapers. The data collection occurred while the protests were still taking place; therefore, the data was gathered as it was becoming available.

The data was primarily gathered from the social media website – Facebook. As mentioned previously, the Energy Protests were entirely organized through the use of Facebook as an informational, organizational and communication platform. This meant that Facebook represented the hub in which individuals and groups uploaded images of the protests in abundance.

The majority of the data is visual and includes uploaded images with or without captions, with or without further dialogue in the comment sections below the images. These images, which include posters, cartoons, and photographs as well as a few videos, were selected from a sample of over 10 000 images available through the social media website. The sample was evaluated and only visual depictions relevant to the study of images of energy were selected for this case study. By removing irrelevant parts of the sample, such as selfies, essentially portrait photos, or photos whose meaning was to illustrate the community solidarity rather than the themes of the protests, the final sample remaining contains just over 1000 images.

These 1047 images were all collected from publicly available profiles of Facebook groups. Due to the public nature of the profile, in addition to images being re-posted, or alternatively, posted with the use of pseudonyms and fake profiles, these public profiles made authorship and copyright of the image impossible to trace. This means that as a researcher I was free to use the images for my research, but also on a practical level, reflects that the captions underneath the photographs (unless previously provided) will depict descriptions of the content of the image they are meant to address.

In addition to the visual data gathered, there is also a sample of 39 newspapers. This newspaper sample is meant to supplement the visual materials as needed. The newspapers are primarily from *Presa*, but also few from *Trud*, *24 Chasa* and *Standart*. Here must be noted that the newspapers can only supplement the visual data, but the focus is on the visual data is for several reasons. *First*, the aim of phase one of the research project is to let people communicate their perceptions of energy as provoked naturally rather than by a researcher, so what better way than to study the images they are creating, posting and commenting upon in order to open up dialogue. *Second*, with Facebook as the medium for communication, anyone could post to the profiles thus

establishing a much more inclusive environment than the newspaper setting. *Third*, most newspapers in Bulgaria are privately owned by politicians and interested parties who wanted the protests to dissipate, so the print media ignored the protests at large or attempted to make them appear less significant thus prompting people to discuss and connect through social media. This statement is also true for the online news media, which in addition is also rather underdeveloped. *Finally*, the people retaliated to print media by posting photographs of the protests to try to ‘show’ what really happened and to try to build solidarity in the same city as well as across the nation. Some people even created live streams in order to allow non-participants to observe the protests. The retaliations on Facebook then helped create dialogues, in which people commented, explored and further reflected on their perceptions of energy and on the situation. Therefore, upon reflection, much of the newspaper data has much more inherent biases as its owners sought to undermine the existence of the protests.

The images were recorded in a secure database and were mostly processed by hand. When needed some of the images were coded using the software Compendium. The newspapers were coded by hand and written in Microsoft Excel.

Table 5: Summary of Online and Newspaper Data Gathered for Phase I of the Research

Type of Data Gathered	Total Sample Existing	Used Sample in Thesis
Visual Data	over 10 000	1047
Newspapers	over 500 x>1000	39 papers x>200 articles

Phase II of Data Collection: Interviews

Phase two data collection consisted of a series of semi-structured interviews that were conducted three months and a year and three months after the protests took place. The interviews, as mentioned in the methodology chapter and the previous case study chapter, were structured in four parts – biographical narrative section, semi-structured energy and electricity focused section, photo prompt section as well as word association section. The biographical section was open-ended, prompting the speaker to recount his or her experiences of the protests, of any stories heard or of any signs, symbols or messages that can be recollected or anything else the speaker may deem relevant. This section also explored in depth narratives that were raised in some of the images from Phase I of the research, but also asked the participants to reflect on their role in the protest. The semi-structured section of energy and electricity elicited responses concerning various forms of renewables, coal and nuclear and their symbolic

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associations as well as topics such as climate change and global warming. This section also asked questions regarding consumption of energy in everyday life and the individual perceptions of electricity. The photo prompt section showed a series of photos that are attached in the Appendix along with the interview questions, which were also split into two sub-sections. (Appendices C, D, D2). The first of these included images from the protests with a focus on images featuring electricity, while the second contained a series of images to represent various forms of energy – solar, wind, coal, nuclear, hydro – as well as an artistic representation of electricity. The final of the four interview sections was comprised of a word association game that featured the topics raised or additionally mentioned by the participant during the interview. The questions raised in the interview were the same types of questions, arranged in a similar order to the Hurricane Sandy case in order to allow for continuity in the comparative sections of the thesis. However, the questions were translated into Bulgarian to better communicate with the participants. Therefore, the interviews were conducted in Bulgarian, so where direct quotes are used in the text, they would feature the Bulgarian transcription followed by the English translation.

The participants were contacted via two gatekeepers that were already in place from a prior research conducted. The first gatekeeper was a protest organizer for environmental groups, so they provided the access to the organizers of these protests. Following the first contact, the rest of the protest organizers, participants and observers were found using the snowball sampling method. The same gatekeeper also provided access to the civil servant. The second gatekeeper provided access to the police and secret service interviewees. The second gatekeeper was particularly important because when I attempted to make direct contact with the police station through the Ministry of Internal Affairs [MVR II in Sofia], I was told that due the sensitive nature of the protests, there is a ban on political and police members giving interviews. This prevention measure was put in place in an attempt to prevent further escalation of the protests. As a result, as my interviewees later also confirmed, the politicians were encouraged to police each other and stay away from the protests while the policeman had to sign a non-disclosure agreement.

The final sample of interviewees consists of 11 participants, which are protest organizers, participants and/or observers of the protests as well as police and a civil servant. The following table lists the primary roles of each participant and the duration of their direct involvement with the protest, where direct involvement can be defined as

direct physical involvement outside of the home space thus excluding activities conducted online. Activities conducted online for many would last the entire duration of the protests and do not necessarily exhibit a commitment to the protests, which is why this selection was made in an attempt to illustrate the participants own perceived commitment.

Table 6: Summary of Interviews Data Gathered for Phase II of the Research

Interviewee	Primary Roles in Protest	Duration of Direct Involvement with Protest
1	Organizer/Participant	1 Year
2	Organizer/Participant	9 months
3	Organizer/Participant	9 months
4	Observer	1 day
5	Observer	3 weeks
6	Observer/Participant	1 week
7	Participant	2 weeks
8	Police/Participant	3 months
9	Police	3 months
10	Secret Service	3 months
11	Civil Servant/Observer	3 months

Each participant was selected based on the role they claimed to have played in the protests; therefore, these are targeted, rich response samples used to illustrate as many perspectives of the protests as possible with the resources available and within the time constraint both imposed by the limitations of the Ph.D. project. Additionally, even though the interviewees categorized as ‘observer’ or ‘police’ are inherently participating in the protests with their respective roles, the separate role title ‘participant’ refers to actively walking and being part of the protest. Of course, many of the interviewees played several roles, so the attribution to certain categories is a rather artificial one applied to show the focus of how the participant perceived themselves as defined by them.

A methodological challenge was encountered unexpectedly with one of the participants who was deaf. The arrangements for that interview were the same as all the others; the interview was to be conducted as we were walking through the protest path in an attempt to refresh the participant’s memory of some details. Unfortunately,

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neither the interviewee nor the gatekeeper had pre-warned me that the participant was deaf and all my prior communications to set up the meeting were in written form. This meant that when I met the participant I had not prepared a strategy of communication outside of common interviewing practice. As the participant was deaf and we were walking side by side, I found it very difficult to express active or passive support to encourage the interview nor could I keep the conversation on the topic. After the first hour, I began to tap her shoulder and to control my pace to go slightly faster so she could see me if I wanted to ask something or interrupt her stream of thought. The participant insisted we go through all the questions, so as a result that interview lasted for about 4 hours in total. Upon reflection, had I known the participant was deaf in advance I would have planned a shorter way through the route with more standing still moments so that we may have more time face to face and engage better.

The interviews themselves were gathered in two waves. The first wave of interviews was conducted with protests participants who claimed to fulfill the roles of participants, organizers, and observers while the second wave of interviews was conducted with policemen and politicians. In addition to these actors involved in the protests, there were also policy makers, energy companies, and other institutions. Unlike the situation with the police interviews where a gatekeeper allowed me to circumnavigate the interview ban, access to the energy companies and the other parties was not possible due to the tender situation the protests caused for the companies and directly involved politicians in Bulgaria. This does not pose a problem, however, as the focus was to study the perceptions of energy and electricity of the people, rather than organizational perspectives.

The majority of the participants were interviewed in the capital city of Bulgaria, Sofia with the exception of one that is from Varna. That participant was targeted in order to receive clarification on some of the narratives that were culture specific to that location. The sample of the participants includes a variety of social situations, ages, and employment status. All participants have signed the required consent forms that are attached in the Appendix A2.

*Summary Chart of Data Collected for Case II Bulgarian Energy Protests***Table 7: Summary of Online Visual Materials, Newspaper, and Interview Data Gathered for Phase I and Phase II of the Research**

Phase I		
Type of Data		
Gathered	Total Sample Existing	Used Sample in Thesis
Visual Data	over 10 000	1047
Newspapers	over 500 x>1000	39 papers x>200 articles
Phase II		
Interviewee	Primary Roles in Protest	Duration of Direct Involvement with Protest
1	Organizer/Participant	1 Year
2	Organizer/Participant	9 months
3	Organizer/Participant	9 months
4	Observer	1 day
5	Observer	3 weeks
6	Observer/Participant	1 week
7	Participant	2 weeks
8	Police	3 months
9	Police	3 months
10	Secret Service	3 months
11	Civil Servant	3 months

Data Systematization: Thematic Presentation and Discussion

With the context set up and the specificities surrounding the field methodology provided, the following section will present a systematization of the data. This systematization will show the major themes and sub-themes that emerged from the data at the various stages of research and as it permeated through the various modes of the data such as narrative or visual. This systematization will then be analyzed through a presentation of overarching concepts that the themes feed into, which will serve as the basis for the further analysis in the later chapters.

Phase I Data: Major Themes in Online Visual Materials and Newspapers

Phase I data collection is based on two data sets, namely visual materials and newspapers. The visual materials include, but are not limited to a variety of images with or without text, photographs or computer creations, realistic representations of the world or society as well as caricatures and imagined scenarios.

The data for this section is comprised of visual data that were primarily gathered over Facebook. There are 887 individual photos obtained from the online platform that will be discussed in this section. Additional visual data [n=160] was also gathered from print visual materials in newspapers and whole online web pages with further information or embedded links with further visual galleries. This data set of n=160 will be analyzed separately in order to reflect the medium from which they were obtained. The print media will be explored in the following section of *newspaper data*. This is needed, given previously outlined consideration of the lack of partiality of the Bulgarian print media. The visual galleries, by contrast, will not be discussed further as they only support the frequency of particular visual data emerging and/or as to remove redundancy. For example, a gallery full of posters for download will not be analyzed further if those posters are reproduced in a protest setting because the *use* of the poster, which includes the wording on the poster and the setting, is more valuable for it yields to an analysis of the social and cultural context, rather than the poster on its own as a tool to be downloaded. In other words, if the same poster information appears in two places, but one is only the poster, while the other includes the people and the setting, the image for analysis will be that of the latter. That being said, galleries that create photo stories or photo narratives are included in the larger [n=887] sample.

Online Visual Materials

The remaining visual data [n=887], to be presented in this section, was single coded by type image (content and/or medium) in order to allow for better understanding of the visual data types available prior to analyzing the themes that exist in each visual type. The table below summarizes the visual data available of the selected sample.

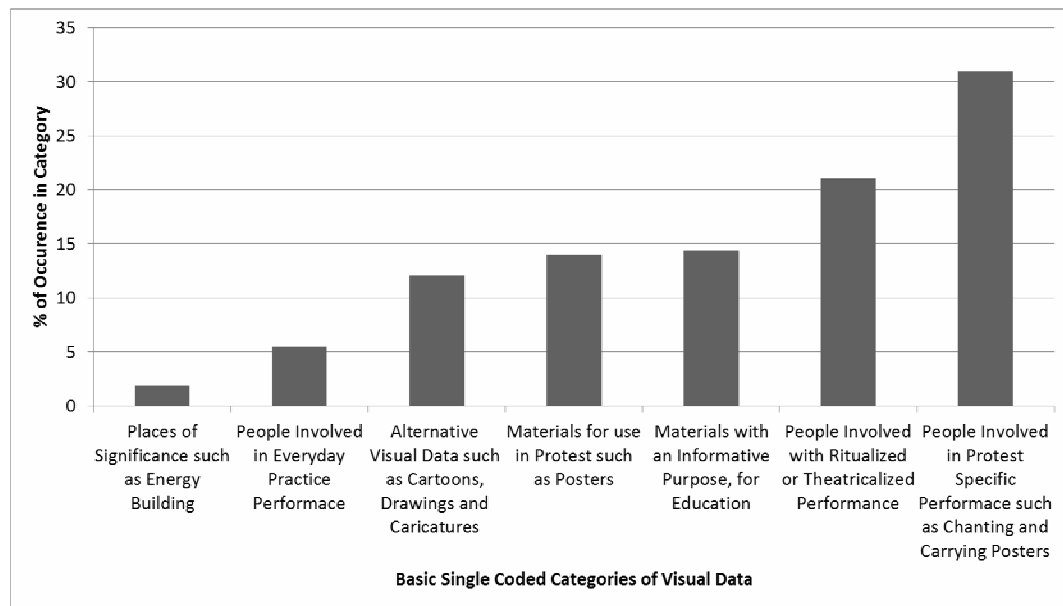


Figure 17: Breakdown of Coded Categories in Visual Data

Figure 17 shows that there were 7 categories that the visual materials could be sorted into, and some of them have further division of subcategories; for example, the rituals or theatrical performances category could be further subdivided into 23 single coded categories, or 13 grouped ones if, for instance, ‘burning of objects’ is one category rather than three separate burning ones based on what people were burning. The largest category is photo based on people involved in protest specific performances such as chanting and carrying posters, which constituted 31% of the total sample, where some of these posters were text based, image based or mixed. The second largest category is that of people involved with ritualized or theatrical performances as captured in photographs in 21% of the cases. This was followed by a category of photos or other visual materials that served to educate [14.4%], or provide further information, content, or context surrounding people, events, or places. After that, there came two categories that are man-made visual data rather than photo-based, or that of materials for use in the protests such as posters, or 14% of the sample, as well as alternative visual data such as cartoons, drawings and caricatures, or 12.1%. The last two categories were of people involved in everyday practice performance such as narrating to a group energy bill troubles that comprised 5.5% of the total sample and the photos of places of significance such as the various energy buildings of which there were less than 20 photographs.

These broad categories could be further subdivided into others. An example of focus for this thesis is the people involved with ritualized or theatrical performances category that could be further sub-divided into 23 categories, which grouped by

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performance type are represented in the table below. These groupings are artificially created for the smoother presentation of data, but it should be noted that some of the events when looked through the lens of a narrative cross through various categories and/or groups. The single coding also means that one image that exists in one category due to a particular emphasis could easily exist in another as well or several for that matter. In other words, these sub-categories are artificially created in order to present better the various components of rituals or theatrical performances seen, but are by no means static and as such serve only as guidelines. The data analysis was much more involved and examined each image as part of the category in which placed as well as in relation to other categories and photos as in the case of narrative images.

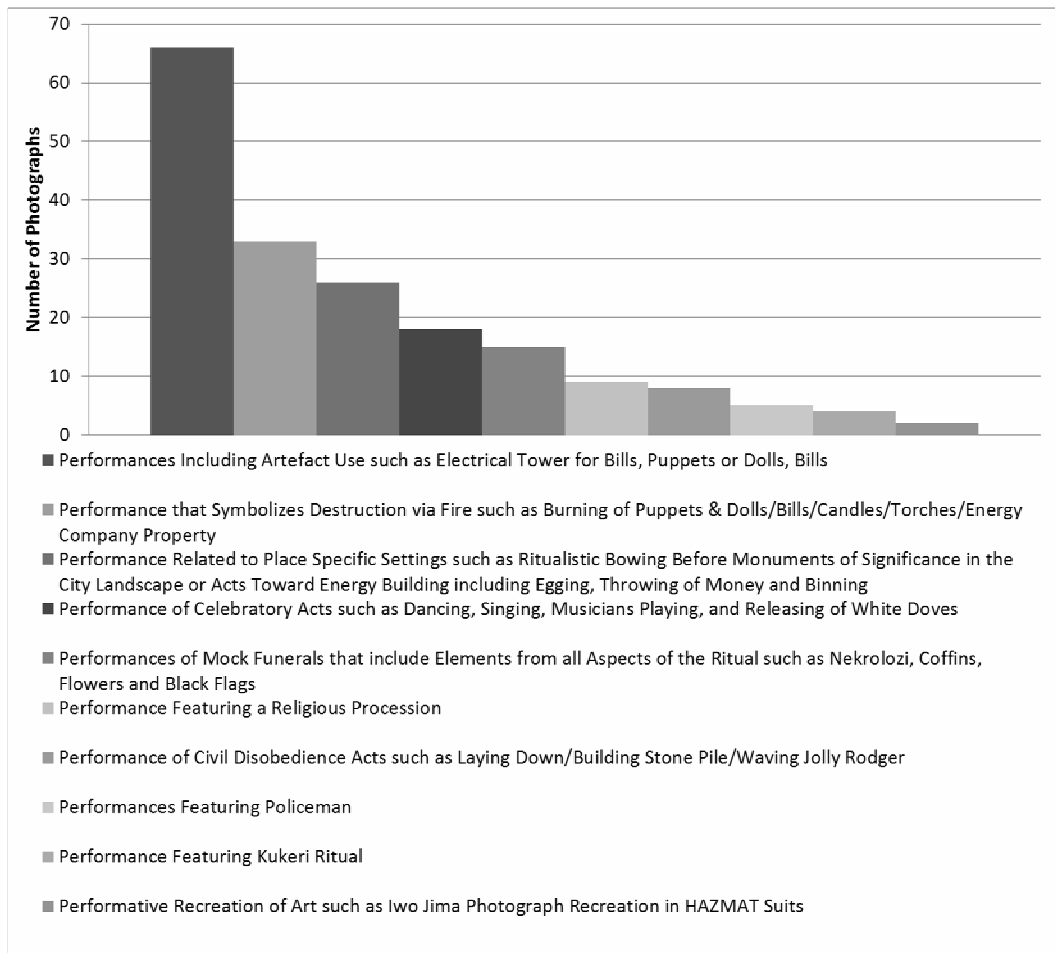


Figure 18: Categories for Coding of Ritual and Theatrical Performances Illustrated in the Visual Data

The data presented in Figure 18 shows that the most prevalent images were those of performances that include artefact use during the protests or 34.5% of the total for this

category. They would bring fake weapons, electricity meters, energy bills, etc. The most often encountered artefact in the protests was that of a puppet or a doll, which would account for 15.1% of the total or slightly less than half of the artefact category. Performances that symbolize destruction with fire such as the ritualistic burning of objects such as bills, candles or torches, puppets and dolls, and energy company property accounted for 17.7% of the total; with the burning of bills the most common at 10.2% and the puppet burning as the least at 1.1%. The place specific performances such as acts toward the energy building such as egging and throwing money as well as ritualistic bowing before monuments of significance in the city such as statues, churches or particular buildings were represented in 13.9% of the photographs. Performances of celebratory acts then accounted for just over 10%, which included singing, dancing, musicians playing or releasing white doves. Performances of mock funeral rites or elements thereof, present the next sizable category with 8.1% of the total. Performances featuring religious processions are at 4.8% with all the remaining categories at fewer than 4% each.

Knowing how many photographs fall in each category are not enough for a comprehensive thematic analysis. There are other factors that can influence the prevalence of an image, an example being the number of times that image is re-posted or discussions surrounding it. The varied engagements with an image could be connected to the ability of the individual viewer to connect to the presented image. In other words, the accessibility of an image can determine its position in the communicative hierarchy relating to the situation in which it is used. That is why here will now be presented two cases of focus to illustrate the photographic data. The first case is connected to fire because as noted in the categories a very large percent of the photographs illustrate the burning of an object. The second case will focus on only a few photographs using them to illustrate possible problems with engagement with them thus explaining their lack of their prevalence.

EXAMPLE 1 – Performance that Symbolizes Destruction via Fire



Figure 19: Performative Burning of Artefacts: puppet (left), bills (two middle photographs), and torch (right)

The performance of the burning of object accounted for slightly less than a fifth of all the ritual photographs. The most common objects burned were energy bills, but also puppets that represented the energy companies as well as torches and candles. To borrow a description from one of the organizers of the protests who recants the burning of bills and the reasons behind it in their perspective:

“Като предвид изнервената ситуация просто, просто реагираха хората много спонтанно. На двадесети януари се бяхме събрали тука пред столбична община. Запалихме си демонстративно сметките за топлофикация. Всъщност това се случи първо в София, после последваха запалени сметки надолу в Сандански и Благоевград които вече бяха за тока. [Запалихме ги] демонстративно ... една демонстрация че ти не признаваш че това е реалното количество което ти си употребил и което те карат да плащаш. [...] Еми просто ... лично ние понеже бяхме организаторите се събрахме, поне стотина човека бяхме първия път като се събрахме ... смятам че е доста ефективно и може да събуди доста повече внимание от страна на хората отколкото да хванеш и да скъсаш един лист. Това го правиш ежедневно, няма значение дали е сметка. Докато по този начин показваш категоричното си несъгласие с това дело се случва. Ух ... по скоро е по силно като демонстрация отколкото да я скъсаш тази сметка.”
-Original Bulgarian Transcript from Semi-Structured Interviews

“Taking into an account the anxiety in the situation, people just reacted very spontaneously. On the 20th of January we had gathered here in front of the city hall. We set on fire, demonstratively, our heating bills. Actually that happened first in Sofia, and then followed burning bills further down in Sandanski and Blagoevgrad where they were now about electricity. [We burned them] demonstratively ... a demonstration that you do not recognize that this is the real amount that you have used and that they are forcing you to pay. [...] Well simply... we personally, because we were the organizers, we gathered, at least a hundred people were gathered the first time ... we believe it is very effective and can draw much more attention from people than if you were to take and tear a piece of paper apart. You do that every day, so it doesn't matter if it is a bill. While in this way you illustrate your absolute disagreement with what is happening. Uf ... it is perhaps stronger as a demonstration rather than if you were to tear that bill.”
-English Translation of Transcript from Semi-Structured Interviews

The burning in this situation was perceived as something extraordinary, hence stronger than for example tearing or crumpling of a piece of paper. The burning of bills was then highly ritualized as a way to detach the destruction of the bills from the everyday and add further symbolic meanings to the act. As the participant states, to show civil disobedience and a personal disagreement with what is written on the bill and what that bill represents. Therefore, the performative act of burning was not just an act to draw attention, but also an act that served the purpose of conveying a message.

The burning practices have long existed in history. Loftland argues in his book *Protest: Studies of Collective Behavior and Social Movements*, burning practices serve to illustrate ‘the character of collective action’ in western cities up until the 19th century when these distinctive features began to fade away (Loftland 1985; 14). Some of these ‘features’ interestingly enough have been preserved in Bulgaria judging by the burning of bills, effigies, and other articles that took place in the protests by mass ‘collective action’ of at least a hundred people participating.

EXAMPLE 2 – Staging of a Photograph

There were some visuals in the sample that were not as common place. It was as though they lacked the tools for any reader to be able to interpret them so once an image appeared, that image was not shared or developed further. These images also tended to have less discussion in the comment sections attached to the photographs. Arguably, in cases such as these even highly symbolic images dissipated from the online sphere rather quickly. The following example is chosen from one of the smallest categories, or the performative recreation of art, and has been selected to illustrate. The black and white image is the original photograph titled ‘Raising the Flag on Iwo Jima’. This photograph was taken by Joe Rosenthal in 1945 in Japan. It is considered one of the most iconic photographs from the Second World War and it was awarded a Pulitzer Prize for Photography in 1945. The colored image is one of staging the photograph ‘Raising the Flag on Iwo Jima’ as part of the Energy Protests.



Figure 20: Raising the Flag on Iwo Jima (left), Staging of Iwo Jima in HAZMAT suits (right)

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The colored photograph depicts a group raising the Bulgarian flag above the protest, but this depiction is all part of a performance – the re-staging of a famous piece of art. The fact that it is a performance carries as much symbolism as does the actual message, the visual portrayed in the image as well as the ideas it alludes to. The group is standing together as a show of solidarity while wearing matching HAZMAT protection uniforms. The HAZMAT uniforms have much written on the outside which depicts the words ‘MAFIA’ and ‘ИЗЧЕЗВАЙТЕ,’ a wordplay of an energy company Chez as part of the words ‘Get Out.’ As the colored photo is a staging of the one from 1945, there are many similarities such as the raising of the national flag at the highest point available in the protest thus making the flag a focal point for the viewer in both images as well as the collective action in raising the flag. After that, the similarities dissipate as the Bulgarian image is imbued with further symbols that have come from different contexts, such as the Energy Protest context that includes the inspiration for the wording on the HAZMAT suits as well as post-apocalyptic Hollywood context that explains the use of the HAZMAT suit in the first place. Both of these contexts provide tools for decoding the image, but also a set of symbols that can be used to identify the context in return and reinforce its existence. If a viewer is not familiar with either the symbols or the context, the photograph becomes less meaningful as the intended messages fail to reach the interpreter. Unfortunately, thematic analysis is not enough to allow me fully to explore these relations between symbols, context, and interpretation, so this example will be revisited in a later chapter along with the burning one once other tools for analysis have been provided.

Newspaper Data

The newspaper data were gathered from 39 newspapers and involves the processing of more than 200 individual articles that were written in relation to the energy protests and visual printed materials such as photos and cartoons. The main newspaper *Presa* was chosen as the only newspaper that seemed to write more about the protests beyond reporting that they do not really exist, and which also happens to be the only newspaper without transparent ties to a political figure.

Many of the articles reflected attitudes toward participants or interested parties that related to the protests, some were political or social analysis that frequently placed the protests in a historical context, very few would refer to a specific type of energy or

attitudes toward energy, and some reflected in the various communication methods used in the protests or social media use. Therefore, after coding, the articles could be placed in four broad categories:

- a) Contextualization
- b) Response and perception of participants
- c) Current energy situation
- d) Interconnectedness

The following sections will present the data that is evident in each of these four categories.

a) Contextualization: Who is to Blame?

In the contextualization category are articles that attempted to showcase historical, political, social and/or cultural contexts that may have provided the stepping stone for the energy protests. For example, for a historical comparison, parallels were drawn to the BSP protests of the 90s that both align with Todorova-Pirgova's work on the rituals used in the protests, but also on the similarity of the situation, desperation, and even death of a regime as felt in both cases. Further parallel was the 'images of evil' and characters who were assigned those images in an attempt to dispense blame and/or responsibility.

Blame for the current energy situation was frequently targeted at the energy companies and on occasion, a particular political figure that may be seen as having some connection to the energy situation. The most discussed political figures were, therefore, the energy ministers – Traicho Traikov [minister of energy, economy and tourism 2009-2012], followed by Delyan Dobrev [Ibid 2012-2013] as well as the prime minister at the time Boyko Borisov. The discussions of the political figures, however, were very chaotic. They served as though to illustrate the perceived chaos in the political system itself. Most of the stories were thus contradictory or unclear just as the perception of the Bulgarian political system was for my participants. For instance, in some articles Borisov is portrayed as a victim and that he is not to blame for the energy prices while in others he is seen to have a direct involvement and responsibility for the current energy problems. What is more interesting is that some of these contradictory articles occur in the same newspaper. In *Presa* from the 21 February, pages 14 and 15 portray Borisov as a victim, while only two pages later there is a discussion of how he is not.

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The victimization of Borisov is also rather interesting in view of his direct involvement in the protests. There are articles in which he addresses the protesters and tells them to “go home.” His direct involvement is a contradiction to the falling government and, therefore, the unable-to-respond-victimized version presented in some of the other articles.

All this shows is that there are no clear perceptions of the political roles and to what extent one can expect the political representatives to take control. Further, if blame is to be assigned, that there would be someone to dispense justice because the historical political context has shown that this is not the case. Finally, despite the perception of a hopeless situation, there is a sense of solidarity across time and political contexts; this is evident in the parallels drawn between the protests of the 90s and those from 2013.

b) Response and Perception of Participants: A Sense of Solidarity?

The theme of solidarity was evident with the parallels drawn between prior and current political and protest contexts, but also within the particular responses toward this protest. This was evident in two ways. *First*, there were articles on social solidarity as shown within. The solidarity of policeman by commenting on the directive issued that they are not to beat people. Some photos also even depicted the policeman as putting their shields on the ground as a way to show solidarity. Solidarity also within the nation for both people in the protests as well as the observers, or as one article specified that after a poll was done, 92% are shown to totally agree with the protests. *Second*, there was social solidarity from abroad. On one hand, there are Bulgarians who supported the protests from wherever they live abroad. On the other hand, many foreign nation states were discussed as having commented on the energy situation in Bulgaria and showing solidarity with the plea of the people for lowering the costs. Many of these foreign commentators or advisors were quoted as being from Russia, Brussels, London or even Germany was depicted as facing similar concerns. Both within and without, people expressed solidarity with the immolations that took place in Bulgaria, which are not a common form of protest or communication in Bulgaria.⁵¹

These shows of solidarity further helped solidify the protesters as the ‘heroes’, ‘victims’ or ‘good guys’, but also helped further highlight those who were seen as

⁵¹ For further information, please see Appendix F2

‘evil,’ ‘corrupt’, or ‘immoral’⁵², with a focus on the energy companies in the latter distinction. Unlike the protest photos, however, the energy companies were not presented in only those terms but with numerous contradictions. For instance, in the same issue of *Presa* from the 23rd of February, the energy company EVN is depicted as both a ‘thief’ and an ‘oppressor’ on page 6 and as a victim of the system structure on page 11, namely that energy cannot be cheaper because even if the Czech Republic would want to lower the costs and stop the monopoly within Bulgaria, they would not be able to as it is built in the Bulgarian system. That being said, the earlier articles seem to attempt to create two sides to the same story, while the later ones, especially in March issues, focus only on the negative aspects and the underlining corruption. The corruption that is presented as both within the country as well as in the energy companies, which helps explain why any economic or legal prosecution suggestions of the energy companies were seen as improbable and discussion would cease on them before it had even begun.

c) Current energy situation

The theme of the current energy situation in response to the protests was discussed very sparingly. In early February, there were comments about the positive response to nuclear power in the country and how despite this, the political party GERB is stopping the project. The only other type of energy apart from nuclear made apparent was a hydro energy plant in the south of Bulgaria, but only to mark its existence. Some articles reflected on the shifts of the energy prices – up, down, stable, changing – and how regardless of the shifts, people still experienced energy poverty due to their inability to consume energy even for basic needs such as heat and light. A couple of articles commented on energy measures and how those were in favor of the monopolies and not the people with high costs for, for instance, the common areas of a shared building.

d) Interconnectedness

The theme of interconnectedness was seen by numerous articles commenting on two types of identities – the social media one and the traditional Bulgarian one. The first type of identity reflected in social and other media uses as the driving force behind the protests. Facebook, Twitter and Live links were set up in order to allow observers

⁵² There is one particular story that stands out about a priest that could not pay for his electricity as he had no money, which the reader is made to believe is a sad one. Until it is revealed that he solved his problem by using his Rolex to pay the bill. These kinds of stories are part of the reason why after two months the protest theme changed from electricity to corruption

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to follow the protests in real time, upload photos for posterity reasons, organize, comment and/or communicate. An example would be the detailed article on the use of Twitter as evident in the 25th of February issue of *Presa*.

The second type of identity was based on the use of rituals and other traditional elements derived from Bulgarian folklore that connected the participants through the use of a shared identity⁵³. Similar to the topics raised earlier through the photos there were burnings of a puppet with EVN written across its chest in the city of Varna and burning of a constitution in Plovdiv, drummers and other musicians leading the protests, the stone pile as well as the coffin to name a few.[25 Feb. p 6; 9 Mar. p 8; 6 Mar. p 6; 8 Mar. p 11 all in *Presa*].

Further to the articles and cartoons within the newspapers, a brief content analysis was conducted of the *page one* stories that related to the energy protests. There were only 14 page one stories that can roughly be presented in the following narrative, which serves to summarize the newspaper data presentation section. Some of this narrative is factually untrue, so it is only to illustrate the picture painted by the page one articles in the newspapers.

There is a really *bad government image* that is based on the actual situations, *or how bad is it at home*. This caused for people to rise up and first attempt a *civil meeting*, followed by issuing *blood threats* as their pleas were not heard over time. Most of the protesters were calling for the *government to come down and the streets to be able to rule*. So the government responded with attempts at *discrediting the protesters and attempts to send them home*. Stories such as the *priest who paid his electricity bill with a Rolex* become popular and reflections on that *chaos can lead to a dictatorship*. The people still continued to protests calling for *economic sanctions for the monopolies*, anything that could potentially bring energy costs down. The protesters still refuse to participate in political power plays. A headline then comes explaining the *bad idea of a nuclear power plant* that is seeded with the political interests of the ruling party. The people feel desperate and as though no one listens...⁵⁴

...and with the abdication of the GERB government following the energy protests, the theme of energy is lost completely. The intermediate government states that they have

⁵³ For an introductory text on folklore and various other concepts, please see Greenublisher (1997) *Folklore: An Encyclopedia of Beliefs, Customs, Tales, Music, and Art*

⁵⁴ The italic are translations of the article main topics

no time to deal with it as they have to prepare early elections and with that no further articles addressing the energy situation appear.

Phase II Data: Major Themes in Interviews

Phase II data includes semi-structured in-depth interviews that were done with 11 participants. The first 7 were conducted 3 months after the protests took place, while the last 4 were collected a year and 3 months. The major themes in the interviews will be presented as to first reflect on the type of protest that took place, which is relevant to the type of images of electricity that emerged as a result of the protest. Then, various roles and positions people played in the protests will be illustrated and how those roles shaped their perceptions of the situation as well as to provide various perspectives of energy. Finally, a look through the particular content as evident in the various sections of the interview data might help further illuminate the influences over individual perceptions of electricity.

An Idea is Born: Information, Communication, Network

Some of the first questions that the participants answered concerned why were they involved in the protest, what made so many people go out onto the streets and how is the protest connected to energy and particularly, electricity. In other words, what was the *frame* of the protest in which images of electricity were created? One of the participants answered that question by arguing that for most of the people it was a question of physical survival.

“Отговорих си че е чисто физически. Хората когато ммм са останали на студено и с невъзможността вече да платят сметките си за ток през зимния сезон, са се усетили реално върху себе си... тази ... причина ... да излязат на улицата са я намерили и така.”

-Bulgarian Transcription of Semi-Structured Interview

“I told myself that it is purely physical. For people ummm when they were left in the cold and with their inability to pay their electricity bills during the winter months, they felt it on themselves...that...reason...to go out onto the street as they found it and so.”

-English Translation of Semi-Structured Interview

With some of the highest electricity prices in Europe, but some of the lowest income averages, people could not afford to pay for energy and electricity according to both the participants and the online sources. Then when the bills came, and people could not pay, they were threatened with being cut off from the supply net as with any service that the customer cannot afford. Since many people use energy for heating, the threat of being cut off from the supply net was, in fact, a very physical threat. That is why the

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most important aspect that all participants agreed on was that the drive behind the protests was a call for ‘lowering electricity prices.’

The protests were not limited to just a notion of a physical threat, but also for some, it was about the moral principles of the energy situation, specifically the energy monopoly that exists in the country that is perceived as a social injustice. For instance:

“Ами...всъщност бях ... реално, сметките ... високите сметки за ток изкараха хората на улицата но ... бях протеста беше много бях ... по различен и по дълбок от това което беше със сметките за ток и като цяло енергийния сектор. [...] Аз лично съм излезнал заради социалната несправедливост която съществува в България ... заради липсата на условия на нормален живот.”
-Original Bulgarian Transcript from Semi-Structured Interviews

“Well...actually uh ... in reality, the bills ... the high electricity bills got people out onto the street but ... uh the protest was very uh ... more different and much deeper than that which was with the electricity bills and the energy sector as a whole. [...] Personally I went out because of the social injustice that exists in Bulgaria ... because of the lack of conditions for a normal life.”
-English Translation of Transcript from Semi-Structured Interviews

These reasons for participating in the protest then had a rippling effect over what images of electricity were made available during the protest. Some of these images come from what is defined by participants as ‘normal way of life’ and serve to illustrate how electricity is part of this normality. Other images circled around issues of moral and ethical concepts such as the notion of social injustice. In such images, electricity was a tool to illustrate deeper problems within the social, political and economic structures in Bulgaria. In other words, these images of electricity served to illustrate messages about other concepts, but also through the use of those images and the messages they carry, perceptions of electricity as such can also emerge.

Having agreed on the messages that underline the protest, the next question was who these messages were addressed to. Most posters and many of the photographs made it clear that the message was for the energy companies and the ministers responsible for energy in the country, but in the interviews the intended recipient of the message was rather obscured. With the exception of some of the organizers meeting ministers from the energy sector, no one had contacted the companies or the energy regulating institution in the country. So when people spoke of the energy and electricity they were receiving and the change they hoped to bring about, those messages were not addressed specifically at anyone and the notion of ‘energy’ seemed to simply exist in the open space without a link to the producer or regulator of the electricity supply. This

was quite different from the visual data where the recipient of the intended message was clearly identified.

The visual data from social media from which the first data set came from was a very big part of the protest, and as Oates (2013) would argue, it is important to note that the 'online' and the 'offline' sphere of a protest cannot exist apart. It is not useful to try to separate 'online' and 'offline' engagement even if online a meaningful factor and can provide the spark for the offline one. Both are a part of one whole. Further, as Oates (2013) suggests, the internet platforms created a different context – that of 'one nation and two media audiences.' This thesis focuses on only one of those audiences, the people rather than the political elite, in part because the role of the internet changed most profoundly individual participation and engagement without much effect on the political one, but also because the aim of the thesis is to create a bottom-up approach, or let the images of electricity of the people come to the foreground.

Therefore, the social media aspect was acknowledged by the participants to have played quite a role in both the shaping of the protest as well as their individual perceptions of electricity. Particularly Facebook was seen as the center of the protests with one participant explaining how Facebook played a central role in providing information, opening channels of communication and establishing networks. "Well at the beginning things started on Facebook, absolutely normally. That is where the particular terms and conditions were clarified that were part of the protest." Evidently Facebook as a place for organization, networking and communication are seen as a norm in this technological world. Facebook is presented as a platform where productive growth and development could take place. It is also where people could communicate about energy by using narratives as well as various visual materials.

In addition to social media, there were few forms of 'free' communication as explained by one of the participants who argued that in Bulgaria there is 'full informational blackout' in more traditional forms of media such as newspapers, blogs, radio or television. This was an interesting description because of the association of darkness with the lack of knowledge. This also helps explain why in addition to social media, other forms of engagement were also used by the organizers; the most notable of which is an informational film about electricity in Bulgaria.

EXAMPLE 3: A Film about Electricity for Public Education

“Тък ще се върна от Май месец когато вдигнаха цената на тока, втория път с 13%. Ние направихме един образователен филм за във...енергиината мафия в България. Тръгнахме по квартали на София [...] кръстихме го по във така ... Спрях ли ти тока? ... първа част и втора част и има една чалга песен която във...знаете че чалгата в България е ... във на почитание ... ние умнишено избрахме да го кръстиме с това име защото в България повечето неща са чалга [...] и така сглобихме го този филм.”

-Original Bulgarian Transcript from Semi-Structured Interviews

“I will again return to May when they raised electricity prices, the second time with 13%. We made an educational film about uh ... energy mafia in Bulgaria. We started going in Sofia neighborhoods [...] we named it uh ... Did I shut off your electricity? ... first part and second part and there is a chalga song that uh ... you know that chalga in Bulgaria is ... uh revered ... we purposefully chose to name it with that name because in Bulgaria most things are chalga [...] and so we put together that film.”

-English Translation of Transcript from Semi-Structured Interviews

This film was, therefore, created and used for public education about energy in the context of the protests. It was not an objective interpretation of the energy situation of course as suggested by the referral to an ‘energy mafia’ and connections to the perceived low-end type of music called *chalga*. Regardless, the film is an example of images of energy and electricity created by the organizers that were purposefully spread out to large portions of the population. These images will be analyzed in detail once semiotic tools for analysis have been provided in the later chapters of the thesis.

For now, only one of the main themes associated with the film will be noted. The reactions of the public to this film according to the organizers were ones about acceptance of the information that brought on feelings of despair. “They didn’t believe that anything could change. They didn’t believe that even if they go out on the street, even if they protest that that would in some way change things.” As the organizers of the protests further described: the feelings of despair and inability to change the energy situation in Bulgaria are both what started the protests when fueled by a hope for change, but also what extinguished the protests when the hope seemingly run out.

Images of Electricity in a Different Kind of Protest

Having established the protest setting as a frame in which images of electricity occurred, the next set of questions relate to what and how were people communicating about electricity. In other words, what was the *content* of these images of electricity?

There were universally recognized images of electricity such as thunderbolts, light bulbs or particular companies like Lukoil, as one participant suggested, but there were also some culturally-based responses. Some of the participants were recollecting

performance elements that were meant to communicate different aspects regarding energy, the energy companies, production, consumption, and distribution.

Some of these performance elements, as explained by the protesters, came from Bulgarian traditional culture and could be described as *folkloric*, while others were more modern due to authors known or objects that came into existence after technological developments took place and as such could be described as *referenced*. The abundance of performance elements highlights the notion that not all messages were embedded in natural or narrative languages, but some were also evident in other forms of language such as body movements, material objects embedded with meaning, music, theater and ritual. This means that in relation to the content of images of electricity, some of these images may be visual, some may be spoken, and some may be evident in gestures, and so on. In the interviews, the narrative was dominant, but the narratives could be describing other narratives, artefacts or any of the other languages used to communicate. Therefore, images of electricity in the interviews came in responses to direct questions about how participants perceive, for instance, green energy where the answers were *descriptive* as well as through, for example, narratives about consumption and importance of energy in everyday life where the answers were *abstract*.

DESCRIPTIVE IMAGES

Some of the descriptive images of electricity discussed in the interviews are based on what type of energy exists in Bulgaria. That explains why there is, for example, little discussion on geothermal, which is relatively unused in Bulgaria and thus unknown to most of the participants.

In Bulgaria, there is the so-called ‘energy mix,’ a term used by the organizers in their explanations about the types of electricity that reach people’s homes. “That would be the electricity from AETZ Kozlodui that comes, the electricity from the green energy in Bulgaria, the electricity from Maritza one, two and three.” AETZ Kozlodui is the only nuclear power plant in Bulgaria and Maritza are actually three coal-powered stations. When asked what images the participant connected to these two, the responses frequently were a description of the building, the smoke stacks, or the nuclear logo/company logo. Additionally, the names ‘AETZ Kozlodui’ and ‘Maritza’ as evident in the quote were used interchangeably with the type of energy they represented. The name itself has become a symbol or an image of the electricity produced at each location.

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The names as symbols were then also used as descriptors themselves of other concepts, such as the notion of ‘brown energy’. Brown energy is coal energy, so as one participant stated by using a name interchangeably, “well [brown energy] would be the Maritza actually.” The knowledge that ‘Maritza’ stands for coal energy in this context is the tool that then allows the possible decoding of the description.

Brown energy is also an image on its own, as most participants agree, it refers to ‘impure’ and ‘unclean’ energy. Both the notion of impurity and lack of cleanliness further allude to some detrimental notions. As one observer suggested, [both brown and atomic energy can be associated] “with making something dirty and ... I don’t want to say desuetude ...but maybe that is how I wish it to be ... and that is a long process.” This quote shows a perception of the proper energy place for brown and atomic energy in an idealized world, namely that these types of technology belong to the past. However, there is also an onset realism that before these types of energy can become archaic; a long transitional process of change has to take place. In other words, the image of brown and atomic energy is one of necessary occurrence in the present albeit be temporary because, in an ideal world, this energy would cease to exist in view of social, technological and moral developments.

Contrary to brown and atomic energy that participants perceive in the present as a temporary condition but wish to situate in the past, ‘green energy’ is seen as still developing in the present but is very much situated in the future. This could perhaps explain why green energy, was the only energy that was not associated with a particular company, but rather, a set of values and ideals that were ascribed through the use of imagery. As one observer argued, “Well green energy is a strong enough term on its own. Green – Clear.” Other attributes participants linked to green energy were ‘pure’, ‘better’, ‘safer’, and ‘cleaner’. That is not to say that people did not know the different types of green energy, as all participants identified at least solar, wind, hydro and biomass as green energy, but these were not connected to a particular group or ownership. In fact, most of the participants connected green energy to the notion of ‘independence’.

ABSTRACT IMAGES

The values associated with green energy are both descriptive and abstract. Values, in general, are socially developed and as such change over time. This means that what was considered ‘pure’ or ‘clean’ in the 13th century may not be so last week or tomorrow. The same is true for the values attributed to different types of energy and the

images of energy they help create. That is why the next example attempts to focus on the concept of electricity consumption and depict how consumption helps shape particular images of electricity. The example follows the story of one of the organizers of the protest, who lives below the poverty line and along with many others, cannot afford to pay for much energy consumption.

“Възшност не Февруарските а протестите почнаха може би края на Януари когато дойдоха първите сметки за тока. Аз тъй като употребявам некакво такова символично количество, между 19 и 25 киловата поради простата причина че живея сама и не готвя. Изключула съм хладилника и дефакто това се натрупва от осветление ... на една крушка и от един компютър защото не ползвам и пералня. Няма от какво просто да става. Ако си сваря някой чай или кафе с бързовар това е. Или да сваря некакви картофи или ориз. Толкова.”
-Original Bulgarian Transcript from Semi-Structured Interviews

“Actually not February but the protests began maybe at the end of January when came the first electricity bills. Since I use some sort of symbolic amount, between 19 and 25 kilowatts because of the simple reason that I live alone and I don't cook. I have switched off my refrigerator and in fact that [amount] builds up from lighting ... of one light bulb and from one computer because I don't use a washing machine. There is not simply from what. If I boil some tea or coffee with a kettle so that. Or boil some potatoes or rice. That is it.”
-English Translation of Transcript from Semi-Structured Interviews

The participant describes their energy usage, but more than that, the participant also alludes to a constructed energy dependent reality. Part of this reality is based on the idea of limiting consumption due to moral, e.g. ‘taking care of the environment’, social, e.g. ‘others have done it’, or economic, e.g. ‘not enough money’ attitudes. These attitudes call for specific practices to take place such as the expectation of managing one’s own resources. In the Bulgarian context since it is about constraint, people perceive the act they should undertake with electricity is to ‘save’ or ‘use less.’ Nonetheless, the perception is about limiting, not giving up entirely. This serves to illustrate the energy dependent life the participants acknowledge living. Therefore, even though participants perceive their lifestyle to be inseparable from energy use, the electricity consumption as such is seen as being under individual control.

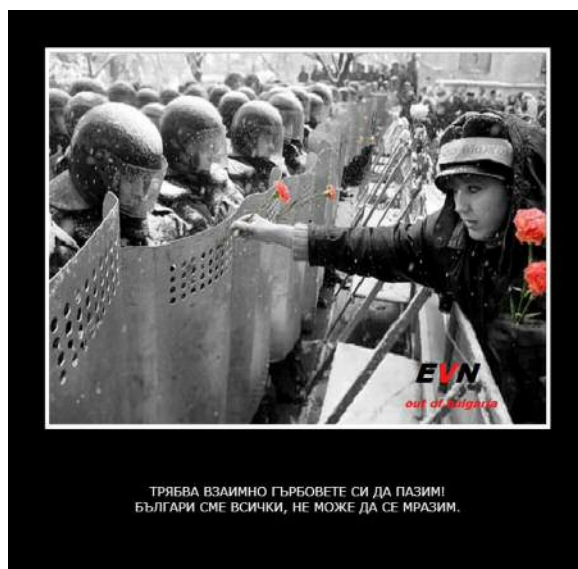
However, not all energy consumption is seen to be under individual control. There were some tendencies in the data of the Bulgarian interviews that despite my absolute attempt to stay away from the topic of life energies, almost all participants mentioned ‘life energy’ at one point or another. One of the organizers suggested that energy “in the sense the energy ... actually it can be energy that is purely human [...] how you feel alive, charged ... uh not surprising to be full of energy and so on.” Energy was also equated often with ‘life force’ or growth, but what was surprising was

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that these abstract ideas were not only limited to the general concept of ‘energy’, but also to ‘electricity’. In order for these specific tendencies to be explored further in relation to what these ideas tell us about electricity, much more focused data needs to be gathered and could perhaps be something to explore in the future.

Caught in the Middle

The final sets of interviews conducted were with members of the police, secret service, and a civil servant. These interviews provided an additional perspective on the protest. So far we have seen the participant, observer in the protest, and on the ground people, but what about the people who are at the boundaries of the protest such as the police and the civil servants. These are the people who are caught in the middle, as employed by the government they find themselves between the energy giants and the protesters. That is why these categories of people can be seen to possess a split identity when in relation to their place in the protest situation. The split identity refers to the dual roles police and civil servants have to undertake when on duty and when off duty. The police exist on both sides of the fence because when on duty they have to stand opposite the protesters but when on duty, most police would join the protests in their spare time as one of my participants remarked. That is why in the empirical materials there are many photos where the police would put down their shields to show solidarity with the protesters and the protesters would acknowledge the difficult position members of the police are in by giving them flower as in the example below.



**Figure 21: Protester Giving a Member of the Police Forces a Flower in Sympathy, Text Reads:
“We need to protect each other’s backs! We are all Bulgarian; we can’t hate each other.”**

The civil servants were in a more difficult position. As one of my participants explained, civil servants would police one another and would be threatened by superiors with consequences if they joined the protests because they need to uphold a particular image that does not conflate with the rebellious one.

Data Discussion

There are several concepts that emerge from the themes that are presented in both the visual as well as the interview data. These concepts emerge from the tension that occurs between the protesters wishes and hopes of change being juxtaposed to the actual energy situation that exists in Bulgaria. This tension is with particular regard to the difference in perception where the protesters portray an almost ideological view of neo-liberalism and the possibilities that arise from democracy and citizen engagement versus the inferred rigidity of the system. The first concept that underpins the energy protests is the notion of *the transitional context*. This then ties to the next concepts of *trust* and *capability*, and finally the notion of *identity* as the focal point of solidarity.

The Context of Long-Lasting Transition

The reality is that there have been several pivotal transitions that have taken place one after the other over 25 years in the Bulgarian social, political, economic and cultural spheres. However, because of the temporal perceptions, just as one event ends and another begins, the perception of most participants is of a single transition that has stretched across that time. This perception has contributed to the establishment of a created reality where the Bulgarian context remains in a moment of flux and with perceived loss of stability. This has led for people to enter what one participant termed ‘survival mode’. That is when an individual has to find ways to survive without outside help. It is this mentality that underpins the out-of-institutional approach to education and, arguably, is one of the conditions for the social media activism to flourish. Through self-education by life experience, storytelling, or the utilization of educational tools posted online as another participant stated, “here we have become half-experts due to everything that happens in Bulgaria [...] the individual needs to take the initiative and to push because we cannot expect anything from anyone.” And one of the ways people push is through engaging in protests.

Every pivotal transition for the last 25 years is marked by massive protests. For example, the transitions that impact the currently alive generations began in November 1989 with the change of the socialist regime towards a democratic one. This major political transition had a rippling effect on all economic and social structures in

Bulgaria, which in turn transitioned in order to adjust to the new political regime. These transitions led to the manifestations, and what are referred to as ‘student protests’, of the early 1990s. Then, just as the country began to stabilize across social, political, economic and cultural structures, there was another political transition, when Bulgaria prepared and eventually joined the European Union in January 2007. This new political transition caused for all the other social structures to also change and adapt one after the other, and it could be argued that the current waves of protests, starting with the energy protests in January 2013 till present, are the response to those transitions. As Grin et. al. (2010) argue the transitioning of any structure is a difficult process due to the persistent structural problems that have been socially reinforced over time and that have historically co-evolved with progress. The Bulgarian transitions are the same – with many structural problems, maintained and sustained over time.

The images of electricity present also reflect this transitive context. One of the examples presented earlier from the interviews about the role of the various types of energy helps reflect on that. In that example, some energy types were attributed to the past, such as coal and nuclear, while others to the future, such as green energy. The present, however, was presented as in a moment of flux, a moment of transitioning from one type of energy to another, so neither here nor there.

Trust and Capability

The transitioning situation has had consequences in relation to the perceptions of *trust* and *capability*. The notion of transitioning relates to instability due to ever-changing structures, which in turn has led to a break in communication between the general public and energy companies and the political elites. This break in communication has led to a lack of trust as well as questions of capability, where the concept of capability refers to both the need to gain knowledge and expertise for the protesters, as well as lack of understanding and structural politico-economic constraints on both the political figures and the energy companies. This break in communication then leads to protests that illustrate mistrust and the lack of perceived capability to deal with the energy situation in the country.

The comparative case with the Russian Winter of Discontent can serve as a theoretical explanation regarding this break and communication and the issues of trust and capability. As mentioned prior, there are several factors that underpin protest behavior, which can be summarized as three critical elements that helped the internet

change the political landscape in Russia. *First*, the internet opened up preexisting restrictions that were imposed by the Kremlin on the flow of information. *Second*, internet platforms provided a space that was much more difficult to control by the political elite. *Finally*, the “compelling evidence of falsification in the December 2011 Duma elections, spread in different ways through the online sphere, [and] triggered a particularly visceral response from Russian citizens.” (Oates 2013; 165)

The energy protests I study, used the social media platforms in a similar way, which unleashed a flow of information, diminished state and party control as well as provided the space for citizens to organize themselves in what later turned to be very large manifestations. In other words, in both the Russian and the Bulgarian case, the online sphere did not change the political system per se, but rather shifted some of the “power to control political communication away from one set of elites.” (Oates 2013; 184). The online sphere allowed for mistrust to flourish and the divisions to deepen on one hand, but on the other, for voices that may not have been heard before to come to the surface. Because information was unrestricted and information flow was made possible, this explains why there was such an abundance of images of electricity present in the social media sphere, images that present the voice of the people.

Furthermore, the shifts of power did not affect everyone in the same way. In both the Bulgarian and the Russian protests, there was no change in the elite or party groups – they still remain an oligarchy. In both cases, the online sphere highlighted both available opportunities and impending risks to participants. In both cases, however, the most profound change could be seen on an individual level. The ‘individual citizen’ learned how they could participate in a range of new ways such as acquiring information, contributing views, discussing new ideas, taking part or organizing a protest march. In both the Russian and the Bulgarian protests, it was the individual person that was much more involved, which in turn led to the high numbers of the group present and persistent during the protests. This also meant that it was not just the general public group that communicated images of electricity, but any individual.

This argument falls in line with the conclusions of Oates’ book, where she suggests that the evidence from the Russian case shows how the online sphere alone cannot help democratization, but it can be part of the process by providing an opportunity to engage with and organize a civil response. However, having said that, it is up to the individual members of the public, as well as the society as a whole, to

decide if the potential freedoms provided through internet media would be embraced or ignored.

Identity

The previous section also alludes to a ‘dance’ between two roles – the role of an emancipated individual and the role of an individual that is part of a group. These two identity roles were navigated by reserving the emancipated individual for the online sphere and the social individual as part of the protests. This helps explain why images of electricity in the visual data gathered online is much more varied, while in the interviews, the images are much more uniform. Be they descriptive or abstract, the protest images have already been entered in a communicative process – creation, communication, interpretation – that then seems to constrain them to fewer possibilities. In other words, many images appear to be lost if they go through the image communication process. Online, on the other hand, there are many more images, which as was the case with the HAZMAT suit recreation of art performance.

This situation can be explained by Todorova-Pirgova who argues that protests can be seen as cultural expressions of a *semi-closed community*, which is defined as “one which closes up around a certain idea and whose members feel the need for artistic self-expression within that community [...] it emerges from the social environment of the open community and it is closed only around a specific cause for a particular moment.” (Todorova-Pirgova 1997; 109). This means that in the semi-closed community, in which any protest can be categorized including the Energy Protests that I study, can be expected to have musical, verbal, written, or ritual expressions of a singular idea. Folkloric elements then can be evident in the context of the semi-closed community where social interactions occur in a specific cultural context. These folkloric elements are not enactments of traditional folklore, but rather a set of reproductions “of certain traditional cultural patterns in present-day social and cultural reality” (Todorova-Pirgova 1997; 110) can be seen to exist in this setting. In other words, the traditional folkloric elements are taken out of the cultural context in which they nominally reside and transported into the protest context where they serve the semi-closed community. During this ‘transfer’ from one context to another, the folkloric elements may lose some of their embedded meaning or may be infused with another in an attempt to communicate a singular idea across to all the members of the cultural community that participates in the protests, but who also, have a shared heritage

allowing them to understand the embedded meanings of the folklore elements as they exist in the original cultural context.

The trends Todorova-Pirgova identifies can also be observed in the energy protests. Whether it would be the folklore language for communication or some other sign system, the system or language creates parameters that relate to the possible communication and conveying of meanings across. Moreover, without the tools or an understanding of the system used for communication, exclusion may occur to any potential participants due to their inability to interpret the messages. This would then give rise to divisions between 'Us', those who have the interpretative tools and can be considered insiders, and 'Them,' those on the outside.

Chapter 5

Semiotics: Analytical Framework

We are symbols, and inhabit symbols,
-Ralph Waldo Emerson

Introduction

Having presented the field methodology for the thesis and two data presentation chapters that illustrate themes and concepts arising from the empirical materials, this chapter will outline the theoretical framework of the analysis that will be presented in the second half of the thesis. This framework, which includes its own ontology, epistemology, research design, and methodology, is that of semiotics. The semiotic perspective will be the next level of analysis on the collected empirical data. The semiotic analysis for this thesis is built on the thematic analysis that was shown in the previous two chapters, which would explain why this methodology chapter is presented here as a separate chapter, rather than as part of the previous methodological discussions.

The semiotics framework is seen as a crucial part of the thesis because it would allow for a deeper understanding into the images of electricity people have as well as new images that can only emerge from the visual and narrative data already presented with the use of a systematic interpretative semiotic analysis. That is why the chapter will focus on some of the definitions of semiotics and further, relevant for the later discussion, terminology. Further, in this chapter is also developed my own semiotic theoretical frame that I hope to illustrate with the empirical materials in the later chapters.

Most researchers do not consider semiotics a unified discipline even though its major scope of study has been well defined as the study of sign and sign systems (Sebeok 2001; Crow 2003; Margolis and Pauwels 2011). Several schools of thought developed simultaneously in different parts of the globe, and each one of them formed its own theoretical models and research priorities. That is why most introductory books present semiotics as developed by ‘national schools’ and/or based on the attributed ‘creator’ of the school of thought.⁵⁵

There are three major schools that are considered classics in the semiotic discipline – the French, the American, and the Tartu-Moscow ones (Sebeok and Umiker-Sebeok 1988; Bankov 2001). At their establishment stages, at the turn of the 20th century, these schools did not communicate with each other, so they each developed their own definitions of key terms and concepts. It was not until the resurgence of the discipline in the 1950s that books were written as divided in

⁵⁵ For some introductory texts and general works: Fiske 1982; Hodge and Kress 1988; Deelu 1990; Nöth 1990; Danesi 1994, 1999; Bankov 2001; Chandler 2001 (also online version, better as interactive); Cobby and Jansz 2004

terminology rather than nationality, but even then, the Tartu-Moscow school of thought was greatly excluded (especially pre-1989) because of political reasons and linguistic barriers. Even to this day, most of the Tartu-Moscow works on semiotics have never been translated into English and were read in Russian in preparation for this thesis. That is why; the presentation of the theory for this chapter is structured to portray a balanced view between the French and American schools of thought on one side and the Tartu-Moscow one, on the other.

This chapter is structured around major themes and concepts in semiotics, within which the similarities and differences between the different schools of thought are explored. Further, as semiotics is a discipline that has grown and evolved over the last hundred years, the similarities and differences will also be reflected in time. The chapter could be considered a rather oversimplified overview of the basic terminology and possible semiotic interpretations of human communications that lays out the foundation for my study of images of electricity. In other words, references to semiotics terms and theoretical models will be made only in view of their application to my empirical data.

Semiotics, an Overview

Semiotics is a difficult concept to define because it may be found in all aspects of the research process – ontology, epistemology, methodology, methods, and content (Parret 1983; Buckland 2000; Bains 2014). First, semiotics may refer to a framework that allows a researcher to see the world in a different way, a different reality that is culturally and socially constructed, and then it may be defined as ontology. It may refer to a discipline that has a particular way of allowing the researcher to study the social world, an epistemology. It may connect to specific research designs or employ a particular methodology depending on the focus of inquiry, but also semiotics may be defined in accordance with the content being studied. Semiotics does not have a strictly determined boundaries of study in terms of selected objects, regions or time periods, but rather offers, a series of theories developed over the last 120 years that can help the researcher understand hidden aspects of visual, linguistic, auditory, etcetera aspects of social life and communication.

To add to the already existing complexity of semiotics as a concept, the term itself was developed simultaneously by two scholars in different parts of the world, France and the United States. Ferdinand de Saussure and Charles Peirce are believed to have never met and that the concept was developed naturally as the next logic step

based on Emmanuel Kant's philosophy. (Kant 1819; Saussure 1906-1911; Pierce 1931-58). Because of these circumstances, semiotics evolved slightly differently but simultaneously over many years. Meanwhile, in Russia, the concept was being developed in a different research context,⁵⁶ which remained somewhat outside of the academic dialogue with the rest of the world due to the existing political and linguistic barriers in place. That is not to say that Russian scholars were completely unknown outside of Russia, but they were simply not as influential within the semiotics dialogue in Western Europe and the United States due to a lack of availability of translations of academic works written in the Russian language as well as a lack of ability to participate in as many face-to-face exchanges in the forms of conferences and seminars until 1989 when travel opportunities became more frequent.⁵⁷

As a result, there are varying definitions of semiotics in existence. The most often cited definition is that of Charles Pierce, who defines semiotics as *the study of signs*. (Pierce 1931-58; Bignell 2002). For Pierce, and his followers, the study of signs is connected to the individual cognitive processes. How we develop thoughts and thought processes would dictate what signs we create, communicate with and comprehend. (Chandler 2001; Bignell 2002). By contrast, Ferdinand de Saussure perceived semiotics as 'a science *which studies the role of signs as part of social life*.'⁵⁸ The precise term Saussure uses is *semiology* rather than *semiotics*, where the focus of the investigation is 'the nature of signs and the laws governing them.' This focus is achieved by placing *language* as the center of the inquiry and Saussure defines *language as a system* as oppose to a random string of words. Finally, the Russian thinkers that developed semiotics did so based on the works of the Russian Formalism as an early 20th-century school of thought as presented in the publications of Mikhail Bakhtin and Vladimir Prop amongst others. (Bakhtin 1924; Prop 1968). The Tartu-Moscow school of semiotics formed in the late 1950s and quickly developed between 60s and 80s with numerous publications focusing on semiotic analysis of language, arts, mythology, culture, society and human communications in general (Lekomtzev; 67; Lotman 1969; Uspenski 1969; 1973; Bogatarev 1975; Ivanov 1975; Muhargovskii 1975; Solomonik 1980; Lotman 1998). An example of a leading scholar from the

⁵⁶ For examples, please see publications in Sign Systems Journal

⁵⁷ Vygotsky's work became very fashionable in developmental psychology and remains so. Bakhtin's relevance grows with a start in the mid twentieth century

⁵⁸ Chandler in relation to Saussure's semiology – Saussure did not publish so hearsay references are acceptable when discussing his theories. The only reference I can give is Saussure *Course in General Linguistics* (1906-1911) that was published 4 years after his death. The course does not outline the theories directly so what we really know about Saussure and his work is mostly through his students. Also see Culler 1985 and Holdcroft 1991

Tartu-Moscow school of semiotics is that of Jury Lotman whose work has transcended some of the linguistic and political boundaries and a small part of which has been translated into other languages such as English and French.⁵⁹ There isn't just one definition of semiotics that one can quote from the Tartu-Moscow school as there are many of them, but what is evident is that all definitions have as their focus the cultural aspect of semiotics. In other words, the focus of the inquiry emphasized by the scholars in this school is the social and cultural context in which signs do exist by nature, i.e. the interpretation of signs in context.

Semiotics has developed further over the years from these three approaches to the study of signs – cognitive, linguistic, and cultural – and has been profiled by either the methodology used for analysis such as structuralist or interpretative methodology or by the content of the signs such as biosemiotics, behaviourist semiotics, animal semiotics, visual semiotics, semiotics of art, culture, mythology, etc.⁶⁰

For this thesis, a holistic approach to semiotics is applied, which can be seen in the works of many Bulgarian scholars such as Julia Kristeva, Tzvetan Todorov, and Kristian Bankov to name a few. (Bankov 2000, 2001, 2001a, 2004, 2005, 2008; Kristeva 1986; Todorov 1982, 1982a). These scholars did not have a linguistic barrier to neither the Tartu-Moscow school of semiotics nor to the American and French ones. Moreover, the political barriers were also not as strong, which enabled these scholars to study all three approaches, develop their own and apply them to any subject matter in a holistic manner thus studying the cognitive, linguistic and cultural aspects of any text simultaneously. For ease of use, in this thesis, I would refer to this holistic approach as the Bulgarian school of semiotics, which, similarly to the Tartu-Moscow one, has no founding figure but is rather a group of scholars who practice this holistic approach to semiotics and develop an original approach that could be defined as *interpretative semiotics*. All schools of semiotics are taught at the Bulgarian universities, and young researchers are left to make their own choices of definitions and theoretical models when applying semiotics as an analytical tool to various texts as stated above.

⁵⁹ As for example, his theories on the semiosphere that will be discussed later in the chapter are also translated into English. For full list of English publications, please see: Kull 2011 and for online access <http://www.zbi.ee/~kalevi/lotmeng2.htm>

⁶⁰ Behaviourist semiotics – (Pierce 1931-58 and Morris 1938, 1939, especially 1946, 1948, 1964, 1993; also see Mead 1922, 1934); Cultural semiotics – (Lotman, please see previous footnote for full list in English; and Uspenski 1976) Interpretational Semiotics (Bankov 2000, 2001, 2001a, 2004, 2005, 2008); Visual Semiotics (Group M – translated versions on Semiotic Map); Tartu School in the Last 10 years – biosemiotics and developing the semiosphere theory (Kull 1998, 1998a, 1999, 1999a; 2000, 2002, 2005, 2005a, 2009, 2009a; Kull et. al. 2005; Pattee et. al. 2009) etc.

The Bulgarian school of semiotics can be associated according to Bankov with a definition of semiotics that seeks to describe the semiotic approach by highlighting its interpretative nature. (Bankov 2001). In this school, semiotics is equated with “the theory of interpretation,” where the interpretative nature of the sign is at the focus of the inquiry. This interpretation can apply to cognitive, linguistic, or cultural elements being studied, but it does not come without certain conditions or assumptions. The very basis for this definition stems from the notion of the interpretative nature of signs. In other words, the assumption is that only one reality arguably exists, so then semiotics is about how to communicate and interpret that reality versus interpretation that reflects the inherently present polyphony of the signs. It is this change of focus that makes the Bulgarian approach so valuable for my study.

Using this holistic approach, there are multiple aspects I can focus on in both of my case studies, and a discussion of their interplay provides me with deeper insight into people’s individual perceptions of energy and electricity. Energy and electricity will too be analyzed in this thesis as one reality with multiple interpretations reflected in various types of signs and sign systems.

A Sign, Comparative Definitions

All the definitions of semiotics keep bringing forth the notion of a *sign*, but what is a sign? This section will present an overview of definitions that not only explain the term *sign*, but also identify *its* basic elements and functions in human communication. These definitions will not be presented in the chronological order in which they occurred, but in comparison based on the various internal sign structures they describe.

The most commonly accepted definition of a sign accepted by most scholars regardless of semiotic school affiliation is that of: “something that stands for something to someone” (Pierce 1931-58). This definition distinguishes four basic elements of the sign. *First*, an object or an idea that is followed by *second*, a representation, physical or mental, of that object or idea that can be *third*, interpreted and understood by someone. The *fourth* emphasizes the communicative nature of the sign and provides the relationship between the sign and its context.

The internal structure of the sign is described differently depending upon the specific research focus of each scholar so in this section will be presented several examples.

The major research focus of Ferdinand de Saussure is the human language. He argues that the sign can be seen as the product of the convergence of the *signifier* and

the *signified*. (Klages 2006). The signifier is defined as the physical form of a sign such as sounds, words, pictures, etc. while the signified is the abstract notion that is both reflected by the sign and embedded in it. For example, the word C-A-T seen as a sign consists of a signifier (the sounds that form the word cat or the letters on the page) and signified (concrete or abstract notion of a specific animal). Some scholars prefer to use the terms form and content as almost synonymous to signifier and signified respectively (Barthes 1977; Kim 1996; Zube and Moore 2013; but also see Deleuze and Guattari for problematizing this substitution 2004; Parisi 2004).

Saussure, and later Derrida, explore the relationship between the concepts of sound and image, or the idea of the *sound-image*. For Derrida, “the sound-image is the structure of the appearing of the sound [*l’apparaître du son*] which is anything but the sound appearing [*le son appraisant*]. [...] The sound-image is what is *heard*; not the *sound* heard but the being-heard of the sound.” (Derrida 1998; 63). In Saussurian terms, the sound image designated the *signifier*, while the concept is the *signified*, or simply put – sign and referent respectively. Saussure argues that the linguistic sign is actually the byproduct of a concept with a sound image, where “the latter is not the material sound, a purely physical thing, but the psychological imprint of the sound, the impression that it makes on our senses.” (Saussure 2010; 95). Therefore, he concludes that the *meaning* of any sign can be traced in the association between the concept and the sound image.

The following figure was created by Peter Kugler to illustrate the relationship between sign, sound-image, and meaning-concept as developed by Saussure and Derrida (Kugler 2002; 59).

$$\text{sign} = \frac{\text{sound-image}}{\text{meaning-concept}}$$

Figure 22: Sign, Sound-image, and Meaning-Concept as Originally Developed by Kugler

With this Figure 22, written like a mathematical equation, Kugler suggests that the sign is proportional to the sound-image and inversely proportional to the meaning-concept (Kugler 2002; 59). In other words, the stronger the sound-image, the clearer and more

understandable the sign is, while the stronger the meaning-concept, the weaker the impact of the sign.

By contrast, Pierce perceives the sign to be much more complex and tied into human cognitive processes. “According to Pierce the object is something infinitely complicated, from the type of ‘unrecognizable dynamic object’, that shows itself with every opportunity for us to understand it as a specific immovable object, depicting only partially that, which the object is, as a function of a theoretical frame or of the culture-forming our perception of the object.” (Bankov 2001; 40).

Charles Ogden and Ivor Richards (1946) developed the triangle theory based on Pierce’s work. According to them, the basic elements of the sign are object, sign, and interpretanta as illustrated by the following figure.

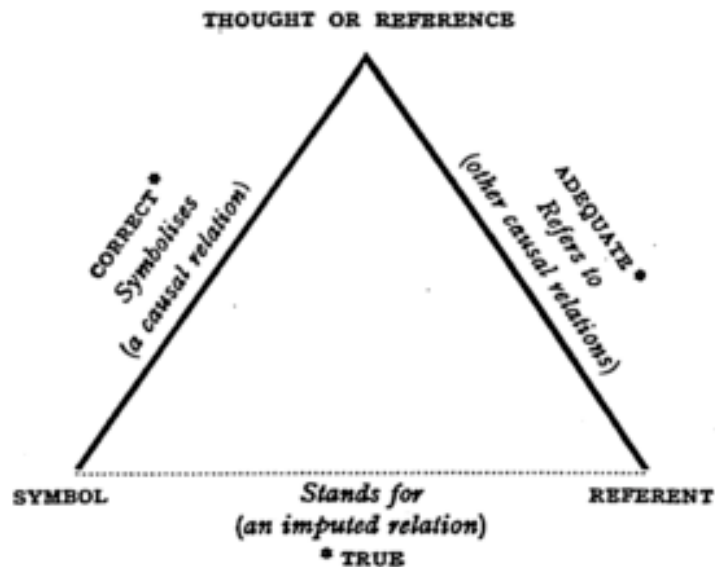


Figure 23: Object, Sign, Interpretanta Triangle from Ogden and Richards (1946)

The three elements of the sign in this figure correspond to the three elements identified by Pierce. The symbol⁶¹ corresponds to sign, the referent corresponds to object, and the thought or the reference to it corresponds to *interpretanta*. Stephen Ullmann relabelled them later as ‘name’, ‘thing’, and ‘sense’ respectively (Ullmann 1957, 1962). The symbol can be any form that can stand in the place of the referent. The referent is what the sign is describing, and the thought of reference is the meaning or the content of the form. The thought of reference or the sense/*interpretanta* is what makes this theory different from the Saussurian one. The *interpretanta*, which is part of

⁶¹ Symbol is one type of sign please see pages 145-146 in the thesis to see more on typology of signs.

the cognitive process, was not developed as part of the linguistic focus Saussure had when developing his view of the elements of the sign.

In order to understand the complexity of the *interpretanta*, one needs to understand the logic Pierce was building this theory on. He perceived “the entire dynamic of thinking as a series of transformations of one type of signs into another” (Pierce 1931-58) and it is because of these transformations that thought processes grow and develop. Every such transformation, Pierce saw as an *interpretation*. “The result of the interpretation is the interpretanta, that becomes the starting point for the next interpretation, and so on this continues to infinity.” (Bankov 2001; 37). This continuous thought process is called *infinite semiosis* (Noth 1995; Eskin 2000; Amian 2008; Silvermann 2014; Atkin 2015). It is in this context that Pierce (1931-58) created his definition of the sign as “something that stands for something, to someone in some capacity.” The interpretanta, therefore, is the beginning of every following interpretation for as long as thought processes exist.

Interestingly enough though, the triangle theory that shows the interpretanta as an alternate to the Saussurian model, as widespread as it is in semiotics literature, is actually an oversimplified model of the theory developed by Pierce originally. The model Pierce developed is much more complex as it actually considers nine elements of the sign divided into three categories, or as referred to, a triple trichotomy (Pierce 1931-58)⁶². *First*, there is the trichotomy of the sign itself that is defined by its a) quality, b) existence, c) role of law⁶³. *Second*, there is the trichotomy of the sign in relation to the referent, which is defined by the specific characteristics of the sign. This trichotomy is known as the ‘typology’ of signs where the types are divided based on a) characteristics of the sign, b) its physical connection to the referent, c) its connection to the interpretanta. *Third*, there is the trichotomy of the sign as an interpretant itself where the three aspects of the trichotomy are a) sign as a possibility, b) sign as a fact, c) sign as a reason.

A visual representation of the nine elements could be seen in the following Figure 24 that I based directly on Pierce’s work.

⁶² Original texts for the triple trichotomy theory were accessed from Semiotic Maps

⁶³ Law seen as a commonly repeated, routine custom

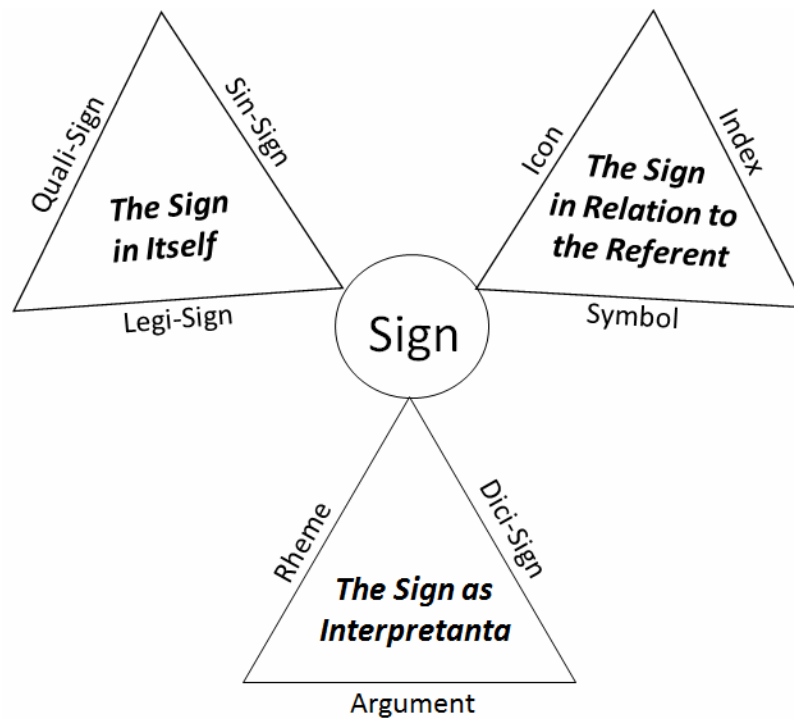


Figure 24: My Visual Representation of Pierce's Triple Trichotomy

The sign in itself consists of *quali-sign*, *sin-sign* and *legi-sign*. The sign in relation to the referent can be categorized as *icon*, *index* or *symbol*. The sign as the interpretanta can function as *rheme*, *dici-sign* or *argument* (Pierce 1931-58).⁶⁴

“*Quali-sign* is a characteristic that is a sign”. *Sin-sign* is a sign that exists at only one moment in time. It is an actual event that becomes a sign due to its characteristics. Therefore, a sin-sign is based on quali-signs. *Legi-sign* is a sign that is a common law or understanding that is inevitably social in nature. Every negotiated sign is a legi-sign, but not every legi-sign is a negotiated one. The legi-sign is not a particular event, but rather, a common view or abstract idea. For instance, the word ‘hurricane’ refers to all possible types of hurricanes. Similar to a sin-sign that is built on quali-signs, a legi-sign is built on sin-signs that show the particular application of the legi-sign. ‘Hurricane Sandy’ is an event that can be interpreted through the typology of the sign in itself as an example of a sin-sign. Hurricane Sandy is a single event that has the common characteristics of a hurricane, (destruction, power loss, etc.) but the specific combination of those has made the name of the hurricane when used as a sign in its own right with its own specific characteristics and set of associations. ‘Hurricane Sandy’ is a sin-sign of the legi-sign ‘hurricane.’

⁶⁴ This characteristic is a theoretically analysed one, because a characteristic cannot in reality be a sign until it is applied, but the application has nothing to do with the characteristic of the sign. For more information, please see Pierce’s original work from 1884, Bulgarian Translation on Semiotic Maps.

The sign in relation to the referent refers to the typology of signs as *icons*, *index*, and *symbols*, a typology accepted across all semiotic schools of thought.

Iconic signs are signs that relate to the referent primarily based on their physical characteristics. These characteristics usually reflect reality and are visualized as they are socially negotiated to exist and as such the icon is built from quali-signs. In



other words, an iconic sign is a stylized image of something that can be seen.

For example, the icon on this page to the left is socially accepted to mean thunderbolt. The image refers to a particular characteristic or quality that is accepted to underpin the illustration of the thunderbolt, so even if the color is lighter or darker, the bolt fat or thin, people would still recognize it as a thunderbolt. That being said, the socialization needed for the understanding of an icon sign is very basic and it does not require a particular cultural familiarization. The image above of the thunderbolt is an icon in societies that have electricity and have seen thunderstorms, regardless of geographical location or ethnicity; the thunderbolt can be either thought or observed in nature thus making the reading of the icon possible without prior specific cultural knowledge.

Symbolic signs, by contrast, require particular cultural knowledge. Symbols are signs that refer to the referent by pre-negotiated culturally accepted interpretations of the connection between the symbol and what the symbol refers to. Symbols are thus connected to legi-signs. A cross could be culturally accepted to stand for Christianity, while the six-point star, can be a symbol of the Jewish religion. Even if one has observed a star or a cross, the connection to the specific religion, value systems and beliefs that come with it, will be lost on the interpreter without prior enculturation having taken place (Ortner 1973; Rosaldo et. al. 1975; Needham 1979).

Finally, *index signs* are signs that show a relationship to the referent, a cause and effect correlation such as an arrow pointing in the direction of the center of a city or a traffic light signaling a car to stop with the color red.

The majority of signs used in the thesis are either symbols or icons and the terms are used accordingly. A symbol is a sign that often refers to an abstract emotion or feeling such as hope, love or fear. An iconic sign refers to a stylized version of a particular object or idea. As will be evident in the analysis chapters, in some cases a sign can be interpreted as an icon while in others the same sign can be seen as a symbol, which is why this theoretical foundation is necessary for the situation of the semiotic analysis of the images of electricity that follows in Chapters 6 and 7.

The final trichotomy depicts the sign as the interpretanta. *Rhema* is a sign that is the sum of the quality possibilities in relation to its interpretanta. It is the signification of an object. Thus, the rhema is a sign that signifies the referent only through the existence of its own qualities. *Dici-sign* is a sign that actually exists in relation to its interpretant. The rhema is used as part of the dici-sign in order to explain the ‘fact of the direct correlation.’ In other words, the dici-sign signifies the referent through an active physical connection. *Argument* is a sign that has the relations of the common norms or law similar to the basis of the legi-sign. As a sign, the argument signifies the referent through the qualities of the referent itself as a sign. An illustration of this typology of signs could be ‘Christian faith’. The rhema is when the possibility of the Christian faith begins to exist. The dici-sign would focus on the facts of the religion while the argument would highlight the reasons or logic of the Christian dogma.

In some ways, these trichotomies are built so that the first levels of each – quali, icon, and rhema – refer to characteristics and substance. The second levels – sin, index, and dici – refer to a connection or link between the sign and something else. The third levels – legi, symbol, and argument – refer to the normative or commonly negotiated and accepted laws of meaning, use and communication on a cultural level.

In accordance with the Peircian definition of a sign, a change in overall meaning can occur with the change in any of the components of a sign. In other words, the change in form will produce a change in the referent, which will in turn produce a change in the interpretanta. On a theoretical level, this means that signs have meanings that exist unrelated to the use of the sign as part of any communication process, but that are an indivisible part of the components of a sign. On one hand, this highlights that only one of the three aspects of a sign – form, referent, and meaning – directly refers to the use and communication on a cultural level and yet even if we do not know the exact meaning of a sign used in communication or what it refers to, theoretically, we can distinguish that if the form changes then so do the referent and the meaning.

This triad – form, referent, and meaning – will be the basis for the data analysis in the next two chapters and will be illustrated with the use of graphic representations i.e. *triangles*. Each triangle is a sign, and each side of the triangle will be labeled as one of the three parts of the triad. The analysis will be described in the text, but the triangles will serve to better illustrate the analysis. In some cases, triangles will be placed side by side as a way of comparing and contrasting the changes a sign undergoes when there is a shift in the form, referent, and/or meaning.

In contrast to the Peircian triple trichotomy theory, some of the theoreticians from the Tartu-Moscow school of semiotics would argue that “the minimal semiotic unit is the communication act.” (Andrews and Maksimova 2009). This would infer an assumption that a sign does not exist outside of the communication sphere. A sign carries meaning only when used as part of the communication process.

Sign Systems

Sign as part of the communicative process is only one part of a larger system (Kim 1996; Inkinen 1999). A sign system can be a separate system while also being a sub-system of another system. For example, ‘language’ can be studied as a system on its own as well as a sub-system to the system of ‘culture’. The relationship between a system and its environment is that everything that is not placed within a given system becomes an attribute to its environment. In semiotics, an example of such a relationship would be that of text to context.

Sign systems can be studied in one of two ways – synchronically or diachronically. Synchronic refers to “the approach which aims at the definition and description of the structure of a text in the final form in which it is handed down to us” (Moor 1995; 98). In this approach, the same text has several meanings; therefore, polysemy is a synchronic concept. (Ross 1994; 389). Diachronic can be defined as “the approach which aims at the definition and description of the compositional/redactional history of this text.” (Moor 1995; 98). In this approach, the multiple meanings studies are seen as a change in meaning, or a transfer of meaning, in relation to time. For example, in relation to electricity, a synchronic study of electricity in a particular place might focus on one specific moment in time for that place such as the moment the first light bulb was turned on, or a moment when energy was lost. A diachronic study of electricity might focus on one place but stretch over time allowing for a temporal comparative perspective. In relation to my two case studies, both can be studied either way. The case study of Hurricane Sandy can represent a synchronic study with the focus on one event at a particular moment in time in a particular place and how that event impacted individual’s perceptions of energy and electricity, but it can also be a diachronic study by providing a comparison to other such events such as to hurricanes Katrina and Irene. The case study of the Bulgarian Protests could also be studied both synchronically and diachronically. On the one hand, the protests could be studied synchronically as one event, with a beginning, middle and end, which simply took a long time to complete, but nonetheless, a single event. On the other hand, the protests

could be studied as a series of events, each protest as a separate event that could be compared to the one the day before or two weeks after. In this latter case, the *meaning* of electricity can be studied as it evolves over the time of the protests and as it changes over time.

Language as a Sign System

The distinctions made thus far about the linguistic, cultural and cognitive foci that help provide a nuanced approach to semiotics are rather basic and incomplete without some consideration of the use of these terms and within the context of sign systems. The first one that will be addressed in this section is the notion of *language*.

Ferdinand de Saussure postulated the concept of semiology, which he defined as “a science that deals with all types of sign systems, one of which is the natural language.” (Bankov 2001; 23). This definition shows that there are a multitude of sign systems and that one of them is language. The concept of language as a sign system is one of Saussure’s contributions to the development of semiotics as an approach. Language as a system can be understood as “the simple language is not a part of the more complex ones, as it would be, if language is a group of words, but that actually that the whole reality is articulated in a different way.” (Bankov 2001; 25). Saussure further develops the word *langue* to refer to language as a system, while the term *parole* he uses to distinguish language use. *Langue* is paradigmatic in nature or analyzed using paradigms as it is based on classifications or groupings while *parole* is syntagmatic or analyzed through the study of syntax and surface structures (Parret 1983).

In descriptive linguistics, all subsections of language can be studied as sign systems. The subsections beginning with the smallest are phonemes, morphemes, words, sentences and text (Krampen 1995; Nicholas 2009). These subsections are researched by the disciplines of phonetics, morphology, lexicology or lexicography, syntax, and text linguistics respectively (Karpova and Kartashkova 2009). When text is analyzed as a sign system, that is when semiotics is applied. Each of these listed linguistic disciplines has both paradigmatic and syntagmatic aspects and can be analyzed either way and yet descriptive linguistics and its subsections are all synchronic in nature. For linguistics to apply a diachronic perspective, one must look into historical linguistics (Bynon 1977; Campbell 2013).⁶⁵

⁶⁵ The relationship between language and its environment and development over time is studied within other disciplines. Language and its use in social situations are *socio-linguistics* such as language used when speaking to mother, professor or a doctor (Spolsky 1998). Language-culture refers to *ethno linguistics* such as how the Inuit language includes over 100 words for snow in Alaska, or with respect to how the language reflects the ethnos of the group (Underhill 2012).

Finally, the last aspect of language that is needed for the purpose of the later analysis in this thesis, is connected to the link between language systems and the processes of identification and interpretation (Kasher 1998). “Only within the boundaries of one and the same language system can we connect to the fundamental for the language process of *identification*.” (Bankov 2001; 32). Arguably different language systems are more connected to the process of *interpretation*. That is not to say that the interpretational element does not exist in the same language system, but that it is more pronounced and more involved when different language systems take part due to the necessity to both comprehend and translate from one language system to another. On the other hand, within the same language system, if both participants hold the same language capacity, communication is primarily based on a process of identification. For that to be true, both participants also need to have the same cultural and social background as will be developed in the section below.

Culture as a Sign System

The scholars from the Tartu-Moscow school would argue that the culture is an inevitable part of sign exchange and as such should be a focus of inquiry when one studies signs. “In semiotics ‘culture’ includes literally everything. It is not possible to think about whatever conscious human activity outside of the context of culture [...] a human without culture does not exist.” (Bankov 2001; 12-13). For Pierce and Saussure and their followers over the years, that argument was made implicitly, but it was not until works published in the 1950s by the Tartu-Moscow school that made explicit the importance of culture for the study of signs and communication.

Culture is “something obtained” “Culture is something more, that is great for a person to have, but can also happily live without. It is an amount of knowledge plus a specific way of using it.” (Bankov 2001; 12). Culture is the accumulation of shared code and sign systems through aggregated communication, i.e. being ‘taught’ as well as through experience. Further, “only through signs is communication possible, which is the condition for the most important aspect of culture – its social nature. The availability of culture is also the condition for the existence of every society.” (Bankov 2001; 14). Without social nature, communication is not possible, and without shared culture the communication process would be incomplete (Leach 1976).

One broad definition of culture states that it is “the sum total of ideas, knowledge, values, beliefs, skills, behaviors and material creations that are learned,

shared and transmitted primarily through the sign system of the language.” (Greenublisher 1997).

There are three major components of culture and signs can and do exist in all three. The *first* component is the cognitive processes where thinking and imagination take place. This component includes ideas, values, knowledge and beliefs of both individuals and communities. The *second* component is that of the behavioral models that define human interaction in various social situations, how people engage in or how they act, what manners are used and so on. The *third* and final component is that of all material creations made by humans from tools of labor to exclusive examples of fine art. Each of these components has sub-structures, and each of these sub-structures could cross between different components. In other words, in order for a material creation to be made, someone somewhere had an idea and a certain set of skills that were placed into action that resulted in the material product. Signs are present in all three components of culture. In other words, cognitive processes are reflected in both social communication and material creations, and all three components of culture could be interpreted as subsystems of the culture as a sign system.⁶⁶

Further, there are also three major phases of the cultural process. The *first* is the learning of the culture of one’s own community by engaging in observation and imitation. *Second* is the sharing of the culture with the members of the same culture. *Third* is the transmission of the culture to the next generation of the same cultural community. In the context of semiotics, the cultural process is described as the function, usage of the sign and sign systems i.e. emphasizes the dynamics of the cultural signs in the process of human communication.

Finally, culture itself can be defined as the core of a sign. “When our personal experiences become part of communication, we turn something from natural (given, existing) in culture (sign-related, created).” (Bankov 2001; 44). In order for culture to develop and grow, the processes of communication serve as the drivers, the motivators that encourage that growth, and communication does not exist unless there is the social condition where conventions and rules of information exchange are established and solidified.

⁶⁶ In the case of culture as practice, the same three components refer. For example, material creations can be produced on an assembly line such as cars or clay pots, but that does not diminish their cultural value. A car can still be seen as a symbol of social status while a clay pot can be seen as a symbol of ethnic identity. Similarly, a particular cooking of the chicken because one was thought to do it that way by one’s grandmother is an example of cultural dissemination.

Text as an Embodiment of Language and Culture

A *text* can be defined as “every ordered group of signs that creates a singular unity with its independent sign and communicative functions.” (Dobrev and Dobreva 1992-1994; 147-148). So in accordance with the semiotic base of each texts they can be divided into the category of *language based* (letter, narrative, speech, etc), *non-language based* [visual based] (visual ones such as paintings or road maps as well as body movement ones such as dance or mime, etc), *acoustic based* (music or sound, etc), as well as *mix base* (movies, songs, comic books, etc). The language based is the equivalent of the Saussurian parole, while for cultural texts that are not just language, but a mix base a good example can be seen by Victor Turner and Mirche Elliade where ritual is depicted as a text that has narrative, visual, acoustic, body movements, etc. (Elliade 1959, 1961; Turner 1967). For instance, the ritual of a wedding incorporates music, dance, artefacts, narratives, gestures, various body movements and so on.

Both texts and signs as Gunther Kress would also argue can be multimodal. For instance, a house is on fire, so a gesture toward a stack of smoke can be just as much a text and carry the message of fire as for instance someone shouting ‘Look out, fire!’. In the first instance, the text is composed of non-language based modes such as body movement, the gesture, and visual representation, the smoke while in the second instance the text is language based narrative, the verbal utterance of the danger to the listener. Both can be used for the communication of the situation.

The term *text* in a way can be rather helpful because as Bankov comments, it is easier to imagine that communication is about an exchange of texts, rather than an exchange of signs. A text can be viewed as a sign because after all a text is a group of signs that develop a singular new sign, which is now referred to as text as a reflection of its newfound complexity and multiplicity. A text can be a sign, but multiple signs constitute a text. Multiple texts can also make a text, but not a sign. This becomes clearer if one is to follow the function of a text in relation to communication.

Communication is about exchange of signs. These signs can come from any of the modes humans have learned to recognize and use.⁶⁷ For example, for the moment, unless we are searching for something in the deep ocean, sonar is a useless form of sound for communication amongst humans, unlike the existence of that form of text for the communication among fruit bats. So until we develop the heightened senses a fruit bat has, sonar is not one of the modes humans can use. What humans can use as signs and as texts in their communication is based on two things. *First* is that the same codes

⁶⁷ Please refer to pp 37-39 for modes and further research on multimodalit, especially in footnote.

for encoding and decoding of signs have been accumulated in a given cultural context, and these signs have been communicated or taught to an individual as well as *second*, personal experience that an individual has accumulated and which has enabled him/her to comprehend a certain sign or text. The term *text* is appropriate for the purpose of this thesis because every social phenomenon and human communication could be seen as a text, exchange of texts, or interpreted as signs and sign systems.

Text Structures

Even though texts can be any groupings of signs that when combined have an entirely new meaning of the whole that is irrespective of the parts, some scholars would argue that these meanings can be analyzed as related to certain structures, which share common parameters. In this section, a brief description of the most influential structural approaches will be presented since they greatly influence semiotic analysis of texts.

There are two structural approaches that were more commonly employed in semiotics known as the formalist and the structuralist ones. Some of the more notable formalists include the names of Vladimir Prop and Roman Jakobson, amongst others. (Prop 1946, 1968; Jakobson 1971). Among the most famous structuralists are Claud Levi-Strauss, Algirdas Greimas, Julia Kristeva and Tzvetan Todorov (Levi-Strauss 1966, 1967; Kristeva 1986; Todorov 1982, 1982a; Greimas 1988).

The works that would represent Russian formalism⁶⁸, would set up the argument that the text itself is the focus of the inquiry. For formalist writers, it is the features of the text as removed from human activity that can be seen to constitute ‘linguistic laws’ or ‘literary facts.’ For example, Prop (1968) wrote a book titled ‘Morphology of Fairytales’ where he identified the 31 ‘functions’ of Russian fairytales. To conduct morphology of fairytales refers to “the theoretical division of the fairytale in its basic components [...] 31 functions, in which enters everything that could happen in any given fairytale [and] it is these functions that give the idea of structure, of something unchangeable in the seemingly having nothing in common texts.” (Bankov 2001; 58). These functions might not all occur in every fairytale, and indeed, most of them are almost never present in the same story, but they occur in a specific order that makes the possibility of their occurrence predictable. Moreover, “just as in fairytales, there are both abstract and objective aspects, which the theoretician has to separate from the infinite many of all specific existing examples.” (Bankov 2001; 58). Thus, the functions are identified the same way signs are identified prior to being used as part of

⁶⁸Russian Formalists have in fact been named so by adversaries from the structuralist movement.

the communicative process. Morphology of Fairytales represents a very good example of a synchronic formalistic overview of this type of text.

What is interesting and relevant for this thesis from Prop's work is that in addition to writing the 'Morphology of a Fairytale,' (1968) he also wrote another book – 'Historical Roots of the Wonder Tale.' (1946). The second book represents a diachronic analysis of the fairytales, and Propp himself emphasizes the necessity of both synchronic and diachronic approaches for a better understanding of any type of text. Using these two books one can study texts in relation to both space and time (Leach 1963).⁶⁹

Structuralists believe that texts should be analyzed in relation to larger, overarching systems of structure. For structuralists the text on its own is important to understand but so are the relations of that text to prior existing structures such as linguistic, political, economic, aesthetic, social and cultural ones to name a few. In other words, meaning is not isolated within certain aspects of the text, but rather exists within the composition as influenced by pre-existing structures.

Some researchers consider formalism as less rigid an approach than structuralism, for structuralism can be seen as more 'mechanistic' where the linguistic laws are like cogs working together in a machine or more 'organic' where literary facts are functionally similar like a kidney or a heart, but also differ greatly as do these organs from a person to a person.

Greimas divides structures into two categories. The first category is of semio-narrative structures, which can be defined as 'bone' structures. These structures have two types of syntax – fundamental syntax and narrative syntax. The second category is of discursive structures, which can be defined as 'meat' structures. It is the study of these structures that allows one to see data in time and in space (Greimas 1988).

Another structuralist relevant for this thesis is Claude Levi-Strauss and his work on the 'classification' and 'transformation' of myths (Levi-Strauss 1967). Levi-Strauss suggests the theory of totemism, or "a system of classification of social groups based on the analogy with distinctions between species in the natural world." (Barnard and Spencer 1996; 335). In 'The Savage Mind', Levi-Strauss (1966) develops this theory to suggest that this system of classification is similar to sensory intuition based primarily on perception and imagination. Moreover, the system of classification is universal and can manifest in any cultural aspect. In 'The Structural Study of Myth', Levi-Strauss

⁶⁹ Prop would argue that a researcher needs to know what is to be studied synchronically before it can be followed in time or diachronically.

(1955) explored how myths are created and put forth his second theory of ‘transformation’ arguing that any myth is comprised of a summation of all variations preceding it. In other words, myths are created through the transformation of one myth into another, so they do not have individual meaning, but rather, an aggregated meaning that exists within the mythology context as a whole. (Murray 2003; Smith and Riley 2011).

Semiotics has more in common with the structuralist approach as seen by many contemporary scholars, however, semiotics further includes dynamic interpretations that could arguably be more appropriately linked to the formalist thinkers.

For the purpose of this thesis both approaches can be used for the semiotic analysis of the data. A structural approach can be used to analyze how electricity and energy is placed within the larger social, economic, cultural and political structures, while the formalist perspectives can place the raw data itself at the focus of the inquiry where perhaps a common structural element can be found across types of images or narratives as to how people communicate and imagine electricity. In other words, this combined approach would allow for an analysis that can be described as a structural look but without dismissing the diachronic aspect of the analysis.

Semiosis and Interpretation, Cultural-Cognitive Perspective

Signs and their meaning do change over time. This change can be abrupt or a very slow process. In semiotics, “semiosis is the process of meaning making [...] we have semiosis where a certain object or situation start to exist in the mind of the individual in moments when that individual does not comprehend them with senses [...] then the individual ‘works’ with their meanings instead of just reacting to their impact [...] meanings exist instead of the actual objects and phenomena” (Bankov 2001; 13). This process is based on directly accumulated experience or passed through communication. Once the meaning becomes embedded in an object or idea, the object/idea ceases to exist as it once was and instead becomes a sign that stands for something that is no longer observable with the senses or something that is not possible to observe with the senses. This process of transformation of objects/ideas into signs is called semiosis (Sebeok and Danesi 2000).⁷⁰

Interpretation of the meanings created through the semiosis process can be defined as the ‘specific use of the text’ similar to the term *parole* when referred to a

⁷⁰ with the cultural subject and to psychosocial matters (i.e. how culture is intertwined with feelings – the study of subjectivity) since cognitive perspectives are one of the components of culture that means they are indivisible from cultural influences

language system. Plato defined semantic meaning as “the capacity of language to indicate or make known some nonlinguistic reality,” (Schildgen 1997) or in other words; language translates reality into comprehensible units when used as part of communication. This translation is what Roman Jakobson argues is interpretation, which can occur in one of three ways: (1) intralingual translation or *rewording* is an interpretation of verbal signs by means of other signs of the same language; (2) interlingual translation or *translation proper* is an interpretation of verbal signs by means of some other language; (3) intersemiotic translation or *transmutation* is an interpretation of verbal signs by means of nonverbal sign systems.” (Jakobson 1971; Krampen et al. 2013; 261).

The meaning that a sign is imbued with can be either denotative, or primary, in which case a sign is interpreted directly, or connotative, or additional, in which case the sign is interpreted indirectly (Barthes 1977, 1977a, 2000, 2009; Kim 1996). The connotative meaning(s) of a sign is the driving force within culture because it is at this level that the cultural context shapes and is shaped by the connotative meanings a sign has. Connotative systems, however, are based on the denotative ones, which are much more stable and change more slowly over time. By contrast, connotative systems can change quickly in time and with that are more easily lost. In this thesis, the connotative and denotative meanings of electricity signs will be explored and particularly in relation to how those meanings can change as the context changes because of a natural disaster or another turmoil type event.

In relation to the interpretation of meaning, there are two types of texts that exist – open and closed texts (Eco 1979). Closed texts are texts that can have one possible interpretation. Examples of closed text are for instance the miles written or the geographical positioning of the cities on a map; after all Madrid cannot be argued to be north of London nor can it be argued that it is only 2 miles away. The map has the special locations, and the distance marked, and those can only be interpreted one way. Other examples of closed texts are the information boards at railway stations. The information about the departures of trains that relate to space, Platform X, and time, XX XX hours departing, are not negotiable and do not have another interpretation. The train departs at the specified place and at the specified time. Open texts, by contrast, can have multiple interpretations. Some of the most famous such texts are the sacred religious texts or any texts that are related to the arts.

Open texts do not, however, have limitless interpretations. Umberto Eco (1979) postulates that there are limits to how much a text can be interpreted, even an open one.

His example is that no matter how you try to interpret the bible, you will never be able to justify the actions of Jack the Ripper with it. Another less extreme example can be of any of the murder mystery novels Agatha Christie writes and how they cannot be perceived to provide guidelines as to how to wire your house electrically or to serve as a historical narrative of the formation of Brazil as a nation. When the limit of interpretation is surpassed⁷¹, Eco would argue that the text is no longer interpreted, but it is being *used*.

Layers of Interpretation

Academics across the various schools have identified that not all signs are bound by the same type of interpretation. The denotative layer of a sign requires one type of interpretation while the connotative one requires a different type of interpretation as it builds on the denotative layer. As part of interpretative semiotics, as oppose to structural ones, some scholars argue that some of the signs can be *multilevel* signs. As a parallel, it can be argued, nuances aside, that what Roland Barthes refers to as ‘language’ and ‘myth’ and Umberto Eco labels ‘dictionary’ and ‘encyclopedia’ is what Yuri Lotman argues are ‘primary’ and ‘secondary’ modelling systems (Lotman 1973; Eco 1984; Barthes 2009). The focus of their definitions is what makes these terms unique, but they also follow a similar pattern.

The similarity between these six terms is that in each case, the first term, or first level, refers to the signifier and signified as the two parts of a sign while the second term takes the sign as the signifier in addition to a new signified to produce a new sign. This new compound sign contains the elements of the first, but the interpretation of those elements is much more complex and different than in the original sign. It would be incorrect to state that the first level is a denotative level and the second, connotative, because there are shared characteristics with denotation and connotation at all levels.

⁷¹ The limits of interpretation are a theoretical concept and do not have a physical, concrete, manifestation.

The following illustration is translated and adapted from Bankov’s book on semiotics.

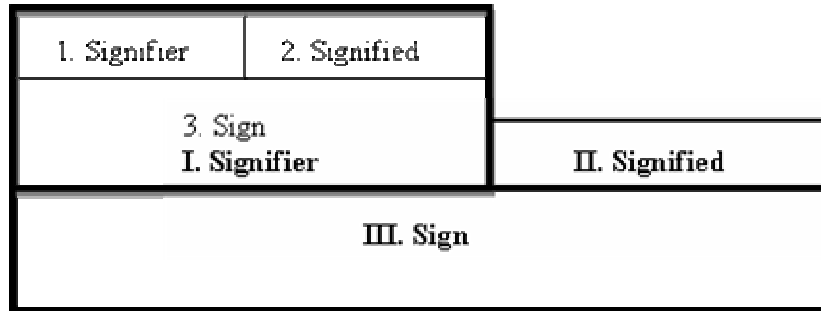


Figure 25: Layers of Interpretation, Original by Bankov

Even though parallels can be drawn between ‘language’, ‘dictionary’ and ‘primary modelling systems’ as shown in the upper left box that is numbered as well as ‘myth’, ‘encyclopedia’ and ‘secondary modelling systems’ respectively as illustrated by the roman numeral identification, it is in the nuances that these terms prove to be quite different. The next three paragraphs will illustrate the three scholars’ specific emphasis when interpreting the two levels.

The first two terms are ‘language’ and ‘myth’. Roland Barthes develops the theory arguing that language in its denotative state is the first level, but when the connotations of language are examined more closely, hidden bourgeois ideologies come to light because, as he argues, the bourgeois ideologies form the basis of the connotations that in turn shape the dominant culture thus preserving the bourgeois power and prestige (Bartes 2009). These connotations are made to seem natural, and their meanings are normalized as part of everyday communication thus preserving the status quo unchallenged. Therefore, for Barthes, the second layer is all about hidden power. (Also see: Barthes 1977, 2000)

Umberto Eco, on the other hand, developed his terms of ‘dictionary’ and ‘encyclopedia’ as a way to examine the structure in general theoretical frame (Eco 1984). By developing an idea suggested by the French linguist Emil Benvenist, “Eco agrees that the text has its own meaning, but the meaning is derived from the way in which the language society, with its speaking, confirms statistically specific meanings associated with the words that comprise it.” (Bankov 2001; 99). In other words, for Eco meaning is related to conventions, the more people use the term, i.e. high probability of reference to a particular meaning, the more this meaning becomes reaffirmed as a dominant one. A term can be denotative if all agree on the meaning and that meaning

goes unchallenged. A connotative term, by contrast, has multiple, and some of which unclear, meanings. That is why he uses the term dictionary to describe the first level or a level where the definition of a sign is agreed much like in a dictionary where $A=B$. The second level, as it presupposes the existence of multiple meanings, is more clearly associated with the notion of an encyclopedia where an entire description can be paired with a term, and only a part of it may be used as part of the communicative process. Moreover, as time passes, certain aspects of the encyclopedic definition may be more accented than others and vice versa but more importantly, as the encyclopedia changes over time, then a necessary part of it are to include the rules for its use. These rules allow for an individual to obtain ‘encyclopedic competence’ or the ability to interpret the encyclopedia which is based on the individuals’ dictionary capabilities (Bankov 2010).

Finally, the primary and secondary modelling systems Yuri Lotman defines also aim at examining the structure in broad theoretical frame. Similar to Barthes and Eco, there are two layers where the second is built upon the first. In very basic terms, the first modelling system, Lotman identifies as the general linguistic level, while the second is often referred to as ‘superstructures’ or the ‘signs of signs.’ (Chandler Online⁷²). Secondary modelling systems thus have further meanings afforded by the particular context and use of the primary sign. Secondary modelling systems are arguably why Lotman created his theory of the typology of culture (Lotman 1973, 1998).

Lotman created the typology of culture by studying how secondary systems model reality through the developed connotations additional to the denotative elements of the primary modelling systems. The natural language is given as an example of a primary modelling system. He goes further to suggest that one could even built “a global model of culture that reflects its non-material, semiotic and communicative aspects” (Bankov 2001; 108), or as he terms it, the *semiosphere*. “Semiosphere is the semiotic space, outside of which semiosis cannot exist [...] the essential feature of the structural formation of the core mechanisms of the semiosphere is the fact that each of its parts creates its own whole, isolated in its structural independence.” (Lotman 1984, 2005).

The interpretation of signs with respect to their denotative and connotative layers is necessary for this thesis because, in order to analyze images of electricity

⁷² Daniel Chandler has uploaded his entire book online for accessibility to anyone who might want to learn about semiotics as well as so that visuals may be better incorporated within the text for illustrative purposes. It is recommended as a basic beginner’s text.

holistically, meanings at both primary and secondary levels should be explored. For instance, when examining iconic signs related to electricity such as the ‘lightbulb’ or the ‘thunderbolt’ icons, the visual form will only lead to descriptors of shape, size, color, etc. but it is within the connotative meanings that perceptions of electricity people have come to the foreground. Further, understanding how the semiosphere works as a fluid system that has inner tendencies and outer influences, helps comprehend why certain signs maintain their meaning over time while others change rapidly when part of a disaster semiosphere and through this change help embody a further representation of energy and electricity in a given cultural context.

Another Layer of Meaning

Describing the various layers to the text one wonders how many layers could there actually be as well as how the semiosphere could be defined in relation to the layers of meaning that exist within any given text. There is yet another layer of meaning that should be considered in addition to the ones produced within the primary and secondary modelling systems. This layer was identified by Yuri Lotman in his article ‘Two Models of Communications in the Cultural Systems’, (Lotman 1973) but he never developed it further as his research interests turned toward the creation of a global model of culture, or what later became the ‘theory of the semiosphere.’ (Lotman 1984). That is why I will first present Lotman’s propositions for this third level, which I will call the Tertiary Modelling System before expanding on it further and explaining how it then links to the theory of the semiosphere.

Lotman writes the following summary of the three layers of meaning:

“A text can carry a triple meaning: the first is a general linguistic one, the second is created as a result of syntagmatic reorganization of the text and its juxtaposition to the primary units [the general linguistic layer], and the third layer – by retracting the messages and organization through a constructive schema within the text an associational level can form – from very general to extremely personal” (Lotman 1973; 236).

The third level builds on the previous two existing modelling systems, and it is the most abstract level, which is why I believe it would be useful for the study of a topic such as electricity and allow me to see more of the ‘unseen’ that surrounds energy and electricity.

The tertiary modelling system, or the associational level, works in two ways. *First*, there is a group approach that is focused on exploring the social, the dynamic, the

relational associations built within signs and texts. *Second*, there is the personal approach that is internal and focuses on the emotional state of the individual as well as their psychological and behavioral characteristics. In both cases, the associations are made across time and within context. For example, for a certain human expression to be recognized as an art form there needs to be a shared understanding of aesthetics and artistry which are culture-based and time-specific. As Lotman describes with an accent of the aesthetics of art, “the aesthetical effect exists in a moment when the code begins to be used as a message and the message as a code, when the text moves from one system of communication to another and preserves in the memory of the audience relations with both” (Lotman 1973; 240). The tertiary modelling system is therefore built on language and on meanings that are above language as well as group and personal association as examined across time and cultural contexts.

On a group level, the tertiary modelling systems can help the researcher highlight the dynamics of the group and the impact of social relations on communication models and communicative strategies. The relations highlighted are not only those of power versus not, but also any symmetrical or asymmetrical social relations that determine the character of the communicative process and may change the group dynamic as well as the individual position and behavior. Within a disaster semiosphere, environmental or man-made, some people are affected more than others, and some can mitigate or adapt better to the situation than others. This discrepancy inevitably leads to asymmetrical relations, which can be used as a justification for certain groups to connect with others via the offering of help and support. The tertiary modelling system can also begin by reflecting on personal behavior, how signs impact the individual, and how signs can change the individual’s reality. This change of reality can then link to how group communication is perceived.

Finally, this tertiary level can also connect to the theory of the semiosphere. The semiosphere is an attempt to create a global model of culture defined as a sign system. Analyzing the tertiary level one can follow the dynamics of the cultural elements from local to global perspectives. The primary and secondary modelling systems are, for the sake of argument, single culture specific, while the semiosphere is perceived as universal unifying all cultures in a global one. But it is the tertiary level that can help highlight the associations made beyond a single culture and without losing the reference to this culture may be linked to certain universal human values and beliefs. An easy example would be the perception of McDonalds not only as a business, but as a symbol of the American culture. It continues to be perceived as such even though the business

adapts to every single culture in which it is established. So it is a fast food restaurant adapted to the local cuisine, but it also remains a symbol of the American popular culture. The connotative elements of McDonalds as a sign could be positive or negative depending on the specific cultural context. As we will see further in the texts, similar interpretations could be afforded by the tertiary modelling systems in relations to energy and electricity.

The semiotic analysis used in this thesis cannot explore this tertiary level in-depth, for an in-depth analysis of this interpretative method, much more space would be required than this thesis can provide. That is why one of the recommendations for further research into this topic is to expand the search for images of electricity using this tertiary level as a point of reference.

Summary

This chapter served as a basic overview of some of the relevant analytical resources for the empirical materials collected classic theories of semiotics.⁷³ Definitions of a sign and sign systems, language and culture as a sign system, text as an embodiment of language and culture as well as in structure, semiosis and interpretation were presented. Most of the definitions are borrowed from the classicists, such as Pierce, Saussure and Lotman, because these definitions still serve as the foundation for modern day semiotics. Semiotics as a discipline has been developed further, but this development has been primarily focused on using established semiotic theories to engage with new fields of inquiry. Few examples of sub-fields of semiotics that have developed in the last 20 years are that of Biosemiotics (Moscow-Tartu School), Visual Semiotics (Group M), Computational Semiotics (Andersen and others), Cognitive Semiotics (Brandt and others), Social Semiotics (Halliday and others), etc. Many more sub-fields can be explored using semiotic theories including, as is the case in this thesis, the semiotics of energy and electricity because as Eco so aptly writes: “the text is a lazy semiotic machine that needs the reader (interpretator) in order to start functioning.”

For this thesis, the semiotic framework that will be applied is heavily influenced by Pierce’s trichotomies but with a particular attention to a variety of contexts including historical, political, economic, cultural social and environmental ones. The key would be to analyze how a change in the form of signs or change of referent in a different context results in a change of meanings in the signs. In both chapter 6 and 7, the

⁷³ For more information, please see: Goodenough 1956, 1957; Durkheim and Mauss 1963; Needham 1963, 1973, 1979; Sturtevant 1964; Tyler 1969; Whorf 1969; Ohnuki-Tierney 1981; Swindler 1984; Riggins 1994

analysis is written out textually, but also supplemented by visual illustrations of the changes in the signs for most of the examples provided as references. These visual references are the forms of triangles where each side of the triangles represents and is labeled as either *form*, *referent* or *context*. These visual references can be interpreted themselves as signs – signs of a unique attempt at applying a particular semiotic model to the study of images of electricity. The last possibility of interpretation of these references, however, is outside of the scope of this thesis.

Chapter 6

Semiotics Applied Case 1: Hurricane Sandy *“Return to the Norm”*

“Even with all our technology and the inventions that make modern life so much easier than it once was, it takes just one big natural disaster to wipe all that away and remind us that, here on Earth, we're still at the mercy of nature.”

-Neil deGrasse Tyson

Introduction

Having presented the theoretical framework for semiotic analysis in the previous chapter, this one will demonstrate the application of that framework to materials collected for the first case study and will examine the affordances of such an analysis on the data. This chapter analyses images of electricity as sign-symbols that were used in communication prior, during, and post-Hurricane Sandy made landfall in the United States 2012. The analysis focuses on the transformation that occurs to a sign following a change in the interpretation of any of the three layers of the sign, as defined by Pierce and other scholars i. e. a change in the *form*, *referent*, or *meaning*. The data from this semiotic analysis is presented both textually and visually, with the use of both photos as well as graphic representations (triangles) that illustrate some of the analysis for easier comprehension. These triangles reflect the three-layer analysis model selected for application and as already presented in Chapter 5.

Such an analysis, however, could be implemented in a variety of ways depending upon specific research objectives and nature of empirical data collected. That is why *first* for this thesis, a particular aspect of the semiotic analysis was selected that would best reflect the study of the images of electricity within the available data. *Second* consideration for orienting the semiotic analysis to one of the possible approaches is the need to focus the presentation of the rich and heterogeneous data available in the field after the Hurricane Sandy. The *final* reason for the choice of the semiotic approach is determined by the limited space of this thesis.

The semiotic analysis offered here is limited to following how a change in the form of signs or change of referent in a different context results in a change of meanings - meanings that are linked to the specific semiosphere as afforded by a disaster setting on one hand, and reflect the perspectives of the affected communities residing on the east coast of the United States, on the other. A further limitation of the semiotic analysis is informed by the focus on the changes of meanings of certain signs when transferred in the disaster context without presenting other possible semiotic interpretations, such as a semiotic view of changing sign forms, comparison of mediums used in sign communication, presentation of signs in the concept of the first and secondary sign modeling systems, analysis of change of meanings over time or transference of meanings as part of social communication. These and other possible analyses could constitute further research into this broad topic. The limitation that is put

in place for the present analysis aims to provide the most viable results from the data set.

There are several types of signs that will be discussed in the chapter, and they will be illustrated through selected examples for each type. The *first* part of the chapter will present an analysis of signs that are prompted in a natural disaster setting in general and how those signs are re-appropriated and re-contextualized in the particular hurricane context thus obtaining additional or changes meanings. The *second* part of the chapter focuses on signs that relate to the community and how the meanings attached to those signs are harnessed in an attempt to deal with the disaster situation after the hurricane swept through. In both parts of the chapter, natural disaster and community context, there are signs with universal, or cross-cultural, meanings that are interwoven in various ways in the semiosphere of the hurricane context and communicated to the rest of the society. The culture-based meanings unfortunately in this case study are very difficult to separate in relation to electricity, possibly because much of American culture has been globalized or perhaps because the culture-based meanings are less prevalent in a disaster situation. Further research is needed for the exploration of cross versus culture-based meanings of electricity.

In both parts of the chapter the signs that will be analyzed are sign-symbols so often the terms 'sign', 'sign-symbol' and 'symbol' will be used interchangeably. Finally, throughout the entire chapter the signs analyzed are both visual and narrative as they reflect the type of data that was collected for this project as described in detail in Chapters 2, 3 and 4.

Part I: Images of Electricity as Symbols of Turmoil, Social Values, and Change

Part I of the data analysis in this chapter will showcase the images of electricity that have been produced and exchanged as a result of Hurricane Sandy making a landfall in New Jersey, 2012. *First*, there will be a focus on the sign-symbols associated with 'light' and 'dark' as related to 'public spaces'. This part follows through the changes and/or emphasis of meanings experienced while the sign-symbols are used to illustrate how these four concepts are placed within any disaster semiosphere. *Second*, the analysis will further explore the changes of meanings these sign-symbols carry when placed within the particular context of Hurricane Sandy as a specific example of a disaster setting with a particular focus on the changes to the

concept of the 'home'. *Finally*, this section will show how the Sandy disaster setting allows for a reinterpretation of the concepts of 'loss' and 'hope.'

1 Re-Interpreting Symbols of 'Light' and 'Dark' Associated with 'Public Spaces'

As electricity is invisible, often what is 'seen' are the 'symptoms' of it, some kind of physical manifestations that could be sensed (seen or heard) and associated with electricity. For example, light, electric shock or a buzzing sound. In order to capture these 'symptoms' connected to where electricity may be, a variety of sign-symbols are used. Many of the interviewees in this project when asked about what sign-symbols they associate with electricity would respond with a 'light bulb,' a 'thunderbolt' or a 'light switch.' Additionally, there were many abstract ideas connected to electricity and energy such as how spaces can be signified through perceptions of electricity or how presence or absence of electricity may influence forms of individual identity.⁷⁴ These perceptions of electricity are interpreted in this text as universal sign-symbols and can be understood cross-culturally, as part of a shared code system for communicating electricity-related information and emotions.

A disaster event of any kind may challenge or highlight certain meanings of the universal sign-symbols associated with electricity, transform or add meanings to their semantic cluster. Most of these changes to their meanings result from associating the form of the sign with alternate referents that occur in a disaster-induced semiosphere. Hurricane Sandy is a good example to explore such a semiotic process and to trace change of meanings when electricity images are perceived and communicated as symbols. This section will focus on re-interpreting the electricity-related symbols of 'light', 'dark', and 'public space(s)' as communicated during and post-Sandy time period.

Light from light bulbs is often used to signify the presence of electricity. The action of switching off that light, or manipulating electricity, represents a certain power or control over electricity. In a non-disaster setting, this power would be attributed to humans, which could explain why electricity is often associated with control over the power of electricity and what it can be used for, such as powering various technological devices. The ability to manipulate electrical currents requires a certain level of technical knowledge and skills humans have achieved over time. Therefore, the ability

⁷⁴ For more information on themes arising, please see Chapter 4 where content and thematic analysis of the case study is presented.

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to switch lights on and off is about the possible attributed control humans have acquired over electricity.

A disaster setting creates a situation where this control over electricity is challenged. Whether in the case of a thunderstorm or as in the case study for this chapter, Hurricane Sandy, in any given disaster control is shifted away from people and transferred to the disaster phenomenon. An example to show this shift of control can be seen in the comparison between Figure 1 and Figure 2.



Figure 26: Brooklyn Bridge at Night (left); Power Outage during Hurricane Sandy on the Brooklyn Bridge and Change in Place Perception (right)

Figure 26 on the left is a photo of the Brooklyn Bridge at night when no disaster event has caused loss of electricity. Figure 26 on the right captures the moment when the lights are going out over the Brooklyn Bridge that connects the Manhattan borough to the Brooklyn one in New York City. The comparison between these two images symbolizes the change of the bridge space, as well as the impact light, has for the space transformation to take place.

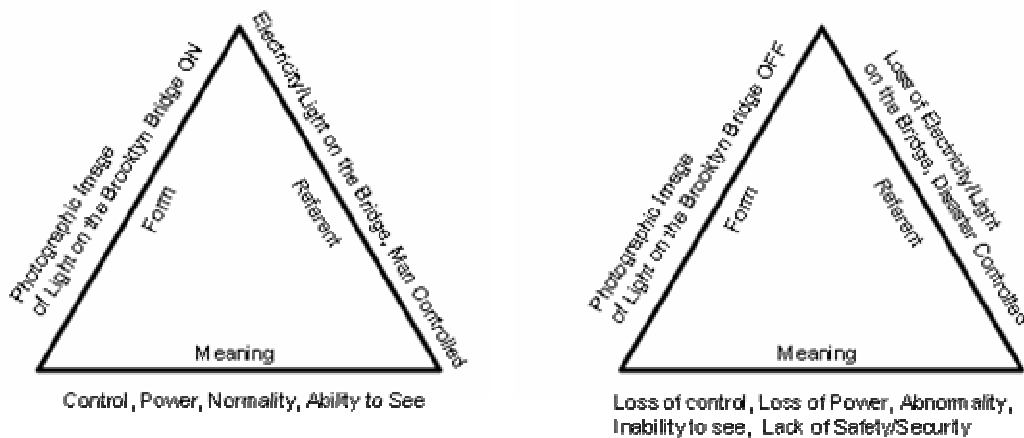


Figure 27: Visual Graphic Representation of Semiotic Analysis of the Brooklyn Bridge as a Sign

The Brooklyn Bridge is an example of an image that is used as a sign to show the process of losing electricity because of the hurricane. In a non-disaster setting, the lights on the Brooklyn Bridge are usually on for the whole night. The function of the light is to make the bridge a safer space to drive through at night by providing better visibility for traffic as well as for aesthetic purposes. The lights are man-made and man-controlled and provide a certain feeling of safety and security.

In a disaster context, on the other hand, the light is lost as power losses occur in the disaster affected area as a result of the storm surges, non-man-made electricity and wind damage. Figure 26 (right) shows the Brooklyn Bridge at the moment when the power cuts shift through the bridge from the Manhattan to the Brooklyn borough. The Manhattan side of the bridge is the one in darkness and Manhattan was the borough that was more affected by the storm. The loss of light on the bridge signifies the loss of control over technology as the storm approaches and takes over as well as the loss of the perceived safety, security and stability that are associated with visibility at night. This loss of light also suggests the re-drawing of the bridge space from 'Ours' to 'Disaster's' and through that the loss of that space to the outer influences of the storm.

The sign-symbol of the bridge losing power, in addition to highlighting the re-drawing of spaces and shifts in control, also can be analyzed in relation to the form used to achieve that. Namely that it is the movement from light to dark that achieves this change in a disaster setting. The bridge with the lights on is seen as the 'norm,' while the bridge with the lights out is seen as a lack of 'norm' for that particular place.

Another way of illustrating the use of light for the re-drawing of a particular place would be the often shown by the media Manhattan skyline in the post- Sandy context. Famous places tend to be used because they can be recognized on a larger scale. That is why the Manhattan skyline shown below was an often depicted image in cyberspace with the main two variations shown here being a completely darkened skyline or one with one or several glowing buildings. The frequent use of this image is also due to the perception of Manhattan as a symbol of the entire city of New York.

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Figure 28: Manhattan Skyline Loss of Power and Change of Place Perception

In a non-disaster setting the Manhattan skyline is rather iconic in that it is always lit up and signifies the "city that never sleeps,"⁷⁵ i.e. full of life and activity day and night (Fig.28 left)

The images in Figure 28 right capture the darkness that was left in the Hurricane's wake. When such change is depicted with the sign-symbol that is the Manhattan skyline, there are two main aspects that can be considered. The *first* of these aspects is connected to the general image of 'light' and 'dark' and how those images as signs stay the same or change when placed in the disaster semiosphere. In Figure 28 (right, top) the darkness, illustrated with the dark buildings in the photo, is directly connected to the post-disaster time and is depicted as the result of said disaster that inevitably brought out rather negative connotations associated with the 'dark'. My participants conveyed emotions, also depicted in the visual materials, which related to these images of the darkened skyline being perceived in the contexts of sadness, bleakness, a sense of hopelessness and disorientation.

In Figure 28 (right, top) the 'dark' or the absence of light in addition to providing a state of physical lack of visibility is also connected to other forms of visibility, as some participants commented, such as lack of intellectual visibility as 'one's mind is in the dark', or 'lack of foresight' to prepare for a power outage. This is further supported by Figure 28 (right, bottom), where the single lit tower represents those who had the foresight to prepare for a potential power outage. The people in the tower obtained backup generators and fuel that enabled it to stay lit as all other buildings were left in the darkness.

⁷⁵ Even though Manhattan is a burrow of New York City, it is often referred to as a city in its own right.

The single lit tower in Figure 28 (right, bottom) also became a symbol of hope that normal life may soon resume as light returns to the skyline. As the original caption of the photo explains, the tower is the first to come alight as the storm passed through Manhattan – “First light over Manhattan as New York woke up on Tuesday. Much of the island is without power and much of the city remains closed.” As a symbol, this light means that recovery has begun thus bringing with it hope for a ‘return to the norm’.

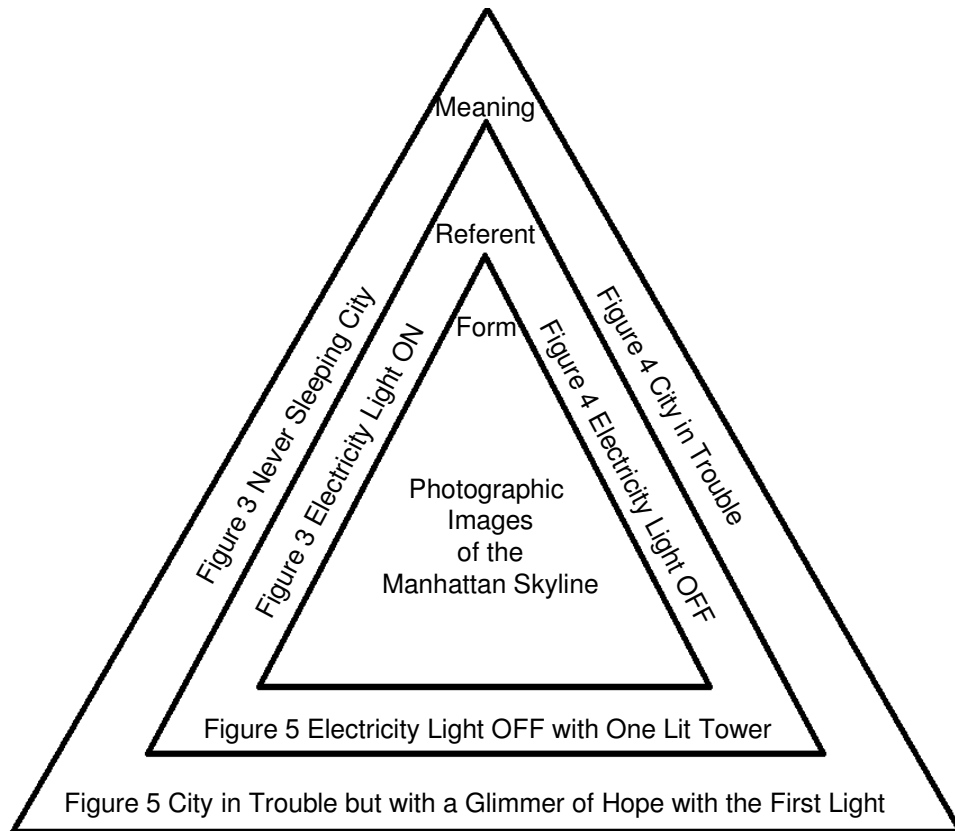


Figure 29: Visual Graphic Representation of Semiotic Analysis of the Manhattan Skyline as a Sign

The *second* interpretative aspect that is important in these three photographic examples that show the Manhattan skyline as a sign-symbol is that of the shared codes of communication. There is a greater translatability of the message the photos communicate because the image-symbol of Manhattan is well known. It reflects a shared knowledge as to how the Manhattan space is perceived prior to the storm (‘the city that is always lit up’) and presents an easy comparison between ‘the city that never sleeps’ and ‘a city in trouble.’ This prior knowledge constitutes what can be termed a shared code. The shared codes relate to both Manhattan as a place as well as Manhattan as a symbol of New York circulated through films, TV shows, illustrated books or

narratives. The same shared codes are also what allow the re-interpretation of ‘light’ and ‘dark’ in relation to the Manhattan skyline. When the two sets of shared codes, those related to visibility and those related to the city, are overlaid, that is when the message of the power of the storm is communicated. A storm that can bring darkness to a city that never sleeps.

In addition to the shared codes that enable the viewer to identify the darkened skyline and to understand that something is wrong with the image of Manhattan, the personal experience of the place and space within Manhattan shared by all living in that area adds yet another layer of knowledge and more intense emotion. Personal experiences create meanings that could be decoded by all who have shared similar ones. Rather than paraphrasing, the following quote from one of the participants highlights just what emotions someone living in Manhattan post-Hurricane Sandy experienced when walking through the darkened streets.

“It becomes scary. People in Manhattan are use to there always being light. Maybe that is what shocked people the most. At the first moment you can not even think that you would not be able to eat or to wash your teeth or to go to work, in that first moment it gets scary. Scary because the light, Manhattan is always lit. 24 hours. During the day it doesn’t matter, but there is no dark night there. There when you go out onto the street and those buildings that are ... are lit, the streets are lit, the tunnels are lit, the stores ... work are lit, there everything is lit. Maybe it is that ... when you see it dark, it is as though it is not there. [...] It is gone. There is nothing there, as though the city has ended [...] [In the darkness] people walking, peering and moving and pushing and can’t believe that it is possible. [...] If you ask them, that is what they remember. No one will tell you ‘I was hungry, I couldn’t wash my teeth, I didn’t go to work’, they say that it was scary to go out onto the street and to see each other like ghosts. That was the most scary.”

-English Translation of Transcript from Semi-Structured Interview

Manhattan is an example of a city that is defined by its light and iconic skyline, so according to the interviewee, the darkness that befell the city is what made it seem as though the city was ‘gone’ and the people on the streets as ‘ghosts’. The urban space in general is defined by the high density of a population and, in this day and age, often lit up streets. It is also a space that is expected by ‘norm’ to have people in it, be lit and be organized in some fashion, but after Sandy, the people appear as ‘ghosts’, darkness makes the next neighbourhood over appear as though it is no longer there and chaos descends as scared people push and shove each other, not knowing what to do and how to cope with the darkness.

The darkness that made the city ‘scary’ also made support services undependable thus adding to the chaos left after Sandy. The following example is of a place that usually offers support and comfort to those who need it most, namely a

hospital. A hospital is a place where people who are hurt go for help, but it is also a place that uses electricity to build its image to a great degree, similarly to the image of the lit up skyline. Electricity in hospitals is used to provide light in hallways, rooms, and surgical spaces as well as particular forms of light or rays are used for examinations such as x-rays or MRI scans. Electricity is also used in hospitals for most surgical and monitoring equipment because apart from a few tools such as a scalpel, most hospitals use digital monitoring and electrical tools to complete tasks such as kidney dialysis machines or artificial breathing ones. Therefore, when a disruption occurs to the electricity in a hospital, the entire image of the hospital changes from a place that can provide help to a place that is in need of help to keep patients alive.

Figure 30 is an example of a photo that captures the evacuation from one of the New York City hospitals. The hospital lost its primary power source after the storm, backup electricity generators also failed and all patients in critical condition had to be quickly evacuated.



Figure 30: Hospital Evacuation Due to Loss of Electricity in an Effort to Keep Patients Alive

The power failure and that of the backup generators meant that the hospital space has been redefined due to the inability to use various technologies for medical care such as monitoring, dialysis, or artificial breathing. In addition to survival, photos such as this one are also examples of the shift of control. This photo is perceived as a symbol of the threat the hurricane poses, its ability to take control from the people by extinguishing the electricity supply, and re-defines certain public spaces. In the example with the hospital, Sandy takes away almost everything that a hospital needs in order to function and indeed be a 'hospital'.

'Safety' and 'security' are also linked to 'control' and as discussed earlier; the hurricane challenges the human control over electricity. The concepts of safety and

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security are often associated with electricity beyond their association with the signs of light and dark. There is the universal perspective that electricity can be seen as dangerous due to its inherent power, or the ability to leave those who disturb it ‘zapped.’ There is also the universal perspective that by controlling electricity and the affordances provided by it, one can make a comfortable space, home or street, which are safer and more secure. A well light up street can be associated with security due to the higher visibility provided with the light. Therefore, a photo of a well-lit street can be interpreted as a sign for a secure space. Similarly, a well-lit hospital can be seen as safe and secure and able to help its patients, but one without electricity can be perceived as a hospital in distress, a hospital in need of help.

Thus far all examples have been of spaces as compared to a perceived image, or in other words, post-disaster photos juxtaposed to an idea of a space as communicated through shared codes. In all examples thus far also electricity is used as a sign to define the space as for instance a bridge, a city or a hospital as safe and secure if lit up and in distress if there is a power loss. However, there are some examples in the data where electricity was not used to signify a space, but rather to create an aesthetic feeling in the interpreter via manipulation of the image.

The following Figure 31 is an example where light and electricity are used for aesthetic reasons, but also an image that was published as a comparative – a photo from before the hurricane and a photo from after presented together as one. I have reproduced the image here as it was published online, as two photos side by side of a prior and post comparison.

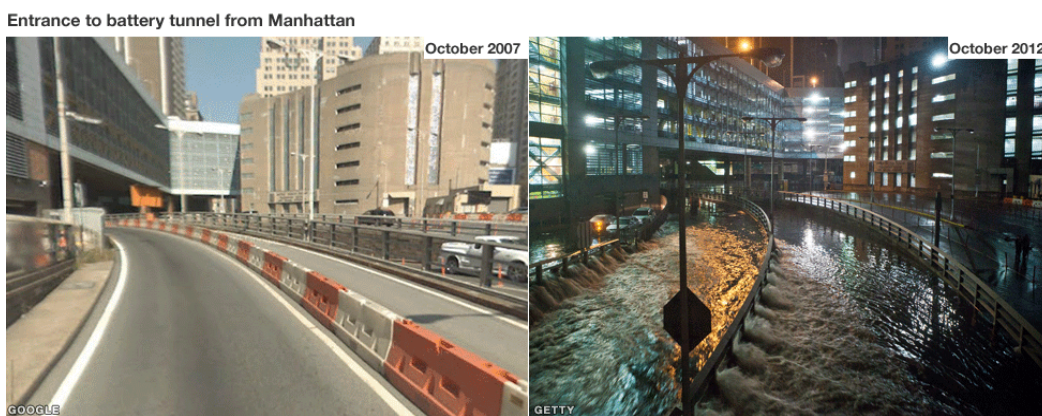


Figure 31: The Use of Light and Electricity for Aesthetic Reasons in the Portrayal of the Battery Tunnel Pre and Post-Sandy

In the image on the left, the Battery Tunnel exit is shown as a dry space in daylight, while in the right image, the same place is shown as a flooded space at night. This is an example of an image that carried the codes needed for decoding it within. One does not need to have an idea of what the Battery Tunnel exit looks like, but only to examine the two photos side by side as provided. In such a case, the use of 'light' and 'dark' also changes. One possible analysis of these images could focus on how the creators of the image use the meaning of visibility in daylight and lack of in the nightlight to create a greater impact on the interpreter. In the dark image (right), one cannot see the true extent of the flood caused by the hurricane, so the imagination takes over. The image may actually show only an inch of water, but because of the darkness and the street lights reflecting in the waves formed, the flooding may appear greater. In other words, electric lights create a desired effect that is not connected with electricity itself but associated with other damages from the storm. Therefore, the light and the dark here can be argued are used for stylistic purposes to exaggerate an event that occurred as a result of the hurricane.

In summary for this section, the analytical focus was on the role of electricity or the lack of it as integrated into symbols of space and the major changes in their meanings caused by a natural disaster - Hurricane Sandy. The examples provided in the section illustrated how the loss of electricity caused by the storm lead to a transformation in several perceptions that relate to places such as bridges, the city, and hospitals as well as a change in perception of more abstract concepts such as safety, security and control. The darkened skyline of Manhattan (Figure 28) carries a message for trouble because the 'norm' for Manhattan is perceived to be a well-lit city that never sleeps. Any other city that is dark is usually seen to be sleeping and not in trouble. The change of meaning in the disaster context is, however, that rather than the darkness symbolizing the city being asleep, the meanings refer to a city in trouble, a city that is out of *its* 'norm.' The same association of darkness in its meaning of distress was carried within photos of hospital evacuations (Figure 30) or bridges losing power (Figure 26). Finally, an example was provided (Figure 31) of the re-interpretation of spaces using images of objects in light and in dark to emphasize a certain message as well as the use electric lights to manipulate human imagination and enhance the impact of the image.

2 Electricity as Integrated in Symbols of ‘Home’

The previous section presented transformations in meanings of public spaces such as bridges, hospitals or even the city landscape that can be perceived through particular energy use. This section will focus on the home space, a space that is also signified in many ways though energy consumption for light, heat, safety, security and luxury, to name a few.

Hurricane Sandy actually presents a case where there were homes lost due to floods sweeping houses away or the long term effects of water in a house left unchecked, but the majority of houses felt the impact of the storm through a loss of electricity and energy supply. When the whole home is destroyed the interviewees focus on their idea of a home as embedded in memories, mementos, people and neighborhood. When the home was preserved but only electricity was lost that is where the focus of the people remained and these are the cases where people began re-examining preexisting ideas of electricity and electricity-dependent home activities.

The images that are communicated as symbols of ‘home’ are challenged in the disaster context and their meanings presented in a new way. Unlike public spaces, electricity in the home serves as a sign-symbol used to communicate individual and social identity as well as concepts of neighborhood and locale - ‘my home is an extension of myself’, ‘my home designates my social standing’, and ‘my neighborhood is defined by our homes.’ It will be considered further in the section which of those images remain relevant in the disaster semiosphere.

‘Home,’ outside of the disaster semiosphere, is defined by the inhabitants and can be connected to a particular place or an idea of what a ‘home’ is that is often derived from the technology. Technology enables people to live more comfortably, albeit not always more sustainable lives, and comfort is one of the qualities associated with the ‘home’ space. Whether ‘home’ is connected to a space or to use the cliché ‘*home is where the heart is*’, the notion of ‘home’ can exist due to a connection that is established between the individual and that which he/she perceives as ‘home.’ However, after a disaster both the space and the idea of what constitutes a ‘home’ can be challenged.

This is particularly visible in a disaster that causes electricity loss due to the importance technology plays in establishing the image of the home. For instance, there are particular technological appliances that are seen to constitute a ‘modern’ home such as a dishwasher, washing machine, vacuum cleaner, oven, fridge, TV, microwave and

so on, the list is long. Many of these items are seen as necessary while many others are seen as luxuries. The definitions of necessity versus luxury differ from person to person and often depend on either a) wanting to save time so one might microwave a dinner versus b) cook one from scratch over a fire in the back yard that would take many hours longer versus c) not having the necessary skill set to cook a dinner from scratch and needing the microwave in order to have a cooked meal. In either case, the technology itself serves as a sign of a shared code for the ‘home’ space. So in a disaster setting when technology is destroyed, the meaning carried within such an image is about the destruction of the idea of a ‘home’ that the technology signifies.

To illustrate, a chair, a table or kitchen appliances in any setting can be connected to the idea of the ‘home’, but when those same chair, table or kitchen appliances are torn and left as debris, that encapsulates the destructive power of the disaster within the sign-symbols of the home. For example, Figure 32 presents a sign-symbol of a decimated home through the shape of a destroyed washing machine.



Figure 32: A Photo of a Washing Machine Destroyed After Sandy in the Debris of a Home (left); Print Advertisement of a Washing Machine from the 1950s (right)

Figure 32 depicts the debris of a home as identified by the sign of the washing machine in front.

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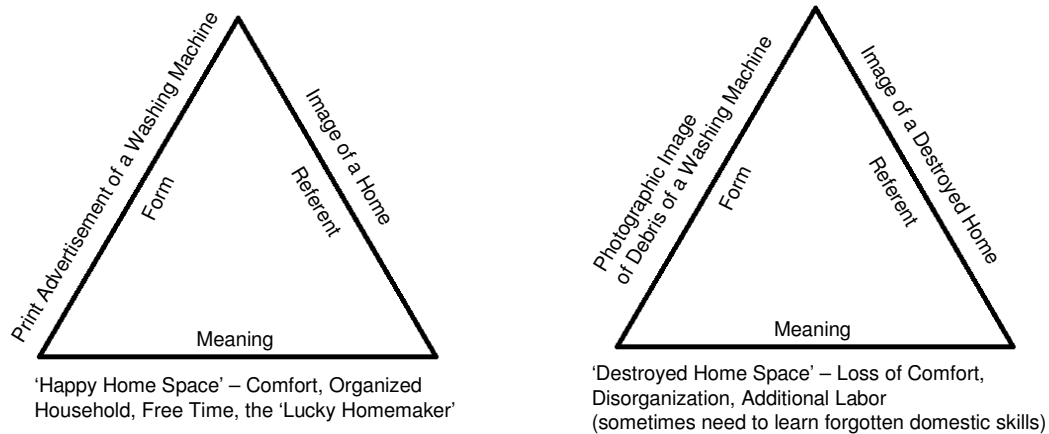


Figure 33: Semiotic Analysis of a Washing Machine as a Sign Related to the Home Space

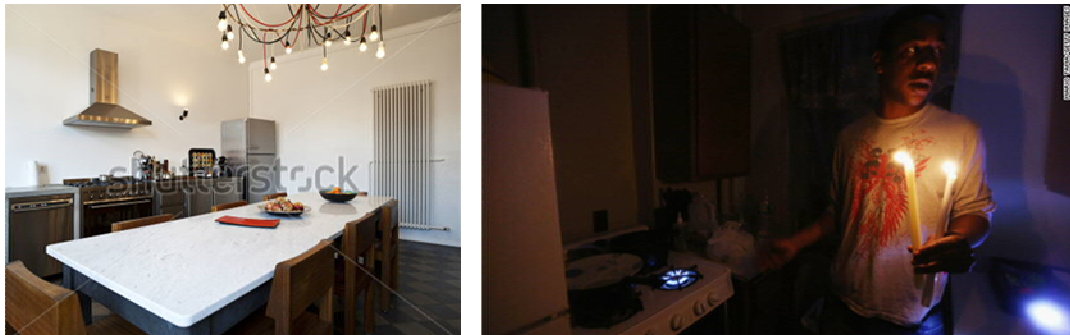
In the advertisement photo provided, the washing machine denotes the home space, and particularly as a sign of a 'happy home space' because the washing machine makes life easier for the homeowner and allows for more leisure time. When the washing machine is used in the post-Sandy context, the debris of the washing machine signifies the destruction of the home space. In other words, it is the state of the technology that infers the state of the home space and can signify the state of the homeowner. In this post-Sandy photo, the state of the homeowner is one of despair for the loss of their property, safety and comfort that derive from the loss of the roof over one's head. Not all examples were so extreme, however. In many examples the washing machines, fridges and TVs simply didn't work due to the loss of electricity, and yet, the interviewees communicated similar feelings of despair and helplessness that result from inability to do tasks such as washing clothes, keeping fresh food for longer times, keeping up to date with information or simply needing entertainment. Through those feelings, the home space is reinterpreted and often questions of what technology people need versus what they want were brought in the discussion.

The re-interpretation of the home space and what technology people need or want often reflects changes in priorities. While in some of the places where I interviewed people where the physical home was still there, the priority was with electricity or how to get the power back on so that the technological innovations such as computers and TVs can again be used. In the places, such as Sea Side Heights and Ortley Beach, New Jersey where people lost the physical manifestation of the home, the home was more often associated with particular memories of objects, people or ideas. An example was provided by one of the interviewees from Sea Side Heights who lost the entire home but who relates to the home the memories of her late husband and his

old ripped armchair. Therefore, in accordance with the narrative data from the interviews in areas where the entire home was lost, the home is more than the technology with which it is filled or the place where it exists. A home is about the memories, ideas and other objects that fill it as well as other notions such as safety, security and privacy. In places where the home was still there in some shape or form, albeit be damaged and without electricity, the memories, ideas and objects discussed by the interviewees are much more frequently electricity related.

“You want to take everything, but you can’t... you know... you.. you are limited in what you can leave with [...] all the [power] tools Johnny, I want everything...anything you can save I want to save, anything possible.” - said as he carries a small mown lower out of a room⁷⁶

Unlike the washing machine and the lawn mower and all other power tools, which might be perceived as luxury items, there are items related to electricity that are perceived to be about survival. Electricity is often used in homes as a source of light and heat, from light bulbs to electrical heating. It is not surprising then that those were two of the main aspects of the home space people attempted to recreate by adapting to other sources of light and heat that were not electricity based in the post-disaster semiosphere. Through this process of adaptation, people were faced with the image of electricity and its place in everyday life and use. Luxury aspects of the home such as laptops, toasters, and other technological innovations were left as a secondary concern to the perceived necessity to feel safe, secure and comfortable afforded by light to provide visibility and heat to provide warmth. In order to illustrate, Figure 34 shows how people have adapted to energy loss after the hurricane by adapting to alternate sources of heat and light, from electricity ones to alternatives.



⁷⁶ This example was presented in detail in Chapter 3 (page 78), but was raised here again as a way to show the difference in the two types of analysis i.e. how the same data yields different information when looked through different analytical prisms – thematic and content versus the semiotic one.

Figure 34: A Photograph of a Kitchen with Lights On in Non-Disaster Setting (Left); Adaptation to Electricity Loss by Using Stove for Heat and Candles for Light Post-Sandy (Right)

The alternative sources of electricity the person in the photo uses (Figure 34) are a stove for heat and candles for light. Similar to the washing machine example, when electricity was lost rather than the physical form of the home, people focused more on the symbol of the home as a space of comfort. The photographer who took the photograph on the right in Figure 34, Mario Tama, focused the lens on the boy showing how he has adapted to the electricity loss, as a way to encapsulate the experience of the storm i.e. the damage of the energy loss followed by various adaptation strategies. The focus is particularly on the kitchen part of the home space and how adaptation to alternative sources of light and heat were needed in order to cope with the after-effects of the storm.

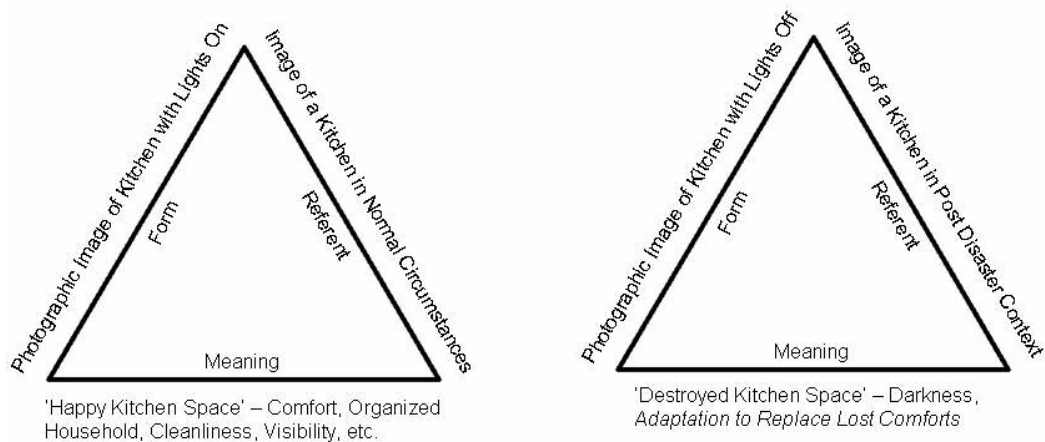


Figure 35: Visual Graphic Representation of Semiotic Analysis of Kitchen as a Sign

Light and heat, as the storm hit in autumn, were about comfort rather than survival as would be the case had the storm made landfall in winter when there are low temperatures. In order to accommodate comfort, in many cities generators were provided in public spaces for the charging of phones and laptops. This means that both the home and the public spaces underwent adaptation measures. The home space had to adapt to have alternatives to light and heat sources as illustrated in the figure above while the public space transformed with the use of generators to perform the functions of a private space such as providing charging for luxury and comfort technologies. In both cases, the disaster setting is what caused a shift in the meaning associated with a

given space. Some of the signs of comfort began to transcend from one space to another, therefore, the sign-symbols of some of the types of spaces were re-interpreted where some were lost such as the security and safety associated with the home space, while others, were transformed and adapted to with alternate means.

Thus far, the discussion has been about technology and appliances that use electricity to run, but there were also many photos that challenged the viewer to question where electricity comes from and how integrated really it is in everyday life and activities. The following figure 36 depicts a house that is missing the entire front façade, but more than that, the figure shows the electricity cables dangling free as they have been partially ripped out of the walls.



Figure 36: Electricity Cables Displayed in a Ripped House with no Face in Manhattan

This image was perceived by the participants as a sign-symbol for the loss of safety and security that are afforded by a home with four walls, a home where the space is controlled with the use of those four walls. The image is also a sign of the sheer strength of the hurricane, a hurricane that can challenge the control by changing the space through the removal of a wall. In relation to electricity, however, the influence of the image is much more subtle. The photograph makes visible the electricity cables as ripped out of the walls by the hurricane.

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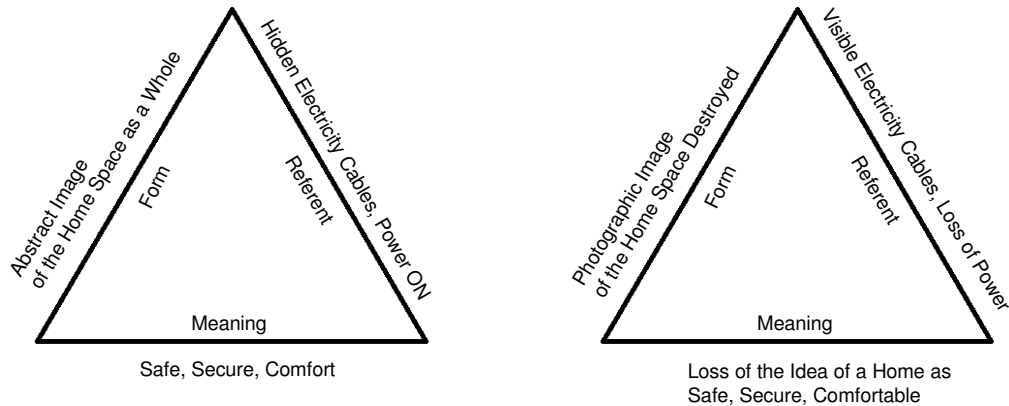


Figure 37: Visual Graphic Representation of Semiotic Analysis of the Home Space as a Sign (Abstract Image Left vs. Photographic One Right from Figure 36)

Normally, electricity cables are hidden within the walls for both safety and aesthetic purposes, but the hurricane has torn the cables out and displayed them for the viewer to see. In other words, Sandy made electricity from invisible, visible and exposed to the gaze of the interpreter, thus forcing the viewer to reinterpret their relation to the electricity cables, the place for electricity cables in the home as well as the image of the home space. The photo then creates an image of the home space by showing the disruption to that space in both the lack of the façade as well as the visible electricity cables, which serves to further highlight the acceptance people have that electricity should be hidden and if exposed that can be seen as a disruption to the ‘norm’.

This photo of the house with no façade is an example where the cables are exposed, but there are photos that further suggest the danger of such exposed cables to people thus arguing that exposed cables are a sign of danger and possible death. An example is Figure 38 that shows a burning tree amidst the rubble left after an electrical fire decimated Queens, New York City.



Figure 38: Exposed Cables and Faulty Transformer Cause an Electrical Fire in Queens, New York

The cables exposed by the storm, along with a shortage in a transformer, are believed to be the causes of the electrical fire that burned down over 200 homes. In most photos the space where the fire raged tends to imitate a war zone. Often images of the fire also include signs of religious identity such as the case of the statue of Virgin Mary that was showcased in the data presentation chapter of the Hurricane Sandy case data set, but this image focuses on the continuing destruction in the form of the burning tree rather than on a religious symbol.

The photo depicts on one hand a fire that is a disaster. On the other hand, the photo shows the disaster that is caused by electricity in the form of an electrical fire brought upon by the hurricane. Photos of the electrical fire serve as a sign of the danger electricity can pose if it is not controlled or hidden away. A similar sentiment occurs when one thinks of a thunderbolt in stormy weather. The exposed cables and images of the destruction caused by the electrical fire are perceived not only as signs of danger, but also as a sign of the disaster in general.

All of the above images were also interpreted by the interviewees in terms of individual or group identities. In some cases, they were talking about their homes as spaces of unique experiences or memories, while in others, they provided descriptions of beautiful summer houses at the shores of New Jersey and New York or spoke of neighborhoods whose houses were sources of pride and signs of prosperity. Interestingly enough, in the face of the disaster, social identities took second place to basic survival and electricity-related images were not interpreted in socially determined concepts of home but rather in universal human experiences.

In summary for this section, electricity was interpreted in association with perceptions and symbols of ‘home’ and ‘home space’. Images of electricity were depicted through the symbols of ‘light’, ‘dark’, and ‘home’. These images were

circulated in the cultural space of the affected neighborhoods and served to enlighten and provide an understanding of how electricity meanings changed within the disaster context. Even though some meanings of electricity as associated with the home remained latent despite the disaster, there were also new meanings that flourished and some of which were even retained after the disaster started to fade into memory.

The empirical data offered several major types of images of home whose transformations were caused by disruptions to electricity: electrical appliances perceived as necessity vs. luxury and related to perceptions of comfort as well as physical survival; usage of alternative sources of electricity emphasizing the message of loss and disorganization of home space; exposed cables leading to deepened understanding of electricity caused disasters or possible dangers, such as fire. Additionally, in a post-disaster setting as the physical manifestation of a home may be left completely destroyed or partially impacted and these remains can provide a new perspective on the home space, with particular attention for this thesis, the place of electricity in the home. Exposed electricity cables directly narrate the destructive power of uncontrolled electricity as was the example of the electrical fire disaster that was brought about by the hurricane. There is a highlight in this section on how the space changes from a space-idea to a space that carries the signs of a disaster impact. In a disaster context social, ethnic, religious, occupational or interest group identities become secondary to universal human experiences and electricity related images are interpreted only in disaster shaped semiosphere.

3 Re-Interpreting Symbols of ‘Loss’, ‘Hope’ and Electricity ‘Recovery’

One of the main underlying themes highlighted is that of the impact of the destruction and loss left in the wake of the hurricane. The loss of electricity has become a sign of the destructive power of the hurricane, but also a sign of hope. This hope is paired with loss through a hope for rebuilding and a hope for a return to the norm as defined in pre-disaster setting. Particularly in relation to electricity, the hope accents on the restoration of power and establishments of many services that rely on electricity in both public and private spheres.

The electricity loss is often shown through images of the physical destruction of objects and places such as this power line in Figure 39.



Figure 39: Fallen Power Lines that Lead to Loss of Electricity for Both Private and Public Spaces (left); Power Lines Upright as ‘Norm’ (right)

Figure 39 (left) is an example of one of the many fallen electricity lines after the storm. These fallen power lines served as vector-signs of where the storm has passed as well as sign-symbols of the storm's strength. Further, the fallen power lines were signs of the destruction itself, the physical challenge to normal life where one can simply drive down the street as well as a sign for the loss of electricity that also disrupted everyday life.

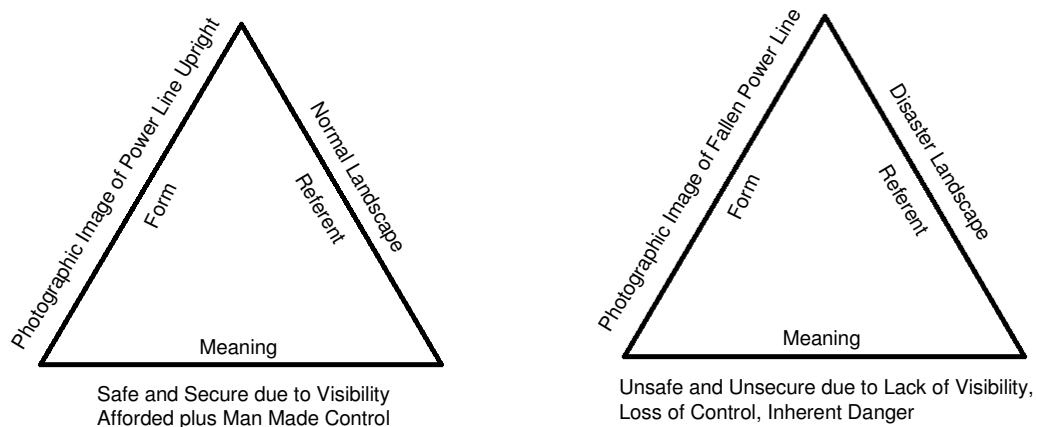


Figure 40: Visual Graphic Representation of Semiotic Analysis of Power Lines as Signs

In the pre-disaster setting, the power lines are in neat rows by the side of the road and depict what is deemed a ‘norm’, or a well-lit street or neighborhood. The light shows the man-made control through the harnessing of electricity and invites a perspective of comfort and protection through the safety and security visibility affords. In the post-hurricane image, the fallen power lines refer to the disaster context where disruption and chaos occur. In this context, danger is prevalent; electricity is outside of

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human control, and lack of security and safety with the loss of visibility comes to the foreground. This is an example that mirrors some of the earlier ones from other sections where electricity images are seen as signs of loss of control, re-interpretation of safety and security as well as re-interpretations of both private and public spaces. What is different is that often this example of the fallen power lines is coupled with images that contain symbols of hope.

A disaster brings disruption to everyday life, so the images that contain symbols of hope in the sample sought to highlight the recovery efforts and a hope for a return to a ‘norm’, or the idea of how a place or space was before the disaster occurred. In other words, once electricity was lost and the services that require it, the symbols of hope focused on the restoration efforts of both electricity and services associated with energy use to a similar standard to the one prior the hurricane. Figure 41 shows recovery attempts in the fixing of power lines that serve as symbols of hope.

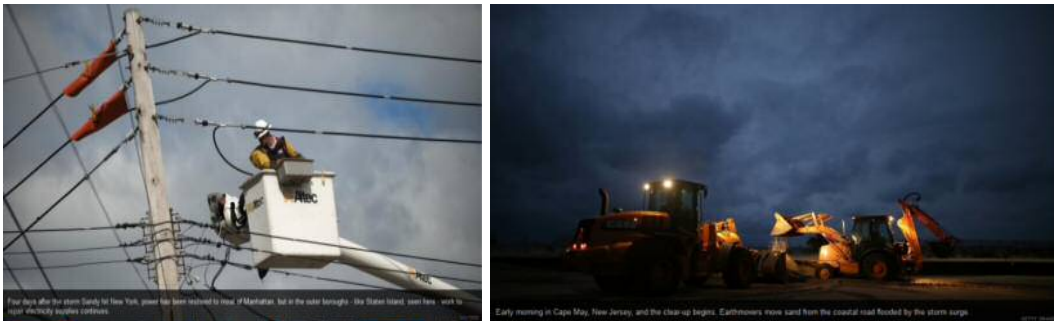


Figure 41: Hope Through Working to Restore Electricity As Soon As Possible In Order to Return to the Norm (left); Hope in Quick Restoration of Services as Crews are Working Through the Night to Fix the Power Lines (right); 24 Hour Recovery Process (both together)

Figure 41 (left) shows the restoration of the power lines above the ground, while Figure 41 (right), the same for below ground. On the left of Figure 41 one can clearly see the people hard at work to fix the electricity wires on the posts, while on the right of Figure 41, it is already night time, but people are continuing to work through the night using their vehicle lights to move excess coastal sand and to fix ground wires in an attempt to bring ‘order’ as soon as possible. Both of these images together present not only that the problem of lack of power is being fixed and various symbols of hope and quick recovery, but also communicate a certain idea of expected stability due to the act of fixing a problem.

The soon expected stability arguably is what signals that a recovery process is taking place. The attempt to fix the electricity cables is an attempt at a return to a

‘norm’, or a state that existed before the hurricane made landfall and when homes had electricity, but these two images together also tell a story. This is a story of recovery efforts that take place around the clock as the first image is captured in daytime while the second, during the night. Therefore, when viewed together, these photos signify that *first*, there is hope for a return to the ‘norm,’ a norm where there is electricity and less sand in places where there shouldn’t be any. *Second*, this ‘norm’ will return as soon as humanly possible as depicted by the working around the clock, day and night. That being said, as a point of reflection, in an online gallery, the photographs are not placed side by side and the message is more subtle than the one presented in the narrative of this thesis, and yet, the meaning is arguably there as the reader moves between the images in a particular order in the online gallery and stores passing photographs in short term memory while evaluating the rest.

Fixing energy supplies is only one of the methods used to show recovery that also serves as symbols of hope and a return to the norm. Another approach was to use photos and videos as signs that even after the storm ‘business can continue as usual’. The following photograph shows a bar in Manhattan that is open for business despite the loss of electricity.



Figure 42: Despite the Electricity Loss, This Bar is Open for Business

Figure 42 illustrates a bar that is not only opened for business after the hurricane made landfall and amidst the power outage but that actually uses the power outage to an advantage. The lack of electricity is instead exchanged for candle light to provide a pleasant atmosphere to the customers. This change provides a new found ambiance of the bar, a more relaxed atmosphere. Therefore, the loss of electricity could be interpreted to signify a change of the bar space into a new type of bar space. Once electricity is found again, the bar space can return to its previous state, but even within

the post-disaster context, the bar is still open and functions according to its specification as a place where people can drink. The bar can still be a bar because it is not as dependent upon electricity, unlike the hospital from one of the previous examples. Despite the change then, the bar serves as a sign that regardless of the damage of the storm, places such as this bar, can cope with the changes and adapt to the new found situation in order to continue functioning as they did prior the storm. Places such as this bar that have only partial transformations of the place symbolism can more easily add the additional meaning of hope carried through images like the one in Figure 42.

In summary, the symbols of hope discussed in this section highlight recovery efforts as well as the resilience and the ability to adapt of the people. The fallen power lines and how they are fixed provides a symbol of hope for quick recovery and return to services at pre-disaster setting while the bar example shows how regardless of the power loss, the bar space can be re-interpreted but maintain much of its primary function even if it gains a new ambiance. Through this, the bar space itself becomes a symbol of the resilience of the people in the aftermath of the storm similar to how the fixing of the power lines is a symbol of recovery and hope.

National and community identities mentioned were also used as a way to cope with the aftermath of the hurricane and push for recovery on individual, regional and community levels. The next part of the data analysis then will focus on the community level exclusively, which was the level where electricity loss was most widely discussed.

Part II. Images of Electricity as Symbols of Neighbourhood and Community

Part II of the data analysis shows how electricity-related symbols are re-interpreted in the community setting after a natural disaster such as Hurricane Sandy. *First*, there is a re-interpretation of the concept of ‘community’ as a direct result of the loss of electricity in the disaster semiosphere. *Second*, there is a re-interpretation of the relationship between the ‘community’ and the storm. This relationship is revisited whereby the ‘storm’ is adorned with human characteristics while the ‘people’ are compared with heroes similar to those of the fairytales. A tale of ‘Heroes, the People’ and ‘Sandy, the Villain’ then is born that serves as coping mechanism in the aftermath of the storm as well as a platform to re-interpret the role of electricity in everyday life.

1 Re-Interpreting the ‘Community’ When Electricity is Lost

The definition of a community stems from a particular cultural standpoint. A community can be identified based on common values, ideas, geographical location, age, gender, occupation, religion, ethnicity, interests and/or other shared cultural characteristics. Ferdinand Tonnies defines a community as “an organic, natural kind of social group whose members are bound together by a sense of belonging, created out of everyday contacts covering the whole range of human activities.” (Tonnies in Forsyth and Copes 2014; 16). A community can be identified in both the physical realm as well as the virtual as would be the case of a neighborhood in Brooklyn versus one in the Second Life virtual reality. Therefore, a community is about having something in common such as a characteristic, location or values, but also a platform on which to connect and exchange these ideas with other members of that community. Communities can exist online or offline.

When a disaster occurs, the community can be reshaped because common ideas and values have changed or because of a physical barrier. Electricity loss is an example of a physical barrier to particular forms of community spaces or forms of communication. In the case study of Hurricane Sandy, the massive energy losses forced the community to redefine itself in the post-disaster semiosphere in two main ways. *First*, the loss of electricity meant a loss of all virtual types of community due to the inability to communicate using the internet, phones and other technologies that require electricity to function. *Second*, the loss of electricity also meant loss of other major services such as transportation. Loss of transportation resulted in a hampered mobility for people in the affected area thus challenging the work, gym, creative interests or shared value groups such as religious ones that may require relocating as for example the need to visit a church as a place of worship to participate in the religious community.

The loss of virtual communities and loss of mobility resulted in the diminishing of many communities until power could be restored, but also a rise of the neighborhood type community. The identity of a particular place, as a result of the energy loss, meant that the neighborhood overshadowed all other community identities, which normally might be dominant like ethnic, religious, occupation, interest or occupation or other. In other words, the disaster context emphasized the neighborhood, and the immediate local community became the most relevant of all group identities.

The impact of the disaster was shared among the neighborhood community members via narratives, shared experiences, and so on. With the inability to

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communicate or visit people outside of the community due to the power loss, new acquaintances were made, and new support systems were established. For example, with energy loss, many people also lost a way to heat their homes. The following Figure 43 depicts neighborhood community members sharing a fire for warmth when electricity was lost.



Figure 43: With no electricity, Community members coming together around the fire for warmth and light

Being around the fire is a shared experience neighborhood members could participate in and through it get better acquainted with one another. It is also an experience that helps with the healing process after a disaster because it helps establish a sometimes ‘new’ neighborly support system. Often the empirical data, both the visual and narrative ones, describe how one person would start the fire, or bring food, or create a care space, that then other members of the community would join in. In other cases, it is the community that comes together to help an individual member.

The community could help with physical labor as well as emotional support. The feeling that you are not alone after a disaster is important for rebuilding not only a home, but also self-esteem. One of the interviewers described a shop that was devastated by the storm in their town and after the community got together to help the owner rebuilt, the owner ‘repayed’ the community by installing a free coffee machine. This coffee machine was to be used by the community and provided a space where the community members would gather and discuss the shared trauma after the storm. The coffee machine became the symbol of unity and provided a platform for discussions that enabled many of the community members to face their trauma and move past it. Therefore, the coffee machine can serve as an example of a symbol that changed meaning as a result of the storm, or from a machine used for the fulfillment of coffee

needs, to a machine that is used to re-create a space that would enable emotional community support. The store itself also changed from a store that sells objects to a community identifying place.

The shop owner is an example of someone who had the means to help the community through using their role or pre-existing position to provide support. This was the case with many other members of the communities in which they dwell. Firefighters, police officers, medics, coast guard or various charity organizations to name a few, used their pre-existing positions and expertise to aid with the recovery after the storm. This expertise was sometimes called upon due to the role such as the police who were asked to help prevent looting in evacuated neighborhoods, but in other cases, it was out of self-volitions that an individual or a group would organize and help the community. From people organizing a food drive to individuals who made and gave out pizzas to places where there was no electricity to enable cooking, there were many stories of such selfless acts, all for the help and support of the community.

A particular example that is notable is that of 'Blankets for Brigantine'. 'Blankets for Brigantine' are a volunteer based organization that was formed by one individual who wanted to make a difference. As per her interview, the whole project began when she traveled to Brigantine, New Jersey, where she had a second home and was stopped by local police who were protecting people from the fallen live wires. She found out that there were not enough blankets for the people who remained in the town shelter, so she immediately donated the blankets in her car to help as the people on the island were not permitted to leave for their own safety. After that with help from friends, family, other community members and the Rotary Club of which she is a member, this individual began gathering supplies. After the travel ban was lifted and she could go back to the town of Brigantine, a center space was given to her as a base of operations. From this base of operations, all aid sent in from elsewhere for South Jersey was distributed, even up to the interview that I obtained from her nine months later. Red Cross, FEMA, and other charity organizations all used her volunteers and expertise to distribute the supplies to those who needed them.

Thus far in this section, all examples have been about neighbors helping each other as a way to survive both physically and mentally the effect of the storm, a neighborly support that was made prevalent because the loss of electricity created a physical barrier to other forms of support. However, even when not in relation to survival, the loss of electricity proved detrimental to those who rely on technology for entertainment and leisure activities. Once power was lost, many people found it

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difficult to find ways to entertain themselves. One of the participants who has lived in a house with no electricity in his youth had the following comments to make:

“I lived without electricity for three years...It sucked ... we couldn't afford it ... my father was a drunk and said we couldn't afford it. He was so busy drinking, we couldn't afford it. Eat the winter ... We just ... bundled up. In those days it was just like normal, it felt normal...Computers wouldn't have even been ... They weren't around ... When I was young, a calculator was unheard of ... I mean ... I think the UNIVAC had come out ... that would have been enough to take up this whole block. [in the evenings] we would tell stories, made up stories ... put on shows ... by candle light. You know when you have to you can learn how to entertain yourself. Actually, the times without electricity. The times when I was the poorest, were the best times. It seemed that like we were more closer as a family. As like you know ... I see the TV and the computer ... and kids getting on the computer and the laptop and this and that ... now you can do all kinds of stuff with just an Xbox ... that there is no need for human contact anymore. Dating sites and sex talk sites and this site and that site and ... whatever site ... think, I think we are losing human contact. I think we have gotten afraid of touching each other ... Oh My God”

-Transcription from Semi-Structured Interview

This is an example of someone who remembers how to entertain oneself without the use of a computer, iPad or phone, but some of my other participants were much more reliant on technology for entertainment, or as the participant refers to them, the people who have become afraid to engage with each other. So when electricity was lost, and people lost their form of entertainment, many walked outside and attempted to connect with their neighbors for the purposes of socialization in addition to that of various forms of support. The following Figure 44 shows people playing instruments together in the neighborhood, who might not ordinarily do so.



Figure 44: Improvised Neighborhood Jam Session while Waiting for the Power to Return

While waiting for the power to come back, many people entertained themselves through non-technology based interactions such as playing instruments as in the photo above, singing, talking, dancing and so on. As we are social beings by nature, the community serves as a support system to help with the recovery process, so it is not surprising that the signs used to illustrate a community frequently were based on the idea of ‘common,’ ‘share,’ ‘support.’ (Harré, 1993).

Unfortunately, according to all participants in my non-representative sample, once power was restored, community members ceased their new found interactions and returned to their prior communicative states. In other words, the shift of the community identity toward the neighborhood one was only temporary while the effects of the storm and its aftermath lasted. Once the ‘return to the norm’ or the restoration of electricity was accomplished, the community identity re-shifted back to how it identified prior to the storm.

In summary for this section, when the storm passed through and forced the massive power losses, many services were also lost. Internet loss and transportation services being some major ones affected post-Sandy. That meant that the community had to define itself based on close-knit geographical location – a neighborhood, a small town, an island cut off from the world, etc. Other types of community identities based around shared interests or online platforms became secondary until power could be restored and with it internet and transportation services. The re-evaluation of the role of the neighborhood community lead to the establishment of the neighborhood as a sometimes ‘new’ physical and emotional support system. Additionally, new shared interests could be developed due to the forcing together of newfound acquaintances as was the case of the musicians meeting to play together as a way to entertain themselves, even if such a shift in the community identity was only temporary, only lasted until power was restored in most cases.

2 A Tale of Villains and Heroes – The Storm vs. The Bucket Brigade

In addition to re-interpreting the type of community once electricity was lost, there was also a reinterpretation of the relationship between the ‘community’ and the ‘storm’. Because the electricity damage was so widespread, people needed to find a way to deal with the emotional and physical problems loss of energy helped create.

This section will be split into two parts. The first part will show how the hurricane was adorned with human characteristics as a way to ordain the storm with the responsibility for the trauma caused, but specifically, the energy loss damage. The

second part will show how people are adorned with characteristics of fairytale heroes as various actions are equated with heroic deeds, thus establishing certain individuals as ‘Heroes’ who are opposing the anthropomorphized image of Sandy the Hurricane as Sandy the Villain. Both the Heroes and Villains in this story occur only because of the loss of energy. Their roles are, in fact, defined by that loss as the ‘Villain Sandy’ who took electricity away and the ‘People Heroes’ who fight to get the power back on.

The Villain: Sandy Adorned with Anthropomorphic Qualities

In any fairytale story, there are both heroes and villains. The villains are defined as a character who takes something that belongs to the hero or hurts the hero physically or emotionally. In the aftermath of Hurricane Sandy, many people were left emotionally distressed, and much of the space around them was physically damaged. The most profound damage was the widespread loss of electricity that affected millions after the storm. The hurricane did the damage, but when people were to communicate about their experiences and the hurricane’s involvement, many turned toward the style of the fairytale narrative, where the Hurricane was described as ‘Her’ and was adorned with anthropomorphic qualities. ‘She’ is ill-tempered, fickle, powerful, cunning, strong, big, fat, purposeful and whimsical.

Describing the hurricane with anthropomorphic qualities arguably is yet another coping strategy in dealing with the storm’s aftermath. That is to say; the hurricane was given the characteristics and traits of a human being such as feelings, emotions, and intelligent thought. When used in communication, the storm was also given a specific gender that of a female, which arguably also came with the stereotypical traits of a female, or the idea of what a female is. Phrases such as ‘‘Sandy’ hurt us’, ‘‘Sandy’ took my home’, ‘‘Sandy’ caused a power outage’ were commonly widespread in both media and the interviews.

Making Sandy anthropomorphic meant that people were able to make it culpable. By providing the storm with human characteristics, people also endowed it with responsibility, which made it arguably easier to cope with. In other words, once responsibility could be placed on the storm rather than oneself; people were able to move forward, to target their anger at the storm, but not as a random occurrence, but a specific one, one caused by the whims of ‘Her’. This mentality also provided a certain sense of control that can enabled both individuals and communities to recover and face the psychological trauma that is usually a part of a disaster situation.

Perceiving the storm as human through an examination of the narratives is further supported by the common meteorologist practice to remove the name of a storm that has caused too much damage from the future hurricane naming index. The name becomes a symbol of the devastating damage caused by the storm. It is also what makes the storm unique and different from other storms. It is believed that by removing the name of the storm there will be no future storm of the same characteristics, and consequently there will be no damage of such magnitude. In the case of Hurricane Sandy, the removal of the name ‘Sandy’ from the hurricane naming index, would prevent the coming of a similar one in the future that would cause such widespread electrical damage. This practice also signifies something else. It signifies that the relationship of the storm to the community is not a one-way act-react condition, but that once the community has fought back the storm and has regained control and this is the end of the battle. By removing the name, the meteorologists prevent such damage occurring again because the power of the storm is given with the name with which it was endowed. The removal of the name to defeat any future storm is only one of the ways that people define their relationship with anthropomorphized natural disasters. The next section will delve into this relationship even further.

The Bucket Brigade, a Story of Heroes

In the post-Sandy semiosphere, various narratives were created and circulated where ‘heroes’ became distinguished and assigned certain actions and/or traits that when highlighted serve as a cultural lesson that communicates societal values. There were many such heroes, but the example in this section refers to heroic acts that are a direct result of the loss of electricity.

The following example is from a video created by Peer 1 Hosting. The video titled ‘The Bucket Brigade’ was published online with general access on the 25th of June 2013. This video is fully available on YouTube and was made with photos and video footage obtained during and after the storm. I was made aware of the existence of the video through social media chatter as well as by some of my interviewees who provided me with the video link. (For easier access, the video is attached to the thesis on a DVD)

The description below the video as provided by Peer 1 Hosting reads:

“In October 2012 Hurricane Sandy churned ashore and a small datacenter in the heart of New York's Financial District struggled to stay on line. As Manhattan went dark and the floodwaters rose, an overwhelmed and battered team of PEER 1 employees and customers came together to do the unthinkable. They waged a 72-hour battle against

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exhaustion, time and Mother Nature. And they persevered -- one second, one step and one bucket of fuel at a time. This is their story as they tell it.”

The Bucket Brigade video serves as a sign-symbol for the relationship that is analyzed in this section or that of the Villain (Hurricane Sandy) versus the Heroes (PEER 1 employees). It is also an example of how it was not actions by the storm that people have to recover from, but that people had the power to fight back to the storm. The empowering message of this film, as it also existed in many narratives, aided in the recovery after the storm as well as the re-affirmation of the self/community in a post-disaster setting.

This film could be classified as a documentary with certain morals, which would explain why the accent on the Heroes vs. Villains storyline is so strong. The underlining message of the video is about the dedication of the server hosting firm to its customers and how the firm is ready to face any challenge in order to maintain the servers operational and service its customers. PEER 1 Hosting is a server management firm where the safety of data is essential and cannot be allowed to be damaged, hacked or left inaccessible for long. This connects to the ideas of safety, security and trust, which are all concepts employed by firms in an attempt to establish long-term loyalty with the customers. The video shows these concepts of safety, security and trust by using the creation and the continued perseverance of the Bucket Brigade for 72 hours in harsh conditions as the symbol for these traits.

In this video, the Bucket Brigade formed because the backup generators that maintain the servers running in the case of a power outage and that are on the 17th floor need to be fed fuel, but as there was no electricity, the pumps were not operational. The Bucket Brigade was then the human chain that was established by the employees to ferry buckets of fuel up and down the stairs for the period of 72 hours in an attempt to keep the generators going. As sign-symbols, the generators represent the beating heart of the firm because without their ability to produce electricity, the servers will inevitably shut down and the services provided by the firm will cease. The employees in the story take the role of the Heroes who artificially maintained the beating heart of the firm through the Bucket Brigade drive.

This is an example where the heroic acts occur as a direct result of the loss of electricity. The generators are perceived as symbols of the beating heart of the firm and the people are perceived as the heroes in the story trying to keep the servers ‘alive.’ If the power was on, these acts of carrying buckets up and down stairs would not be

classified as heroic, but because of the power loss setting, these acts were not only seen as heroic, but the act itself became a symbol of resilience, strength, and perseverance against the storm, the Villain. Electricity in these stories then is also seen as a symbol of that resilience; it is the means with which to fight back against the villain as well as that electricity itself is seen as a symbol of life, the life-force that would keep the servers ‘alive.’

In summary, this section focused on the possibility of analyzing Sandy-associated symbols in relation to those of the fairy tales. The protagonist (The Hero) and the antagonist (The Villain) are interpreted in the narrative of the Super-Storm. The hurricane is depicted as a human being and identified as the Villain while the human communities are represented by a selection of Heroes fighting that Villain. Sandy is described as a female with a specific character, physical and mental abilities that cause devastation to land, homes and people while stories and images of heroes illustrate the human response to Her intentions and actions. Loss and recovery of electricity play an essential role in this narrative since it is the major ordeal endured by the people during and after the storm. In the context of this battle the electricity related symbolism took additional dimensions - the fight against power loss or for power maintenance gave life to a new understanding of human abilities to resist a disaster and renewed old beliefs that all disasters that can be made unique (through names) and forced to disappear after the fight is over.

Summary and Important Findings

In summary, this chapter presented a semiotic analysis of the empirical data gathered for Case I Hurricane Sandy. Building on the thematic and content analyses developed in Chapter 3, this chapter explored the Hurricane-related symbols of electricity and the transformation of their meanings when moved from everyday context to that of a disaster setting. This change was followed through a three-layer semiotic analysis of the transformation of the *form*, *referent*, and *meaning* within select examples. The three-layer analysis was both described in the narrative as well as represented by graphic representations (triangles) for easier communication of the analysis conclusions.

The chapter was separated into two parts where the *first* described images of electricity as symbols of turmoil, social values, and change. In this part, images of electricity were re-interpreted in relation to the concepts of a) ‘light’, ‘dark’ and public spaces, b) electricity and its integration in symbols of the home space, c) ‘loss’, ‘hope’

and electricity ‘recovery’ as well as a consideration of the role of electricity in defining the public, private and in between spaces.⁷⁷ The *second* part of the chapter presented images of electricity as symbols of the neighborhood and the community. In this part, it was shown how the community is re-interpreted when electricity is lost as well as different means of communicating images of electricity illustrated by the comparison with the fairytale genre.

The loss of electricity shook the very foundations of the community identity by re-defining it on the basis of geographical location and removing access to many other types of communities. The recovery takes the form of a want to return to how things were before the disaster, to a pre-defined ‘norm’. The recovery towards this norm takes the place of regaining that which was lost such as shelter or a specific standard of living on one hand, but also having to deal with the psychological effects of the disaster on the other (WHO 1993; Wapner 2000; Gleser et al. 2013; Somasundaram 2014). After Hurricane Sandy, many billions were used for the physical restoration of the East Coast, but the psychological trauma was more difficult to overcome. As discussed thus far some of the coping mechanisms for dealing with the psychological trauma after the disaster was to continue as business as usual, cling to various forms of familial, community, regional or national identity as well as trying to establish a meaningful connection to objects, spaces, and places. (Eugene and Kalayjian 2009; Saul 2013)

Both parts of the chapter serve to illustrate how communication about electricity, and electricity loss, in particular, is used both descriptively as well as abstractly inferring the role of electricity in defining public and private spaces, individual and group relations as well as social values, morals and attributed qualities that have become extensions of both the individual and social self.

Another important finding in this case study is that there were no apparent identifiable culture-specific images of electricity.⁷⁸ Even images that show individual perceptions were saturated with universal characteristics. That may be the case in this dataset because the natural disaster settings repress cultural specific images and emphasize predominantly the universally accepted ones. Further research is needed to better answer the question of why one type of images is dominating over another in a

⁷⁷ Public [bridge, city], private [home], in between where associations with the home space and private sphere are mixed with associations of the public sphere.

⁷⁸ Electricity, nor any particular aspect of it, were described as “American”, and the images of electricity inferred globally shared concepts such as in relation to light, dark, home, safety, security etc.

disaster setting, but the identification of images and their analytical presentation in this chapter is a good foundation for future studies in this direction.

Chapter 7

Semiotics Applied, Case 2: Bulgarian Energy Protests *'Hope for a Change'*

*"People know what they do; frequently they know why they
do what they do; but what they don't know is what what they
do does."*

— Michel Foucault

Introduction

Similarly, to the previous chapter, this one will present the semiotic perspective of analyzing the empirical data related to the second case study, namely photo and video images as well as interview narratives related to the Energy Protests in Bulgaria 2013. The aim of this chapter is to explore the images of electricity that were communicated as sign-symbols during the Energy Protests and all relevant transformations, additions or duplications of their denotative and connotative meanings. In other words, the emphasis will be again on mostly semantic and pragmatic dimensions (please see pages 154, 156-161) of electricity-related symbolic messages.

The analysis presented in this chapter is limited in the same ways as described in the introduction to the previous chapter, or with consideration to 1) the type of analysis is chosen to best reflect the images of electricity identified in the collected data, 2) the analysis is oriented to semantic and pragmatic approaches with the goal of organizing the heterogeneous empirical materials into manageable types of data sets, and 3) the selection of the approaches reflects on the limits imposed by the length of the thesis as well as on the temporal constraints that prevent a more thorough analysis or analysis presenting multiple semiotic perspectives.

Additionally, for this chapter, the examination is further limited to examine the formation and interpretation of signs and their meanings in the specific semiosphere of the protest and of the Bulgarian society at large. Meanings of visual and/or narrative images of electricity will help us interpret the interconnectedness of basic and additional meanings of images used or created by the participants to convey the most important messages of the energy protest. The particular focus is on the meanings of the images, whose primary meanings are changed, shifted or re-interpreted in the particular context of the Bulgarian Energy protests.

There are several types of images that will be considered in the chapter, and they will be illustrated through selected examples for each type. The *first* part of the chapter will present an analysis of images that are universally recognizable as related to electricity in all cultures where electricity exists but are re-contextualized in the Bulgarian energy protest thus receiving additional and/or modified meanings and functions. The *second* part of the chapter focuses on images that are re-contextualized within the Bulgarian culture in order to convey the message of the energy protest, i.e. images drawn from non-electricity-related elements of culture and turned into electricity-related symbols. In both cases, there are images with universal (cross-

cultural) meanings as well as culture-based ones (Bulgarian) that are interwoven in various ways in the semiosphere of the energy protest and communicated to the rest of the society. In both parts of the chapter the images analyzed are both visual and narrative as they reflect the type of data that were collected for this project as described in detail in Chapters 2, 3 and 4. Additionally, the second part will more specifically focus on the performative aspects of their usage in context.

Part I: Images of Electricity as Symbols of Turmoil, Social Values, and Change

The context in which symbols of electricity are used inevitably influences the choice of primary and secondary meanings and determines the exact focus of the sign thus making it relevant to the context. As Eco argues, each sign has many meanings much like an encyclopedia, and it is the context that determines which of these meanings would be more prevalent at a given time. The Bulgarian Energy Protests provide such a context where specific communicative strategies are applied and also serves as a situational semiosphere where specific message communicated through already transformed or re-interpreted electricity-related symbols.

The protest in itself can be interpreted in three main directions. *First*, the protest can be analyzed as a complex sign-system with multiple sub-systems such as protest organizers, participants, observers, police forces; protest actions including processions, slogans, chants, speeches, performances, rituals, vigils etc; protest languages such as natural languages, music, dance, material objects etc; specific time, spaces and places. *Second*, the protest can be interpreted itself as a complex sign that carries one unified message - 'NO' to something or someone. *Third*, the protest can be presented as the environment/context for a specific communication between the various groups of participants and between the protesters and the society at large. This thesis focuses on all three interpretations when examining images of electricity as a way to say "no" to the existing energy situation in the country, the use of the various languages to communicate messages related to the electric companies and the various actions uniting all participants in the specific communicative situation of the protest. The images of electricity here are not interpreted in their basic meanings but as integrated into the general message of the protest itself. They are no longer just images of electricity but images incorporated in a political act of protesting against energy corporations.

As part of the protest, there were many visual images that could be interpreted as signs-symbols, but only some of them are electricity-related ones. The non-electricity-

related protest signs influence the meanings associated with the electricity related ones and add new meanings to them, meanings that in this chapter are interpreted from the perspectives of both the participants in the protests as well as those at whom the message is directed.

The following sections include a selection of several examples used to illustrate the process of change in meaning of the electricity-related signs-symbols that are used in the context of the protest to communicate its messages as well as the emotions associated with them. The first section will show the contextual re-interpretation of the sign-symbols of ‘energy’ in general as circulated during the protest. The second section will present the re-interpretation of ‘power’ and ‘danger’ where both terms are related to both electricity and socio-political phenomena. The third section will then focus on perceptions of electricity associated with symbols of ‘loss’ and ‘hope’ while the last two sections will discuss the re-interpretation of the symbols of ‘light’ and those of ‘evil’ when associated with the energy crisis.

1 Re-interpreting the sign-symbols of ‘Energy’ and ‘Energy Consumption’

People shape their understanding of energy and electricity consumption based on individual experiences as well as social values but within the protest context, these are imbued with added meanings. The universal signs used to signify ‘electricity’ and ‘energy’ in general, for example, could have obtained additional political and economic connotations. Many energy signs appeared in posters and were shared in various forums but in addition to being used for illustrative purposes of the different types of energy and of the values attached to them; these signs were also used as a social commentary relating to the energy situation in Bulgaria. This section will provide some specific examples of meanings associated with certain sign-symbols and discuss how some of those meanings may have altered, have been lost or added to, within the Bulgarian Energy protest context as related to the green energy and climate change debates as well as the acts of energy production and consumption in Bulgaria.

Signs of Energy: Types and Production

In this section, the focus is on the signs depicting the various energy types and their production. These signs include an embedded system of values that are attributed to each sign and its meanings. These general values serve as a framework through which to interpret signs used in the protest. That is why an understanding of these general values is first discussed before the added political and economic meanings the protest context adds can be analyzed. These values arguably share many of the

universal traits that are imposed on the various energy types, but the emphasis in this section is on which aspects are more important in the Bulgarian context particularly. The following figure is used to illustrate Bulgarian societal values associated with the general interpretation of various energy resources and their impact on the earth.



Figure 45: Signs of Green and Brown Energy – the Nuclear versus the Green Energy Debate
(Text on the left reads 'Nuclear energy', text on the right reads 'Sustainable energy resources')

Typically, the image in Figure 45 could be seen to present an argument in favor of green energy, as shown and labeled below the image on the right, over that of nuclear power, as shown and labeled below the image on the left. The argument presented shows that green energy would keep the earth in balance and preserve it for the future generations since green energy comes from sustainable resources such as wind (the icon of the turbines) and solar (the icon of the solar panels). The green image also shows various forms of 'green' transportation such as a biker on the left of the globe, the air balloon just slightly above the biker as well as a car. The car is a rather odd choice for a green image because even an electric car at the moment is not sustainable in either production or use, not to mentioned petrol or diesel based ones. There are various possibilities for the inclusion of the car on the green image; where one could be that the icon is added in order to depict the possibility of future developments of 'green' cars while another is that because at the moment cars are often not perceived as 'green', a 'green' campaign would exclude them. Such exclusion would clash with the current dependency people have on using cars as a major type of transportation for both business and pleasure thus making the 'green' campaign unpopular.

The part of the image on the left that shows nuclear energy also illustrates the argument that is in favor of green energy and in opposition to nuclear. The argument is structured using a series of six images that are narrative images, i.e. images that should be viewed in a sequence that tells a story. The top row of images represents the beginning of three stories while the bottom row shows the corresponding three endings. First, the two images on the left show the leaking nuclear plant (iconic sign) followed by the radioactive materials as signified by the nuclear symbol on the icon of the barrels. Second, there is the image of an atomic bomb (iconic sign) with the corresponding mushroom cloud (also iconic). Finally, the last two images on the right depict a radioactive cloud signified by the radioactive symbol on an otherwise iconic sign of a cloud that is paired with the sixth image of the dying tree as pointed out with the use of the falling leaves.

In the protests, however, this image was used as a symbol that contains further economic and political culture-specific aspects. The image was shared in the social media space along with other texts that were attempting to educate the public about the energy situation in the country as connected to both the political and the economic spheres. The image did stand for a symbol of the nuclear vs. green energy debate as described thus far as well as concepts such as ownership, economic and political gains. One of the most often cited points of reference was who developed various types of energy in the country and who owns it. As energy is no longer nationalized, green energy development is a private business.

Having green energy development as a private business brings forth the notion of profit and who gains from green energy production. As the developers are politicians or investors who need political support in order to build the wind farms, solar farms, and geothermal sources, this has left energy development as a much-politicized activity. The same is true for brown energy production and development. That is why for example, the nuclear referendum in Bulgaria that took place in January right before the protests was as much about the development of nuclear energy as a resource as they were about political platforms and maneuvers for the following election. Additionally, as energy and electricity particularly are no longer nationalized, all profits made go to private parties rather than back in the Bulgarian economy. Following the money trail was one of the activities organizers and protesters would partake in, using what they found as a further argument for the production of one type of energy over another.

All of these substantive points align with the expected from prior research into energy production where two of the major factors people engage with relate to the

political and economic spheres.⁷⁹ The signs used and the meanings attached to them from the protest simply serve to illustrate and support the previous findings in the academic literature. (Beaudreau 1999; Kursunogammalu et al. 2007; Simon 2007; Elkind and Pascual 2010; Dorsman et al. 2012)

Thus far this section has referred to the energy types, their production and impact on the Bulgarian people as well as the planet in general, but there were also narratives as well as signs that stand for values related to energy consumption.

Energy Consumption

In addition to energy production, another way to study electricity is to focus on the consumer side. The focus is to study electricity as related to energy consumption by following patterns of behavior in the consumer both long term as well as everyday life experiences. The Bulgarian Energy Protests also brought forth signs that depict energy consumption and whose meanings attempt to reconcile the energy situation in Bulgaria with the individual choices made. That is to say, the signs used in the protests highlight and consolidate the physical with the mental expectations⁸⁰ in relation to electricity consumerism according to an accepted value system, but also how this expectation was or was not met in this context thus adding to the reasons for the protests.

An energy consumption graffiti that is a sign for energy consumption practices in the country can be seen in the following example. Figure 46 is an example of an image that shows energy consumption attitudes.



Figure 46: Energy Consumption Critique Graffiti

⁷⁹ Please see prior research as described on pages 99-102 in the thesis.

⁸⁰ Please see pages 22-30 in the thesis for reference on physical and mental frameworks.

The image is that of the KFC Colonel, and his scarf is covered with the emblems of many large companies both corporate and franchises such as Shell Gasoline, Coca-Cola or McDonalds. The Colonel is further depicted to hold a silver cup in which there is the logo of the Apple Computer Company. The hand that holds the cup is not a realistic human hand, but rather an illustration similar to those of Mickey Mouse as produced by the Disney Company. Finally, the image is completed with the word 'consume' written across the bottom.

In order to understand this image and how it is used as a symbol, the previous illustrations of various values contained in different types of energy as well as in the act of energy use must be taken into consideration.

The image can be seen as a representation of the current global trend of development and progress through energy consumption. According to Trentmann (2012), research to date surrounding electricity tends to try to escape the narrow confines of "narratives of liberation and progress through greater energy consumption". (Trentmann 2012; 323) Figure 46 then presents a critique of consumption where the result is an amalgamation of parts that creates a possible consumer identity. Each part of the person in the image is based on the consumption of a particular brand, leaving us with no idea of who the person beneath the brands could be. The image could be interpreted to show the loss of individual identity through excessive consumption that is brand encouraged. I would argue that this image is a critique rather than a propaganda for further consumption due to the rise of awareness in consumer that has followed the scientific research in three major areas: 1) social response and adaptation to electrical blackouts, 2) social construction of energy systems and finally 3) how various forms of power structure and function in social life and through time.

As part of the protests, this image also calls for self-reflection from the viewers about the type of energy consumption people engage in and how necessary it really is. The high energy prices were one of the reasons named by participants as the main cause of the protests. Before the protests, one of the ways people were dealing with the situation was to reduce energy consumption in an effort to lower the energy bill at the end of the month. During the protests, even more people realized the necessity for energy reduction practices along with the lowering of existing energy costs. When a protest participant was asked about energy consumption in everyday life, the following narrative was presented.

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Well...when people really start to think, and the question is not when that happens, whether when a disaster strikes or when people see that there is no way out and it all depends on them or when ... uh ... when they get more information and ... and they understand in a rational way that there is a reason for each and every action they undertake [that is when they change their habits regarding energy consumption]

Maybe these luxury items, the luxuries are redundant [] Well to say these air conditioners ... maybe all of these ... hair curlers and the like, they are not needed, even the irons somehow [...] because maybe you can live with wrinkled dresses [a question of survival].

[There is a need of items] Well for cooking the most ... for that mostly and during the winter for heating since I heat with an electrical heater. ... But to say one winter, since I live with my brother, we moved in a new house and we didn't have a refrigerator and ... actually we found out that for a long time people can live without a refrigerator since well you can leave your food outside in some boxes made up for that purpose

[After we got it back] Well we turned it off from time to time when we had fewer products anyway and ... we turned it off and so we left our things outside again [] Yes we preserved [the idea] and we did that from time to time [...] because it is winter and actually ... the natural environment conditions can save you very large [electricity] bills

-English Translation of Semi-Structured Interview

Ами ... като хората наистина се замислят, и въпроса е вече кога става това, дали когато настъпва бедствие вече и хората видят че няма накъде и че от тях зависи или тях ... във ... когамо получат повече информация и ... и разберат по рационален път че има значение всяко такова действие [тогава те променат своите навици на енергийна консумация]

Може би тези елегантните уреди, елегантните те са по изтичани [...] Ами да кажем тези климатизиране ... може би всички тия ... машини за коса подобни, не са толкова нужни, дори ютишите някакви [...] Защото можеш да живееш и с измачкани брави [въпрос на оцелване].

[Нужда има] Ами за зимата най-вече, ... за това става, и през зимата за отопление тъй като с електрически радиатор се отоплявам. ... Но да кажем една зима, понеже аз живея с брат ми, тогава още се биеме насили в нова квартира и наместо хладилник и ... остъпност доста време открихме че човек може да живее без хладилник като нати оставя навън в няколко приспособени кутии месо, продуктите си

Ами от време на време го използватме когамо имамме и без това малко продукти и ... го използватме и така, си оставяме пак на вън, на терасата някакви неща [...] Да, запали се [като идея] и си го ползваме от време на време [...] защото в зима и остъпност ... естествените условия могат да ти спестят доста големи сметки

-Bulgarian Transcription of Semi-Structured Interview

The interview narrative above highlights several important points of reflection. *First*, people change their energy habits and/or values attributed to electricity either when a disaster happens that makes people re-interpret their energy use or as people accumulate information. This observation aligns with the two ways people change habits through either being forced to or through personal choice. *Second*, there are some electricity appliances that are needed and some that are wanted, or those that people depend on for survival and those that are luxury items. *Third*, in a disaster context, one can re-evaluate what is needed and what is wanted as was the case of the participant re-interpreting the role of the fridge for everyday use. *Finally*, having lost electricity or a particular appliance for an extended period of time, adaptation measures are undertaken that may remain in effect even after the appliance and/or electricity are fixed. As the participant explained, the use of the weather conditions to preserve food in winter remained as an idea even after the participant re-acquired a fridge.

In summary, in the Bulgarian Energy Protests, signs based on images that show energy types and energy production illustrate how a change in the perspectives related to energy can shift once political and economic considerations are added. The different types of energy can further be used as a justification for choice of electricity as an

energy source as well as an underline critique of certain energy consumption practices such as the consumption of electricity through the use of technology as a way to maintain the idea of progress as such. Finally, the signs of the energy practices, or the energy production and consumption value systems, also serve to bridge the physical loss of energy to the moral energy use expectations. Lack of money and inability to buy electricity is countered with lowering electricity use expectations – what electricity is needed versus what it is wanted for.

2 Re-Interpreting the Symbols of ‘Power’ and ‘Danger’

This section will show examples of electricity-related symbols of ‘power’, and ‘danger’ and how those signs have been re-interpreted within the Bulgarian Energy protest semiosphere. As part of the protests, some of the original meanings associated with these symbols were preserved, while other meanings were changed. Some of the changes occurred as a result of a change in the referent, which in turn produced a change in the overall meaning of the sign. For instance, ‘power’, and ‘danger’ in addition to meanings connected to electricity were also connected to economic and political structures in Bulgaria. Both ‘power’ and ‘danger’ can be re-interpreted as related to political and economic power within the protest semiosphere. These re-interpretations can be related to the particular energy situation within Bulgaria at that time and not only as related to electricity caused physical danger. In order to illustrate the transformations of meanings, several examples were selected from the dataset that portray some of the symbols associated with ‘power’, and ‘danger’ as related to electricity and how those signs change as part of the protest communicative process.

Most of the universally accepted images of electricity are iconic by nature. They are usually stylized signs that stand for ‘electricity’, ‘power’ or ‘energy’. Some of the most common such images as identified in both the visual data set as well as the interviews with the direct question of ‘are there any emblems, logos or symbols you associate with electricity’ included ‘light bulbs,’ ‘cables,’ ‘thunderbolts’ or even ‘light switches’ signs.

The examples selected to show the re-interpretation of the symbols of ‘power’ and ‘danger’ in this section are based around the icon of the thunderbolt. This icon was often referred to as a sign of electricity in both the visual data as well as mentioned by the interview participants as part of their narratives. The following illustrations (Figure 47) show the change of meaning of the sign-symbol of the thunderbolt as used during the protests as well as in posters and other photographs.



Figure 47: Left – Sign with Text that Reads: 'Warning, High Voltage, Life in Danger' (Used in a Place with High Electric Voltage); Right – Use of the Same Sign that now Reads: 'Warning, High Electricity Prices, Life in Danger' (Used in the Procession of the Energy Protest)

As an iconic sign, the thunderbolt is a stylized image universally accepted to represent a thunderbolt as found in nature. The icon is also used to symbolize electricity and frequently with negative connotations. That is the thunderbolt is often paired with a warning sign such as the ones in Figure 47. The photo on the left of Figure 47 shows a sign as put up on a wall that reads 'warning, high voltage, life in danger.' The photo on the right of Figure 47 demonstrates how a similar sign is used as part of the protest.

The thunderbolt sign often represents an area of high voltage thus serving as a sign of danger and a warning against tampering. Therefore, the sign has rather negative connotations because of the association with warning, danger or threat to oneself. There is also an element of respect for the sign invokes because it warns that there is danger, which is accepted by the reader even though there is no particular explanation about what could happen that can be provided with other danger signs.⁸¹ The use of the sign as part of the protest carries the same connotative associations but as the referent has changed (from "high voltage" to "high electricity prices"), the danger the sign refers to is that of the situation and the particular context that has led to the protests.

Figure 47 (right) signifies the main reason as identified in both the visual and interview data behind the protests or that of the high energy prices. By using the same design as the original sign from Figure 47 (left), the threat, danger or warning that is embedded in the original is transferred into the new sign. The new sign with a few word changes targets the meanings of warning and danger in the direction used for the protest purposes, a context-specific use of the connotative elements of the original sign of warning. In other words, the new sign preserves a similar colour scheme and design

⁸¹ In the case of a sign that means 'danger, drowning', the drowning is specifically listed as the consequence of the danger. While with the thunderbolt, the danger sign only vaguely refer to 'danger' without a specification of consequences such as electrocution.

of the sign in order to carry the original meaning, but targets this meaning to the particular context with the change of text from ‘warning, high voltage, life in danger’ to ‘warning, high energy prices, life in danger’. In both cases, "life is in danger".

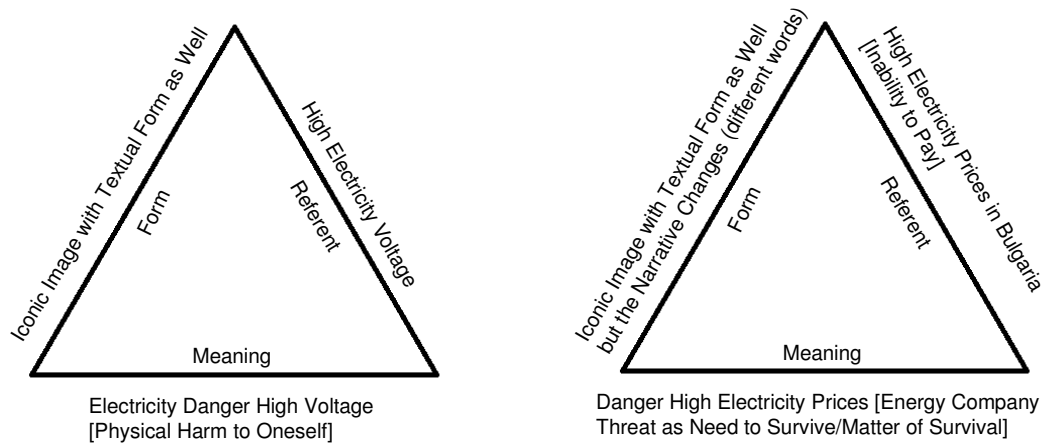


Figure 48: Graphic Representation of Semiotic Analysis of the Thunderbolt Icon

The connotation of the thunderbolt symbolizing ‘warning, high voltage, life in danger’ is applied specifically towards the energy prices grievance in the protests as evident in Figure 47 (right). It preserves the style and design of the original sign, but the transformed additional meanings of the sign are embedded in both the style of the original warning sign as well as the grammar. Figure 49 shows a poster that was also quite common, which is why there are even two identical ones in the photograph, that also reads ‘warning, high energy prices, life in danger’ (the statement rhymes in Bulgarian unlike the original sign which does not). This poster preserves the text from Figure 47 (right) but removes the yellow background and the further sign stylization.



Figure 49: The Text Reads: 'No to Electroshock Therapies! Warning, High Energy Prices, Life in Danger', below the Logos of the Energy Companies Are Crossed Over

Even though the design of the poster is changed, the danger meaning is preserved because of the thunderbolt icon. This shows that even if the same sign is not used with replacement text, the meaning is preserved because it is carried within the sign of the thunderbolt as oppose to the stylization and design of the original warning sign in Figure 47 (left). This means that the thunderbolt can be removed from the 'warning sign' sign and placed in a different context while preserving the meaning from the original sign. Additionally, in Figure 49, there are two added elements. *First*, the sentence 'No to Electroshock Therapies!' which no longer refers to a medical treatment but instead to the "shock" caused by the high energy prices. Again, the change of referent changes the meanings of the sign thus making it relevant to the political protest. *Second*, there is the addition of the logos of the energy companies that are crossed over. The companies that caused "the shock" are symbolically deleted. The new meaning duplicates one of the main messages of the protest - all energy companies "Out of Bulgaria".

This case study is about a protest related to energy and electricity, so all energy and electricity related signs that were used carry transformed meanings of 'danger,' 'warning,' 'threat' or various forms of power as illustrated by the example "thunderbolt" sign. When electricity signs are used to communicate messages beyond 'this is electricity,' the use of the signs opens up new possibilities to better understand how people perceive electricity as such, how they combine these perceptions with those of other social phenomena and how they communicate original and newly combined perceptions through these signs. Communication of emotions is a part of the coding and decoding process. One of the emotions associated with the "thunderbolt" sign is that of fear due to pending danger - high voltage (in everyday routine context) or electricity associated economic crisis (in the context of the political protest).

Figure 50 illustrates another application of the concept where the message is communicated even more though the use of the visual signs rather than the textual statement.



Figure 50: The Text Reads: 1) Warning, High Energy Prices!; 2) Energy Company Logos; 3) These companies torture the Bulgarian people with their high energy prices; 4) 17th of February National Protest Against CHEZ, Energo-Pro, EVN, Toplofikatziya, and the governmental policy in the energy sector; 5) Events: Sofia, Varna, Burgas, Plovdiv, Blagoevgrad, Veliko Turnovo, Ruse, Shumen, Dobrich, Silistra, Sandanski, Pazardjik and many other cities; 6) Inform your friends! Share!

Figure 50 is a poster that is a call to a protest. It clearly spells out the grievances people have about the energy companies and their government supporters in the energy sector who maintain the high electricity prices. Also, the poster illustrates the magnitude of the protester actions by naming a number of major regional centers.

The written text on this poster is also supplemented with the icon of the person being zapped by the thunderbolt. The image again highlights the danger associated with the thunderbolt but combined with the human figure the sign further directs the observer to appropriate decoding of its meaning even if he/she does not have a previous knowledge of the thunderbolt icon. The sign is in effect a more literal illustration of danger than the thunderbolt alone for it contains a ready frame of interpretation directing the observer towards decoding of the combined meaning of the two iconic elements - the thunderbolt and the injured human. The more illustrative sign refers to a cause and effect relationship thus uniting both iconic depictions into one and carrying the same meaning of danger.

In the case of the thunderbolt, the sign is commonly accepted to signal possible high voltage and danger, so the interpretative framework is unnecessary, but the example was selected in order to illustrate how such an interpretative framework may exist. To explain, even if the reader of the sign had not encountered the thunderbolt sign prior, the position of the sign as a dagger-like weapon attacking the icon of the person would be enough to communicate the meaning of danger associated with it.

Some signs have an interpretative framework embedded within the sign by using icons or other means in such a way as to communicate a narrative of sorts; but for others, the interpretative framework comes from the situational context in which the observer exists.

In sum, the thunderbolt illustration was often used in the protest as a sign of electricity. The thunderbolt was depicted as an iconic image situated by a text that would provide the context for the sign as one of manmade electricity. Without the narrative that situated the icon of the thunderbolt, the sign could be seen to represent nature associated thunder rather than man harnessed energy supply. The thunderbolt that usually means high electric voltage when situated on a warning sign was used as a symbol to stand in for high electricity prices in Bulgaria with the added reference to the economic crisis. The shift in the referent, in turn, produced a shift in the meaning from electricity danger surge of high voltage and physical harm to danger caused by high electricity prices and unstable economic and political environment.

3 Re-interpreting Sign-Symbols of 'Loss' and 'Hope'⁸²

In the previous analysis of various universal signs such as the basic iconic one of the thunderbolt as well as the more elaborate ones that draw in energy resource use and sourcing, two concepts keep appearing that deserve some further attention, namely those of *loss* and *hope*. Whether in the context of hope for a better, sustainable future or the context of a loss of our planet due to pollution or use of particular energy resources such as nuclear, the theme of loss and hope seems to be interconnected with that of electricity. At its most basic level, electricity is connected to loss in terms of 'power loss'.

Power loss is at the very basis of both case studies for this thesis because arguably it is because of power loss that people produce images of electricity as part of the protests. The power loss in the protests case is the result of a long, energy strangulation, process where due to economic and political reasons people are not able to afford the energy they desire or in fact need for amenities such as cooking, light and heating. Therefore, power loss is not just about the electricity lost, but also is connected to the loss of the image of a home that is warm, safe, secure and can fulfill the basic functions of an individual such as the ability to cook a meal. Additionally, the power

⁸² 'Fear' is one other theme that came up through the data but it will not be developed further because 'fear' was often associated with conspiracy type theories such as 'they are out to get us', which would not be verifiable by the type of data collected. However, 'fear' is often associated with danger and further research into the topic may prove both useful and interesting.

loss also reflects on the loss of luxury and comfort items that may be connected to social status and success measure in the community standards such as various pieces of technology. This power loss as argued by the participants in the protests is what drove them out to the streets where with their protest actions they hoped for a change. Unlike the Hurricane Sandy case where the hope is one of return to the norm, in the Bulgarian protests case, the hope relates to any change that may shift the political and economic standstill, or the mafia monopolies as the interviewers labeled them, as well as the perceived social acceptance, or the self-inflicted victimization of the Bulgarian people as evident in many visuals.

The hope of the protests is a hope for change, but interestingly, even though the call for change is evident in most visuals, there is no further stipulation as to change into what. The change is divulged as a denial of the status quo and a clear visualization of what people do not want. What is missing in this picture is the alternative to existing institutions, policies or people responsible for the current energy situation. For example, many of the visuals include the statement "Energy Company *Out of Bulgaria*", but there are no visual, performative or narrative suggestions as to what would take the place of the institutions once they are gone nor how the organizational aspects of providing electricity as a service to the people would work. The profound emphasis on denial, disapproval, rejection and removal has produced a great number of images which represent the energy companies as the embodiment of 'evil' itself - the evil that needs to be demolished in order for a change for the better to occur.

4 'Energy Companies' as Symbols of 'Evil'

The power loss people endured refers to both electricity as well as political and economic loss. It is the loss of control over the political and economic situation that is seen to have resulted in the high energy prices that have caused the energy supply to be cut off for many households. In an attempt to regain some control, the protesters laid their grievances not against particular politicians who were often depicted as effigies on strings, and not against the members of the energy companies such as the CEO or various managers who could be named, but against the energy companies themselves who were perceived as entities. During the protest, these entities were presented as animated characters who have thought and acted in a certain way. All energy companies were anthropomorphized and turned into the 'villain' of the classic fairy tales. Similarly, to all other villains the electric companies were described as the 'evil' antagonist, who hurts people, steals, cheats, causes discomfort and chaos in the human society. They

became the personification of the 'evil' itself. This 'evil' was interpreted in various visual and narrative images. Sometimes the 'evil' took the form of a 'great beast', while in other depictions it was a 'terrifying giant', 'three-headed dragon', 'evil spirit', 'vampire', 'vulture', 'demonized scarecrow', 'evil characters from films' or even 'death'. Some of these interpretations will be illustrated through selected examples bellow.

The following cartoon (Figure 51) describes the energy company as a 'three-headed dragon'.



Figure 51: The Energy Company as a 'Three-Headed Dragon'; The text reads: 'Once upon a time there was one very scary three-headed dragon named 'Energy Provider'!!!'

Figure 51 shows a cartoon of a family sitting around the fire and partaking in storytelling. The father is telling the famous fairy-tale of the three brothers and the three-headed dragon. As evident by their scared expressions and additional ink lines drawn above the characters, this is a really scary story. This image shows what many of the photographs depicted and the interviewers described such as the sharing of tales regarding energy bills, company woes, etc. were very common. Additionally, the sharing tales around a campfire are thus translated into the sharing of tales in the protest setting, which also acquire the properties of storytelling around a campfire. An example would be the emotions that are associated with the scary tales and the fear or values they instruct in the reader. The caption below the image actually tells the reader part of the scary story because it reads 'once upon a time there was a three-headed dragon named "Energy provider"!'. The energy provider is attributed with the qualities associated with

the three-headed dragon in the fairy-tale such as cunning, cruel, and dishonest. So just like the dragon steals properties and takes people as victims, the energy providers are perceived to do the same. From a semiotic perspective, the comparison between the dragon and the energy provider represents a shift in the referent that changes the morals of the tale thus sending a transformed message to the listeners. In other words, the meaning associated with the dragon is transferred to the energy provider and used as part of the communication in the protest. The newly formed meaning became an integral part of the protest message - energy companies are evil that needs to be chased away or destroyed.

Figure 52 shows an illustration where the energy company is equated with a giant.



Figure 52: The Energy Company as the 'Giant of Evil'; The text on the image reads: 'Monopol' and 'EVN out of Bulgaria.' The text below reads: "Ideologies Divide Us. Dreams and Suffering Unite Us."

Figure 52 depicts a large male figure wrapped in ropes that are held by several little figures of both sexes and is reminiscent of the image of Gulliver landing on the island country of the Lilliputians from the book Gulliver's Travels by Jonathan Swift.

The giant, rather than Gulliver, represents the energy companies that are also described as monopolies, for reference, please see Chapter 4 of the thesis. In the cartoon, the energy companies are labeled through the sign on the giant's jacket that reads the word 'Monopoly.' One of the energy companies is specifically mentioned in the text - EVN. The caption below the photo reads 'Ideologies divide us. Dreams and suffering unite us.' The poster illustrates the perceived strength of the monopoly by making the figure so large, in opposition to the little people. The caption comments further on the victimization of the people, who are seen to suffer in the situation energy monopolies create, but also that there is hope. The hope is that regardless of individual beliefs, values, and ideologies, they can dream together and unite in their struggle against the giant monopoly. This union may prove to be strong enough to stop the monopolies as represented by the little figures being able to rope and essentially stop the monopolies figure in its tracks. Once the monopolies are stopped, the final message that most of the posters are stamped with – EVN out of Bulgaria – can actually occur. The cartoon visually depicts the way in which this 'throwing out of Bulgaria' can occur - only through unity that involves force as symbolized by the ropes used. The caption, on the other hand, signifies that even if people come from different values or party interests, it is in their common interest to unite in this protest and achieve its goals. Just like in the Gulliver's Travels the small Lilliputians defeat Gulliver, the Bulgarian people would defeat the giant energy monopoly and would make it leave their land. Again, Swift's story has been changed to carry a new message that is relevant to the energy protests. The basic elements have been preserved - giant and small people, but they are connected to different referents thus changing their meanings and telling a different story.

Making the energy companies anthropomorphic also has the added dimension of changing the energy companies into something to be feared, something bad, something 'evil' that needs to be chased away. The names or logos of the energy companies themselves became signs of 'danger' associated with 'evil'. The next example (Figure 53) illustrates the connection between the energy company logo, electric bulb, and thunderbolt icon all combined in a complex symbol of the 'evil.'



Figure 53: 'A Dangerous Light' The text reads 'First on high jumps! [referring to energy prices LP], Always here and only for you!, EVN out of Bulgaria.'

Figure 53 shows an example where the two universally recognized images of electricity – the light bulb and the thunderbolt – are used together to form a new meaning, a meaning that again relates to the status of the energy company as negative, dangerous, 'evil.' The words on the poster read: 'first on high jumps,' 'always here and only for us' and 'EVN out of Bulgaria.'

This is an example where the meanings carried by the signs of the light bulb and the thunderbolt are used together. The light bulb provides the frame or the context referring to electricity while the meaning of warning is carried by the thunderbolt sign. In a different context an elevating red line such as the one the thunderbolt draws would be considered a graph of growth and perhaps associated with some kind of prosperity, but in the protest semiosphere, the sign highlights a problem in the growth pattern drawing on the meaning of the thunderbolt as a sign of warning or danger. Therefore, the sign of the thunderbolt presents us with a triple meaning. *First*, 'danger' of electricity in general associated with the properties attributed to the thunderbolt icon. *Second*, 'dangerous' growth since it is depicted as a growth graph referring to profits made from taking advantage of the people i.e. "first on high jumps" of electricity prices. The source of danger, however, is directly explained in the text written in the light bulb - the electric companies. *Third*, the thunderbolt is drawn to replace the filament in the light bulb representing both the red hot wire as well as the 'red-hot' energy situation in Bulgaria.

The example provides a different interpretation of the electric companies as symbols of 'evil'. Here they are 'evil' because they are dangerous, and the various forms of danger are represented by the elements of this complex image - color scheme, thunderbolt icon, and narrative. The universal signs of electricity such as the light bulb or danger from high voltage such as the thunderbolt are re-contextualized and re-

oriented to a new and very specific referent - the electric companies. Here, the interesting process of sign re-interpretation is not only the shift or transformation of meanings, but also the duplication of old and new meanings in a new complex symbol. It re-enforces the general message of the protest and contributes to its distribution to the society at large.

In sum, in this section were considered symbols of 'evil' as related to the energy companies. Some of the examples focussed on qualities of the antagonist borrowed from fairy tales or references toward literature stories that allowed the protesters to simplify the message as a struggle between the 'good' and the 'evil'. The classic dichotomy good vs. evil is re-interpreted with the people on one side and the energy companies on the other. From a different angle, the entire protest can be seen as a sign implying the boundary between the 'good' and the 'evil' - the 'good' people engaging in the act of a protest against an injustice most often caused by the 'evil' entity. The last example showed a complex sign composed by several elements duplicating the general message of the protest.

5 Re-Interpreting Signs of 'Lightbulb' as Symbols of 'Death'

The usage of light bulbs as signs of electricity were re-interpreted during the protests to become symbols of the electric companies and thus to carry meanings with highly negative connotations. The previous section discussed the perception of the energy companies as symbols of 'evil.' This section will focus on the interpretation of 'light bulb' as woven into various symbols of 'death', which are again associated with the energy companies or with the economic situation in the country. The selected examples show three different interpretations of the light bulb in relation to death.

The next three figures were selected as examples because they all illustrate meanings that were built upon the universally acknowledged image of the light bulb as a symbol for electricity and yet in all three the light bulb symbolizes death.



Figure 54: Text reads: "A Lightbulb, Developed Especially for the Bulgarian Market." (left); Text reads: "Until when? Electricity kills!" (middle); Text reads: "They Want Our Souls!" (right)

Figure 54 (left) depicts electricity cables that are lit up, in the shape of a light bulb, and tied as a noose. The caption below the photograph reads 'a light bulb developed especially for the Bulgarian Market.' Figure 54 (middle) is a photograph taken during one of the protests of a poster that reads 'Until when? Electricity kills!' The poster also contains a light bulb with a hanging man inside it. Finally, Figure 54 (right) shows a hooded figure with a light bulb where the face would have been. The caption on the image reads 'they want our souls!'

All three of those images connect the image of the light bulb with death, one with a noose, one with the hanging man and one with a representation of what could be perceived as the hooded figure of death. In all three images, the signs can be interpreted to contain multiple meanings. The following paragraphs are dedicated to each of the three photos one after the other.

The first figure (Figure 54 left) has the caption of 'a light bulb developed especially for the Bulgarian Market'. It is an image, therefore, that refers to the economic energy situation in Bulgaria. The malice of the energy companies is shown with the use of the sign of the light bulb formed in the shape of the noose along with the man that operates from the shadows, the man who we can only see in shape. Both are symbols of 'death', the bringer of death - the noose and the hangman.

The person in the shadows can be interpreted as the hangman, but there are other possible interpretations as well. The figure in the shadow could itself be seen as a symbol not of a person, but of the energy company, of the politicians, of the of shadow manipulation and high prices that accompany the offer of providing electricity as a service to the people. The person in the shadows then could be seen to represent shadow players just as easily as it could be seen to represent the people who stay

hidden, who stay silent, and who are not part of the protests. This then refers to a different kind of malice, the malice caused by lack of action and will to change.

The light bulb-noose also has multiple meanings because electricity is seen as a means through which to control the economic market wherein the process of controlling, has the potential to cause harm or even death to the consumer; but that is not the only interpretation of the image. The noose could be seen as one created by the companies for the people, or again, one created by the people for the people as a result of their silence and inaction. In other words, the sign of death may refer to the energy companies, their allies as well as anyone who is not openly attempting to cause change, anyone who stays in the shadows.

The next example of Figure 54 (middle) takes the noose-light bulb concept further by explicitly hanging the person within the light bulb. The text that accompanies the second figure completes the message by directly inquiring 'Until when? Electricity kills!' The question is meant for the energy companies and their allies as well as the protesters themselves. In the first case, the question is a plea, or as said, 'until when are you going to do this to us. Electricity kills.' In the latter case, the question as addressed to the protesters is 'until when do we the people have to endure this. Electricity kills *us*.' In both cases, electricity, as controlled by the energy companies, is seen as death, as something that could potentially harm directly such as physical harm, or indirectly such as monetary expectations and political maneuvers.

The third example of Figure 54 (right) also used the light bulb as the focal point of the image as a sign. In this photo, that is a representation of the hooded figure of death; the light bulb is the face of the figure of death. A similar message to the other two examples is achieved through the representation of death, in this case as the hooded figure of death, and using it as a symbol, rather than the noose, which brings about death and is, therefore, itself a sign of death. The representation of death through the sign of death as the hooded figure of death is then further connected to the protests by having the caption of 'they want our souls!' Arguably, this could refer to 'they' the energy companies and the allies, who are seen as symbols of 'death' or to 'they' the people who do not act and therefore will die due to their inability to protect themselves. Similarly, to the previous two visuals, negative action incurred by the energy companies is seen to be just as malicious as inaction by those who do not join the protest.

In sum, there were many signs of 'death' used in the protests, but this section presented the example of how the light bulb was used to connect to the symbols of

'death' as related to electricity and the energy situation in Bulgaria. There are many more examples that use the light bulb, but the focus here was on visuals that perceived the sign of the light bulb in relation to the images of 'death' and 'dying.'

Further research could be undertaken to compare the signs of 'death' and 'evil' from the last two sections associated with both the energy companies as well as the light bulb in relation to other companies depicted as 'evil' and within a variety of cultural contexts. Without this further research, it is not possible to state whether these signs are Bulgarian context specific or universal in meaning.

Part II. Images of Electricity in Protest-Related Narratives and Performances

Part II of this chapter focuses on the images of electricity in protest-related narratives and performances. Due to the nature of the protest context, a carnivalesque representation of the situation was often used as part of the communication process. As a result, there were many staged performances throughout the protests. Some of the performances occurred in a specific space and time such as performances at the beginning of the protest to gather the participants, at notable places to show respect to particular buildings or statues such as the energy company building or the energy and economics ministry, or at the end where performances were enacted at the final destination. There were over 50 different performances that could be identified in the data sample for this thesis spanning from ones against dealing with injustice to others that attempted to create social cohesion through solidarity and shared pride. In this thesis, a select group of examples are chosen that are related to perceptions of electricity as represented within the performance elements used.

This part of the analysis chapter is structured to *first*, provide a brief introduction into the ritual aspects of the electricity-related symbolism in the protest semiosphere. *Second*, an example will focus on the performance of a ritual of chasing the evil spirits away as part of the protest actions. *Third*, another example of funeral rites as presented in the context of the energy protest and what this ritual performance can tell us about the Bulgarian perceptions of energy and energy companies. *Finally*, the last section will explore a tale of villains and heroes through a particular example that employs symbolically setting a building on fire.

1 Ritual Aspects of the Electricity-Related Symbolism and the Protest as a Symbol

All the images presented thus far are taken from the protest context, but in order to better understand the images of electricity, the protest itself needs to be examined as a complex sign system that contains numerous sub-sign systems. The protest as a sign system communicates a message, in this case, a message about the energy situation in Bulgaria and the need to change it. Every sub-sign system within the protest, such as every individual performance, narrative, or poster, duplicates the same message. In other words, the protest as a sign carries a meaning that is doubled or re-enforced with every performance and the signs within it the protesters engage with.

An individual performance can also be analyzed as a sign system that is comprised of other sub-sign systems. A performance, therefore, can carry many messages through many signs while remaining within the larger protest framework because any performance within the protest semiosphere is a sub-sign system of that semiosphere.

Ritual performances duplicate the message of the protest through the use of various objects, actions, costumes, words, etc. Unlike a theater or a concert, the comparison between a ritual and a protest is more easily established because in a protest there is a similar doubling of meaning through sub-sign systems. In this chapter, the word 'ritual' refers to the ritual act as enacted with its original meanings and within its original (in this case Bulgarian) context. A 'ritual performance' refers to a ritual that is re-enacted in some shape or form as part of the protests. When the ritual is re-enacted during the protests, the ritual can be analyzed as a performance because it preserves some components (objects, actions, costumes, words, etc.) but loses others; so from here on when using the term 'performance', the meaning is of a ritual that is performed as part of the protest and not a theatrical one.

The most obvious ritual performance to analyze is that of the protest itself. The protest as a ritual performance contains ritual objects such as posters and objects that make noise like drums, horns, or whistles. These ritual objects are used for specific actions often accompanied by costumes or a particular dress code. The place, space, and time are all carefully considered when a protest is being planned. The underlying message is also always the same because any protest carries the message of desired change, whether it be a change of social rights, moral decisions, or the energy situation in Bulgaria.

As the message of a protest is about desired change that means the people engaged in the protest are not happy with the current situation. This would explain why the establishment of villains and the use of images of evil is a tool used by the protesters to draw the boundaries and make transparent the problems they wish addressed. The use of symbols of 'evil' is needed in order to make the claims clearer as though the situation can be seen as a semantic dichotomy such as black/white, clear/unclear, right/wrong, good/evil, etc. These semantic dichotomies are applied to people, places, and ideas. Even the protest paths are often drawn with a particular message in mind, and the energy protest path was marked with signs that connect to electricity and energy.

For example, when one examines the most often used protest path in Sofia during the energy protests, stills of which are added for visual purposes from a recording done with a sensory camera, the path includes constant reminders of the main purpose of the protest and of who is considered a friend and who - a foe.



Figure 55: Still Photographs from the Sensory Camera on Key Parts of the Protest Path

Figure 55 contains six still shots from the sensory camera on key parts of the protest paths in Sofia. The top left photo shows a starting point for many of the protests, or the Ministry of Energy and Economics. The path continues, following the 'Yellow Brick Road' in the center of Sofia (middle left), to weave through parks (bottom left), passing churches (top right), statues and other buildings of significance such as the various museums such as archeology (middle right) and natural history, the presidency and the palace (bottom right). Each step following the 'Yellow Brick Road' is carefully planned to *first*, contain constant reminders of the message of the protest including the start and finish as well as the places passed in between, and *second*, for the path never to cross itself ensuring that regardless of the number of protesters, no chaos will ensue.

Figure 56 shows a map that highlights the three main gathering areas for the beginning of the protests.

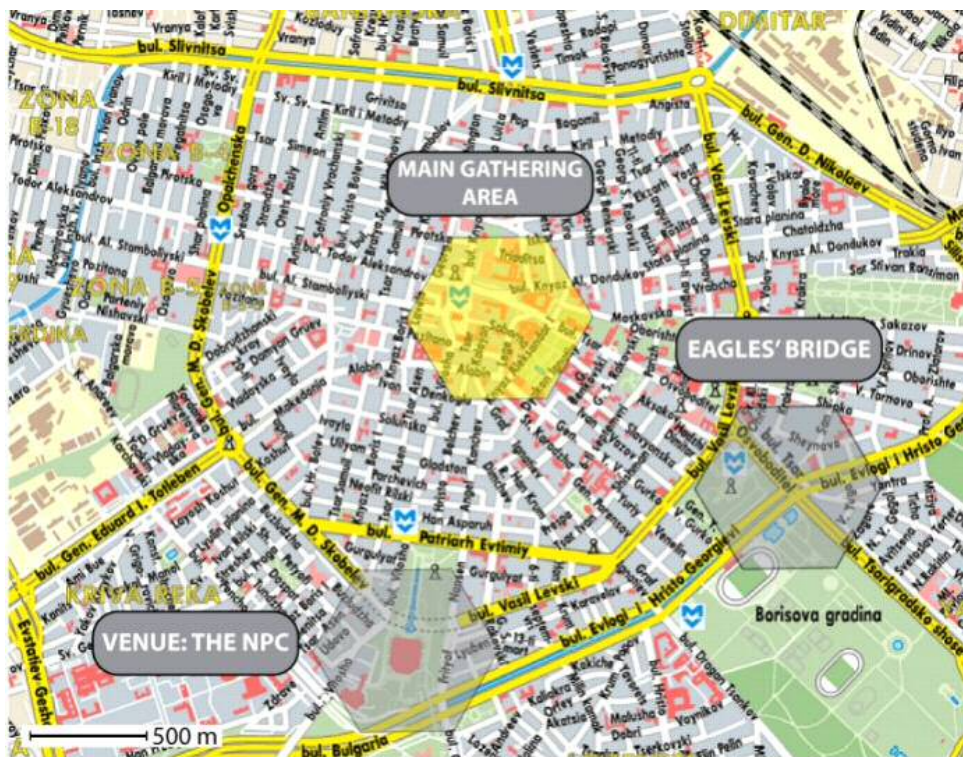


Figure 56: Protest Path and Gathering Points⁸³

The map in Figure 56 shows three of the main gathering areas. The one in yellow is the area walked presented in the sensory camera still images. Regardless of

⁸³ <http://acl2013.org/site/newsboard.html> map created for later political protests in August 2013, but similar path

where the protest started, Eagle's Bridge or the Ministry of Energy and Economics, all protests ended before the parliament building.

The protest path is a part of the sign system of the protest, so it too reflects the underlying message of seeking change. In this case, the protest paths are also carefully selected to specify the type of change required, namely in the energy field in Bulgaria.

In summary, a protest can be analyzed as a sign-system that contains many sub-sign systems that duplicate the message of the protest. The protest can be interpreted as a performance that seeks attention from particular groups as a message is being communicated through the show of solidarity as well as through the use of visual, auditory and other stimuli. The message of the protest often is about correcting a social injustice, political mishaps or improving economic stability. Regardless of the reason the protest serves as a platform where the protest performance has the goal of captivating the attention of a particular group and seeking a change to a perceived norm.

Any ritual performance within the protest can also be analyzed as a sub-sign system of the protest that duplicates the same message and goals of the protest. This performance, therefore, also communicates the particular message about change. Since the message of the protest is about the desired change in the energy situation in Bulgaria, every sub-system relates back to energy and electricity. That is why in the example of the protest path, the energy company buildings, ministries, statues of justice and the parliament are prevalent features. Each part of the path serves to remind the protester and the observer the message of the protest requesting change in the energy situation.

The place of the protest as defined by the protest path contains many signs related to energy but so do performance examples of visuals as related to death and funeral rites, chasing of evil spirits as well as cleansing through fire as enacted during the protests. There were many more examples in the rich data set, some of which are pulled out in the appendix for reference, but the particular focus selected for the thesis surrounds performances where the images of evil were most prominent because those were images that are more likely to exist in protest context thus making the analysis applicable for further comparatives with other protests and other visual forms some of which were analyzed in this thesis.

2 Chasing Away the Evil Spirits as Part of the Protest Actions

This section focuses on examples that illustrate rituals, whose main components are combined in a way that duplicate symbols representing the protest goals - moving

the energy company out of the country thus changing the status quo of the energy situation. The message of how the energy companies must leave was a common theme in the protests with the slogans of 'EVN out of Bulgaria' or 'ChEZ out of Bulgaria' as shown thus far in several examples, but *how* to make them leave was often exemplified through the performances protesters engaged with during the protests.

During these performances, the energy companies were 'chased' or 'scared away' through several ritual acts. The following example (Figure 57) demonstrates one of the ritual techniques used to signify the chase. The example shows an effigy carried by protesters that resembles a scarecrow. The scarecrow is carried above the protest in a similar fashion to how it would stick out above a farmer's field. The text on the effigy reads 'leave! ERPs' where ERP stands for *Енерго Разпределително Предприятие*, or as translated into English, *Energy Provider Company*.



**Figure 57: A Scarecrow that is Carried as part of the Protest Procession (left);
A Scarecrow in a Field (right)**

The scarecrow in Figure 57 serves as a symbol that is carried and moved with the protests and creates a dynamic picture of the protest itself interpreted as a farm field in need of protection. The movement of the scarecrow by the protesters signifies and re-defines the entire space of the protest as a 'field of people.' The entire space where the scarecrow moves becomes a ritual symbol re-defined by the scarecrow sign as a 'human crop field'. The protest path itself is transformed into this 'field' while at the same time the scarecrow transforms from one that chases crows away to one that chases the energy company away. The people then become the symbols of the crops in the field in which the scarecrow stands to protect the people by driving the energy companies out of the country thereby bringing the desired change the protest requires.

Therefore, the message of the protest is duplicated in the actions of the scarecrow, which in semiotic terms is a sub-system of the protest sign-system.

This example, if contrasted to the function of an actual scarecrow (illustrated to the right), retains some of the meanings associated with the scarecrow while other meanings are transformed, lost or additional ones gained. The function of a scarecrow is to frighten away birds or other animals that may attack a farmer's field. A scarecrow helps scare away crows and other animals by resembling a person in the field, or a potential danger that the animals stay away from, and in the process, away from the farmer's crops. Most scarecrows also tend to be colorful as to better stand out against the land as well as with additional flowing fabric or something that rustles in the wind in order to create the illusion of movement and thus to better resemble a human.

When the scarecrow is used as a symbol in the protest, the scarecrow changes its form from colorful and bright to a black human resembling effigy. The black color is often associated with death and mourning in Bulgaria. Additionally, while in both cases the effigy is humanoid, as a scarecrow in a field, the scarecrow is a substitution for a human that is chasing away the animals. As part of the protests, the same scarecrow represents not one human, but all those who are part of the protests. It is a sign of a single voice echoed by the solidarity of the protesters who march as one. The meaning also changes with the referent change because a field scarecrow serves the purpose of attempting to preserve the land and crops from animal attacks, while as part of the protests; the scarecrow is about chasing the energy company out of Bulgaria. In other words, typically a scarecrow is connected to the concept of preservation, but in the protest, the same scarecrow is used as a tool to encourage social, economic and political change. The additional label on the scarecrow of 'leave! ERPs' than particularly brings this transformation to the existing energy situation in the country, a situation that is perceived to be in need of change.

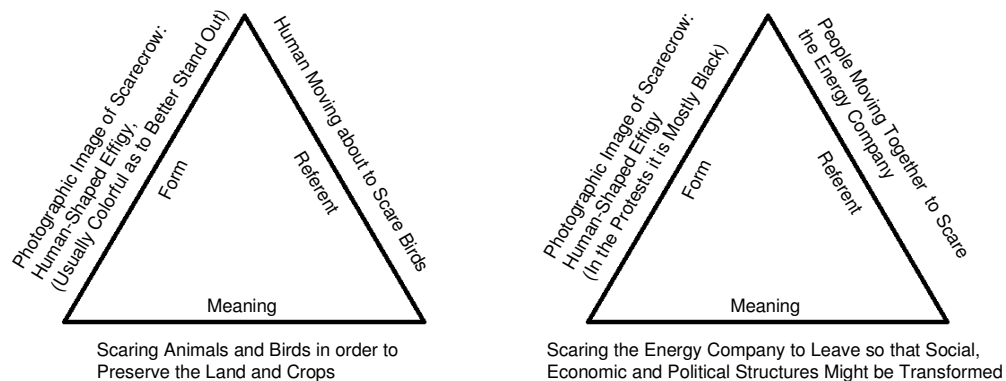


Figure 58: Graphic Representation of Semiotic Analysis of Scarecrow as a Sign

The scarecrow was one example where an effigy was carried with the protest and where it stands for the voice of the unified protesters, but there were other instances where an effigy was used to represent the energy company itself. The following Figure 59 shows an effigy that is labeled as one of the energy companies 'EVN' by the protesters. The effigy is set on fire as the protesters look on in silence.



Figure 59: The Symbolic Burning of the Effigy Personifying the Energy Company 'EVN.'

The burning of the effigy is meant to represent the destruction of the energy company itself, but also a cleanse.⁸⁴ It is similar in meaning to the burning of diseased corpses after a plague in order to stop further contamination. The burning act is seen as a

⁸⁴ This performance connects to rituals performed in some Western European cultures such as the burning alive of witches or 'evil' people.

purification of both the one being burned as well as any ‘evil’ acts the people remaining may experience such as the further spreading of an illness.

Fire in the protest was used for effigies as well as most commonly for the burning of electricity bills. Figure 60 is an illustration of the performance of setting fire to energy bills.



Figure 60: The Burning of the Electricity Bills

As one of the protest observers remarked, the burning of the electricity bills is an important aspect of their destruction “because they disappear into nothingness when they burn.” The impact is much stronger than if there is something left behind, but with burning, the ashes are swept by winds and people moving about leaving the illusion that the burning has left nothing. Therefore, the burning of the electricity bills became a symbol of the treatment the protesters were communicating they wished toward the energy companies, or for the energy companies to also disappear or to burn away without a trace.

Even the organizers of the protest used the burning of the energy bills as a symbol that was considered to be more attention grabbing than other forms of destruction. As the following participant remarked:

“We believed it was much more effective and could gather much more attention from the people than if you take a piece of paper and simply tear it. That you do every day, it doesn’t matter if it is an electricity bill. While in this way you show your absolute disagreement with that which is happening. Uh, rather, it is stronger as a demonstration than if you tear that bill.”

-English Translation of Transcript from Semi-Structured Interview

One of the reasons for these performances is the carnivalesque nature of the protest that provides a platform and arguably a certain expectation for such performances or demonstrations to occur. The burning of the electricity bills was done in no so small part for attention purposes. After all, the attention seeking is one of the core aspects of any protest.

Another carnivalesque ritual form that was performed to communicate the message of the protest was the modified ritual of the *kukeri* procession and dance. This ritual is traditionally performed in all Bulgarian regions with variations, and it is easily recognized nation-wide. It is also important that its traditional meanings are relatively easy to adapt to those of the protest.

The word *Kuker* (*kukeri* - pl) represents a masked male figure participating in the traditional ritual of chasing away 'evil spirits' (hence the masks need to be scary) and awakening the earth for the new planting season. The ritual is traditionally performed at the beginning of the Easter Lent. The *kukeri* dance with sheep, goat or cow bells around their waists thus making the noise that will scare away the evil and perform elaborate actions such as ritual plowing and planting to mark the beginning of the spring as well as to symbolically bring fertility to the awakened earth. There is a great variety in the styles of masks, which distinguishes the regional varieties of the custom. When used in the political protest, the participants brought their own masks to the cities and used them regardless of region and style. In the context of the protest 'evil spirits' were associated with the electric companies and the new season - with the satisfied demands of the protesters, i.e. the desired change.

Figure 61 shows a photograph of *kukeri* who were at the head of the protest procession with musical instruments in addition to the bells that are part of the traditional *kukeri* costume.



Figure 61: *Kukeri* to Chase the Energy Companies Away Who are Perceived as 'Evil' (left);
Kukeri Performing the Traditional Ritual in a Rural Environment (right)

The *kukeri* ritual is performed as a way to chase away the 'evil', but also to help create the new, the 'good', etc. In other words, the ritual signifies a desired transformation that occurs on a yearly cycle. As part of the protests, the form of the *kuker* is recreated as well as the referent. Additionally, most of the meaning is preserved, a meaning that refers to the chasing of 'evil spirits' and the wish for a change or a transformation. What is different is the definition of 'evil' and what is needed to be transformed. In the actual ritual, the 'evil' refers to evil spirits and the transformation called for is from winter to spring, “out with the old and in with the new.” In the protest context, the 'evil' refers to the energy companies and their allies. Also, the transformation called for in the protests relates to a change in the energy companies and political figures, a change that would trigger the establishment of a better social setting where electricity and energy are affordable and accessible to all people.

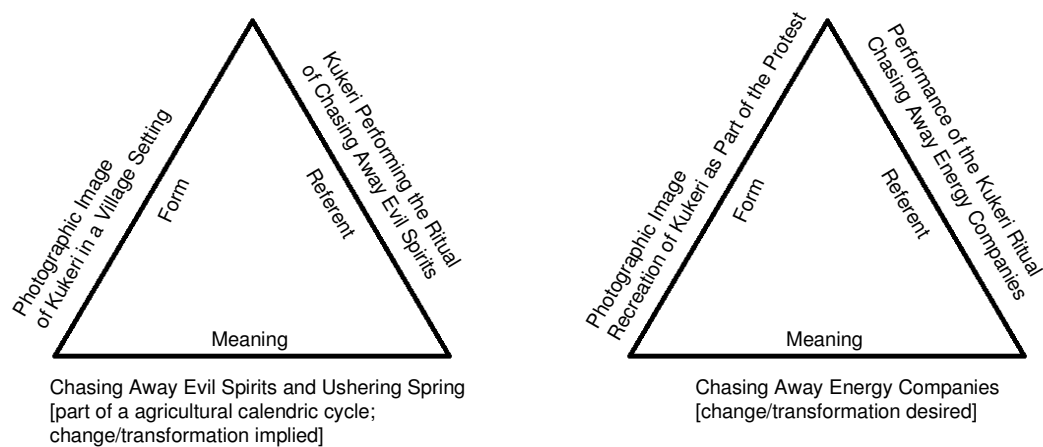


Figure 62: Graphic Representation of Semiotic Analysis of *Kukeri* as a Sign

Kukeri as a well-known symbol for chasing away 'evil spirits' in Bulgaria and as one of the protesters explained the use of the ritual to chase away energy companies as symbols of 'evil' in their own right was a clear and predictable message within the Bulgarian context. The same is true for the use of fire to communicate the same message. Both of these rituals are connected with the same purpose in mind or as the protester explained:

“Well, they are connected to traditional rituals, kukerite chase evil normally. It is very clear, meaning fire is intertwined in Bulgaria as The Bulgarians as a nation, fire always was a part of it ... one old proto-Bulgarian tradition is that actually Bulgarians were not buried but burned. We are talking about many years ago. So it is a demonstration, a clear one, a bright one that grabs the attention towards ChEZ, EVN,

and EON. The meaning for Bulgarians is clearly that they accept them as the new slavers who in some ways very seriously impact their life.”

-English Translation from Semi-Structured Interviews

In sum, all the signs in this section could be synthesized, just as the interviewee so amply states, as symbols that aim to drive the energy companies and the 'evil' which they signify out of the country. Signs used to scare the company away are used such as the scarecrow and the *kukeri* alongside the more menacing signs of death and destruction through fire. The scarecrow, whose function was originally to scare animals who do 'evil' by eating crops, has been repurposed for the chasing of humans, who were perceived to have done 'evil' by how they managed the electricity supply in Bulgaria. The burning of effigies and bulls was seen as a way to cleanse the energy situation in the country while the *kukeri* were used to chase the energy companies out of Bulgaria and ritually influence a transformation.

3 Funeral Rituals in the Context of the Energy Protest

The wish to make the energy companies leave by any means necessary and to transition to the next place where they could exist is clearly communicated⁸⁵ with the signs in the previous section. The focus in this section is on the examples of death and funeral rites as performed during the protests.

These performances are sub-sign systems of the protest sign system and therefore duplicate the same meaning, the desire for change in the energy situation in Bulgaria. In particular, this section aims to show the changes in meaning in funeral rites once the ritual is performed as part of a protest. Particularly, how in reenactments of the funeral rites the meanings change from the burial of people to the burial of the energy company, electricity bills, or energy related comforts. In other words, how all ritual languages that include objects, actions and narratives transform, and yet from the funeral ritual the main message is preserved but applied toward people's perceptions of the energy situation within the protest semiosphere.

The funeral rites represented the most popular ritual that was performed during various days of the protest in different cities all over the country. Several different

⁸⁵ Signification can be perceived as a form of indirect communication that allows for different interpretations, which is something that arguably needs to be better understood by empirical researchers and assimilated into our research practice. However, I am using the word 'clear' to refer to an overwhelming majority of interpretations that aligned at the specific time the research was collected. While reflecting on the multitude of significations that exist in theory and that can and do change over time, in practice, often in communication at a particular moment there are only a few major meanings associated with a sign.

elements of the ritual were used including the waving of black flags, funeral processions with coffins, notifications of death and placement of farewell flowers. The visual selections that follow only use examples that explicitly related to energy and electricity, so not all aspects of the funeral rites as enacted will be analyzed.

The first example in this section shows an element of the funeral that distinguishes the beginning of the ritual, namely the notification of death. Death notifications in Bulgaria are in the form of posters called *nekrolozi* (*nekrolog* - singular) that are placed either in public places or in the newspaper obituary section informing the public that someone has passed away. These notifications usually include a title such as (Grievous News), the name of the deceased, date, place and time for the funeral and they are signed by the bereaved. More importantly, they also include a poem of remembrance and/or description of the one who has passed away. Later on, similar posters are created to notify people of memorial services (called *pomeni*, *pomen* – singular) performed on various days after the funeral - 3, 9, 40, six months, one year and every year after that. The posters are in black and white with a Christian cross above the title and a black frame. When created for the protest, these posters give notice of the death of the energy companies or energy related services.

Figure 63 shows a death notification for the energy company EVN.

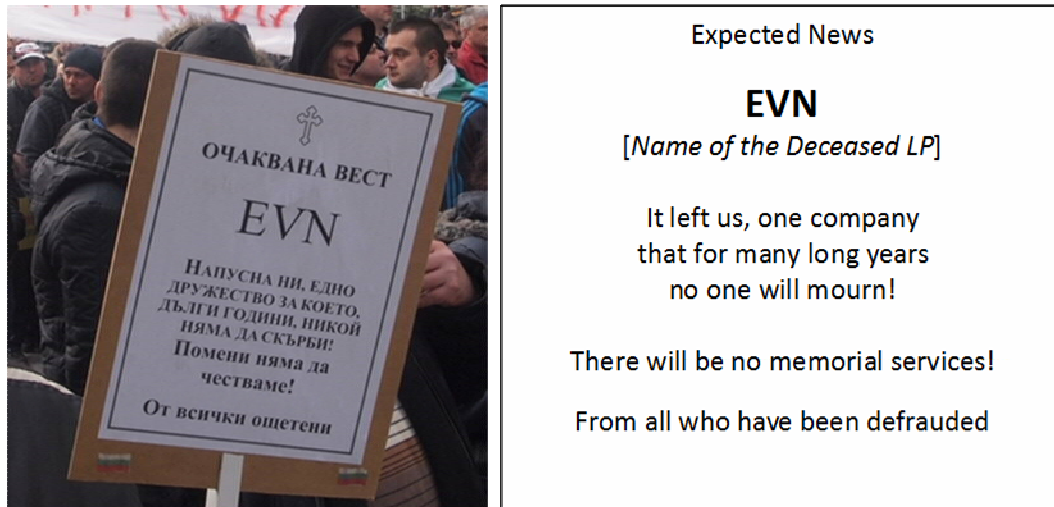


Figure 63: Notification of the Death of the Energy Company; Translation of the Text is on the Right

The text in the photo shows this notification of death to be two-fold. On one hand, the main message of the protest is duplicated whereby the desired change is defined by making the energy company leave; in this case, *EVN has left*. On the other hand, the message of departure is a permanent one equated with death because when someone dies, they do not come back. In relation to the energy company, this shows a wish not

only for the energy company to leave, but to also, never return. The wording also suggests that this departure has already taken place, 'it left us.' As well as the group perception of the company, 'no one will mourn' and no one will celebrate and remember the 'life' of the company. Finally, the signature is 'from all who have been defrauded' allowing for any who are unhappy with their energy situation to connect emotionally to the poster.

Some of the notifications of death were targeted directly at the energy companies while others were showing the impact the energy situation has on individual people. The following illustration (Figure 64) is a humorous version that depicts the grievances the protesters highlight, namely the high energy prices as related to low incomes.

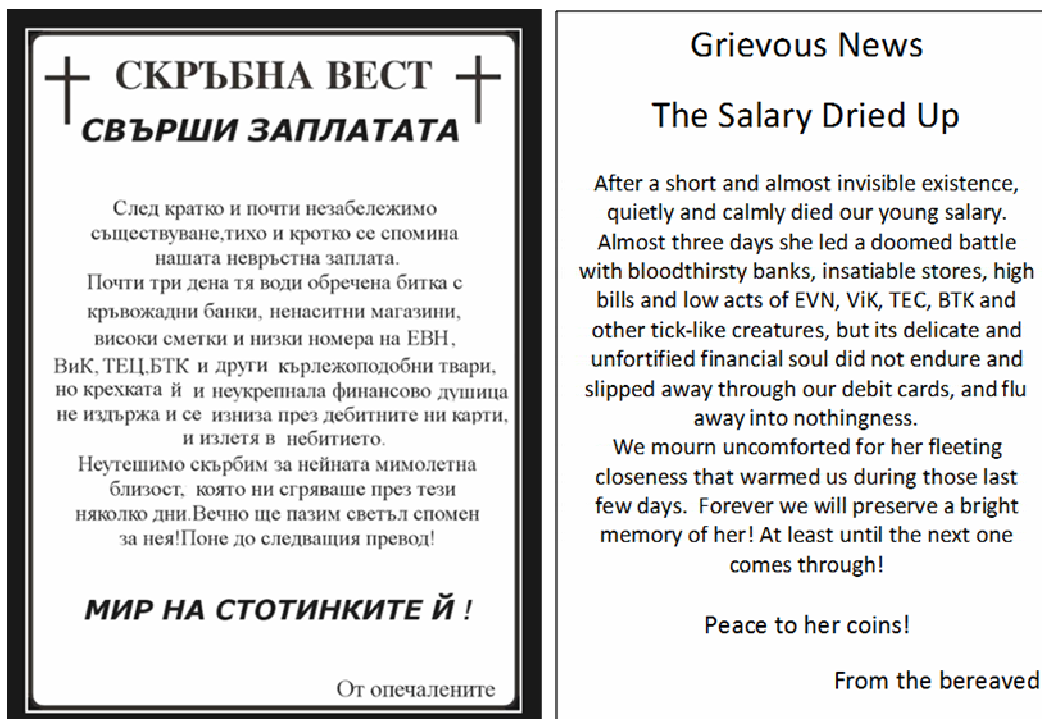


Figure 64: Notification of Death of the Salary Because of the High Electricity Prices and Energy Demands; Translation of the Text is on the Right

Figure 64 presents a notification of the 'death of the salary'. Because of the high demands from energy companies described as tick-like creatures, the salary is gone trying to pay them all off. Unlike Figure 63 where the notification is described as 'Expected News' in the meaning of Desired News, Figure 64 depicts 'Grievous News.' The contrast between the two is the wanted 'death' of the energy company versus the grief of losing the salary to said company. In both the message of the company needing

to leave is re-enforced - Figure 63 through the notification that this is already a fact, while in Figure 64 through the description of the damage the energy companies inflict on individual salaries thus providing a justification for why the company must leave.

These posters are in effect a parody of the real ones. The changes of meanings are pre-determined by the change of names of the deceased and by the text describing his/her accomplishments in life. Their inclusion in the protest is once again to use a ritual element (this time taken from a traditional funeral) to demonstrate the desired outcome of the protest actions - the death of the energy companies, as announced in the funeral posters, to be transferred as a real life event.

The notification of death is the first of many aspects of the Bulgarian funeral rites. Another is the funeral procession that takes the coffin with the deceased person to the cemetery. That aspect of the ritual was also enacted as part of the protest as illustrated in Figure 65.



**Figure 65: The Funeral Procession of the Deceased Energy Company (left),
A Closer Image of the Coffin (right)**

The first photo shows the performance of the ritual of carrying the coffin in which the energy provider companies are placed for burial while the second photo provides a close-up that allows for an analysis of what is written on the coffin.

These photos depict a coffin that is carried as part of the protest procession. Similar to the scarecrow example, the coffin re-interprets the protest place, but in this case, into a funeral one. The protest procession is, therefore, transformed into a funeral procession. The coffin itself is the central symbol of the funeral. The funeral procession signifies a period of transition, a moment of last goodbyes before the ties are severed between the living and the dead and the coffin and its contents are laid to rest.

The words on the coffin as part of the protest allow the interpreter to understand the particular contents of the coffin that is carried and buried.

On the coffin is painted a cross, which is a symbol of the Bulgarian Eastern Orthodox Christian faith, and the name of the deceased is written in two words/acronyms: *Monopolies* and *E.R.P.*, which stands for Енерго Разпределително Предприятие (Energy Provider Company). Finally, the energy provider companies in the coffin are buried by the Bulgarian people as signified by the Bulgarian flags carried and waved alongside the coffin.

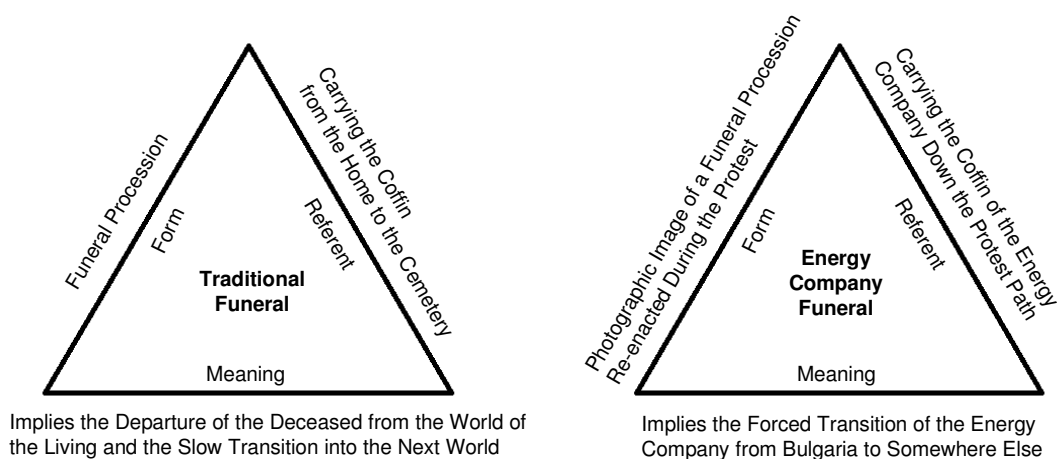


Figure 66: Graphic Representation of Semiotic Analysis of the Funeral Procession as a Sign (Abstract Image-Left vs. Figure 65 Photographs)

In the actual ritual, the carrying of the coffin symbolizes the transition of the deceased person from our world to the next where the person may find a final resting place. In the Bulgarian tradition, it is believed to be a long process that lasts for at least 12 years. The function of the memorial services during this period are also meant to help the deceased with the final transition. The funeral procession marks the first phase of this transition by moving the deceased to a place that is perceived as a boundary between our world and the next, namely the cemetery. The cemetery is also a place where the living can say their goodbyes. In the energy protests, the coffin was also carried by a number of persons ahead of the rest of the protesters thus making a procession similar to the one in the actual funeral ritual. The performance, however, has the changed meaning that the coffin is not meant for a person, but it is a symbol of the energy company. Finally, both the funeral and its re-enactment in the protest aim to symbolically secure the transition of the deceased to the next world. In the protest, the

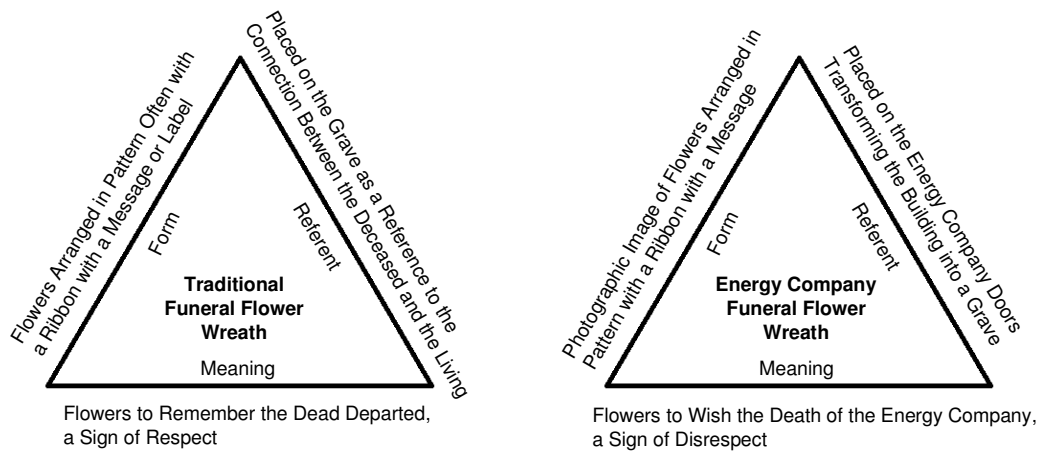
deceased is the energy company that needs the help of the living (the protesters) in order to transition away from their world.

Not only were the energy providers buried, but also flowers were placed on their 'grave'. Yet another element of the funeral rites as performed during the protests. This element was performed by the placing of flowers usually at the doors of an energy company building as shown in Figure 67.



Figure 67: Funeral Flowers Placed at the Doors of the Energy Company Building; The Text Reads: 'Farewell Monopoly'

Figure 67 captures a moment where flowers that typically are placed on the grave during and after the eulogies are read, have in the protest context been placed on the doors of the energy company building. The path of most protests either began or ended at an energy company building thus clarifying even with choice of place the audience against whom the grievance for which the protest is organized to the foreground. This particular flower wreath has been placed on the doors of the energy company building at the end of the protest path. The ribbon on the flowers reads “Farewell, Monopolies.” The monopolies referred to are the energy companies, as defined in many of the visuals and by the interviewers.



**Figure 68: Graphic Representation of Semiotic Analysis of Funeral Flowers as a Sign
 (Abstract Image - Left vs. Figure 67 Photograph)**

Similar to the case of the coffin, the form of the funeral flower sign is greatly preserved. In both the original ritual as well as in the performance during the protest, the flowers are a selection of flowers placed on a wreath and arranged in a pattern with a ribbon that contains a message. Traditionally these flowers are placed on the grave. It is the referent and the meaning that change from the ritual to the performance. The referent in the ritual refers to persons who have passed away, and the flowers are to emphasize the lasting connection between the deceased and the living through their memories of him/her. The referent in the protests is again about the connection - this time the desired disconnection between the deceased energy companies and the Bulgarian people. By placing the wreath on the doors of the energy company headquarters, the building was re-interpreted as a company grave. With the change in the referent, the ritual meaning of the flowers symbolizing a way to remember the dead departed and to serve as a sign of respect, also transform. In the protest performance from a sign of respect, the meaning of the flowers changed into a sign of disrespect and re-enforce the wish for the company to depart.

In sum, in this section, the example of the funeral rites was analyzed as performances enacted during the Bulgarian Energy Protests. The funeral rites were seen as a sign sub-system of the protest sign-system thus duplicating the message of the desire to change the energy situation by making the energy companies depart. This departure is illustrated through the use of elements from the funeral rites such as notifications of death, one where the company has already passed away (Figure 63) and one that describes that while it is there the salary will keep dying (Figure 64); the

performance of the funeral procession (Figure 65) as well as the enactment of the placing of flowers on the 'grave' of the energy company (Figure 67).

4 A Tale of Villains and Heroes – A Tale of Fire

The final example for this chapter that was selected is of a video. The video is attached as a file in the appendix and is about a minute in length. This video shows the symbolic lighting of a fire at the energy company building. That is to say, the participants take a highly flammable liquid that is spilled on the steps of the building and all across its front on the concrete and then set it on fire. It was the intention of the participants to not actually harm the building, and that is why the flames are lit on the cement. So, no physical damage was caused to the building, but due to the amount of flammable liquid on fire, when filmed, there is the illusion that the entire building is on fire. The video is then set to a patriotic song and the final caption of the video reads 'listen to the people, or expect them.' The arsonist is covered in a hood and not identifiable in the images even though later the person who made the short video was made public, arrested and then released.

The following photos are still representations of the video material. (For easier access, the video is attached to the thesis on a DVD)



Figure 69: Sign Identifying Energy Company Building EVN (top left); Energy Company Building Before the Fire (top right); The Symbolic Burning of the Energy Company Building (bottom left), Caption at the End of the Video – ‘Text Reads: Listen to the People, or Expect Them.’

The video can be analyzed using the same three-layer framework that was applied to the data in this chapter. The form, referent and meaning transformations can

be explored in a similar fashion to the examples provided earlier. The fire as a symbol can be seen for its basic qualities of burning, destruction as well as heat and warmth, but only some of these qualities are then transported into the protest case. The intent behind the video, the warning of what could happen if the energy company does not listen to the people, is communicated through the use of the fire symbol.

This example represents yet another duplication of the symbolic destruction of 'evil', of the energy company. Similar to the company burial, to the burning of bills and effigies, to the chasing of energy companies, the video shows the same message the entire protest reflects on - the wish to get rid of the energy companies that would bring about desired change in the energy situation in the country.

Summary and Important Findings

In summary, this chapter presented a semiotic analysis of materials related to the second case study, or the Energy Protests that took place in Bulgaria in 2013. In this chapter, the analysis was also focused on the transformations of *form*, *referent*, and *meaning* when symbols were transferred from their original context and into the protest one. There was also a further exploration of the shared codes of communication needed for better comprehension of particular messages of the protest. They were seen as a complex signs-symbols duplicated through individual performances and protest actions and functioning as an integral part of the protest as a sign system.

The data in the chapter was analyzed and presented in two parts. *First*, the images of electricity were seen as signs of turmoil, social values and change through a) the re-interpretation of the symbols of 'energy' with a particular focus on energy types, production and consumption; b) the re-interpretation of the symbols of 'power' and 'danger' using the example of the thunderbolt sign; c) the re-interpretation of the symbols of 'loss' and 'hope' referring to electricity loss due to inability to afford and the hope for a change in the energy situation; d) re-interpreting the energy companies as symbols of 'evil' borrowing from the fairytale genre as a way to communicate the transformation of meaning; and e) re-interpreting the signs of the 'light bulb' as symbols of 'death'. The *second* part of the chapter then demonstrated the use of the images of electricity in protest-related narratives and performances. Beginning with a description of the ritual aspects of the electricity-related symbolism as related to the protest path and then providing three sets of examples of performances to demonstrate the images of electricity as used in communication during the protest. The second part

concluded with a short video example to demonstrate the yet again evident parallel with a ‘tale of villains and heroes’ as exemplified through ‘a tale of fire.’

Some of the performances presented have a universal interpretative code and can be globally understood while others were Bulgarian culture specific. The posters, statements (written or shouted), protest walks and speeches can also be viewed as the building blocks of any protest regardless of the topic. The use of effigies, burning and funeral rites were examples of performances that use culturally shared codes to communicate protest messages. The energy vampires and *kukeri* as well as the particular elements of funeral rites were other examples of culture-specific signs that have maintained some of their original culture-specific meaning, but then have been transformed within the protest context to convey new or additional meanings corresponding with the change in both form and referent. Regardless if the performance can be perceived as universal or culture specific, the message of the protest – A Hope for Change – was communicated with regard to the perceived energy situation in Bulgaria. Interestingly, at the time when these words were written some two years after the protests, no change has yet taken place.

Chapter 8

Case I "Hurricane Sandy" and Case II "Energy Protests" Comparative Presentation

"Electricity is really just organized lightning."

-George Carlin

Introduction

So far the two case studies in this thesis have been described and analyzed separately, first Hurricane Sandy and then the Energy Protests. These are two very different cases, but they also have many points of similarity. This chapter serves to draw comparison between the two case studies in both field and analysis methodology used to examine them as well as with regards to major empirical and theoretical outcomes. Both similarities and differences will be discussed in the following sections.

Both of these case studies are examples of disaster events where electricity has been lost. In both cases, the loss of electricity has encouraged people to produce images of electricity and has sharpened their perceptions of its importance and impact on human lives in the modern world. Even though both are related to disaster events, the two case studies represent two very different types of disaster. Hurricane Sandy is an environmental disaster while the Energy Protests are a man-made one. This means that each case would encourage the creation and exchange of different images that reflect the type of disaster. In the Sandy case the images that have been analyzed as part of this thesis have been mostly universal ones, meaning they are potentially understood by various communities and cultures in similar situations globally, while as part of the Energy Protests, people produced both universal as well as more culturally situated images, the latter being understood only in the Bulgarian cultural context. Finally, due to the type of disaster, images differ with regard to how electricity was lost. In the hurricane case, most images produced refer to mitigating the energy loss caused by the storm. The protests, on the other hand, show a case where energy is lost slowly over an extended period of time, which is why most images reflect adaptation perspectives.

The following sections will explore in depth the similarities and differences in the images of electricity for both case studies by *first*, describing how the same field and analytical methodologies have resulted in different data due to the type of case study. *Second*, comparing and contrasting the themes arising from the two data overview chapters (Chapters 3 and 4). *Third*, comparing energy-related symbolism in both case studies (similarities), and *fourth*, discussing the case study specific energy-related symbolism (differences) (Chapters 6 and 7). *Fifth*, some future research opportunities are highlighted for these two case studies before concluding with a real world example in order to showcase application of possible interpretative techniques.

Field and Analytical Methodologies

The two case studies have many points of comparison that were intentionally created by the research design selected for this thesis. The research design was carefully selected to allow for the application of the same field and analysis methodologies in both cases. However, because these cases represent different disaster types, environmental vs. man-made, as well as different types of energy loss, the application of the same field, and analytical methods have produced results that are similar in certain respects and quite different in others.

In studies that have been done prior in the social sciences on the topic of electricity, practice-based approaches seem to be favored. Also, even when studying perceptions, a focus is used that is based on the consumption and/or reduction of electricity in everyday life. The Energy Biographies Project implemented at Cardiff University is one of the few aiming to develop an understanding of energy use via a collection of 'energy biographies' and then explore the role of energy demand reduction within communities and in relation to personal biographies and histories.

In this thesis, by contrast, the focus of the inquiry was on the *images of electricity*, which is a topic that has not been explored prior. Particularly, both case studies presented in the thesis focused on the perceptions and meanings of electricity and how those meanings transform with the change of context. In both cases, the change of context occurred as the result of an event, or series of events that caused energy loss, which in turn was communicated via changed characteristics of the electricity-related images.

These specific qualities of this communication were analyzed using a corpus of empirical data gathered while or shortly after both events were taking place as part of continuous field research. The field methods were varied and included the collection of online data and visual materials as well as conducting a series of interviews at both case study sites. The goal of the data accumulation was to better understand the people's perspectives of electricity, which is defined as a bottom-up approach. This is different to how electricity is often studied in social sciences, where an institutional and/or social, or top-down approach, is more commonly adapted.

The varied empirical materials were gathered to serve as a basis of a multifaceted analysis. There were three main layers or aspects of the inquiry, which can be briefly listed as *personal*, *group* and *societal*. The *personal* layer of analysis in both case studies was focused on the psychological processes and has a basis in cognitive

psychology. At this level, it was interesting to explore how various images of electricity were formed and how those images could then be used to better understand the individual.⁸⁶ The *group* layer of the analysis for both cases focused on whether particular images of electricity and their meaning were shared by the group/community or if the images that appeared were unique. Further, how the meaning of an image was transformed in relation to the new context of use, what aspects of the original meanings were preserved and what new ones were added in order for the image to serve a new purpose in the social communication. The communication between the individual and the group highlights the typology of images while the communication within the group or between groups reflects on the means used for the exchange and the sharing of images. The *societal* layer of the analysis was seen in relation to the entire society and explored the dependants of image's structure and meanings in the context of societal values and norms.

Chapters 3 Data Overview of Hurricane Sandy and Chapter 4 Data Overview of the Energy Protests both presented thematic and content analyses of the empirical data while Chapters 5 and 6 both show how semiotics was applied to study the images of energy and electricity as signs in both data sets. The particular application of semiotics was to examine the change in meanings as reflected in the change of both form and referent, thus focusing the analysis on only one of the semiotic theories purposefully selected from a multitude of semiotic frameworks that actually exist. Using semiotics to study electricity is arguably an innovative way of applying some well-established theories of semiotics on a topic previously not explored in this fashion. This theoretical application allowed for a different way to study the psychological, social and cultural aspects of electricity-related imagery and human communication as oppose to existing approaches using practice theory or discourse analysis for example.

Thematic and Content Comparisons of the Data for Both Case Studies

Chapters 3 and 4 both presented a comprehensive overview of the two case studies and categorized the data using thematic and content analyses. There were many themes that the two cases have in common, but within their commonalities, there were also some very interesting differences. This section will focus on five themes that were prevalent in both data sets highlighting their similarities as well as their differences.

⁸⁶ The personal level was used as a way to inform the analysis as a whole. There is not a separate presentation of an analysis featuring the individual, but without this component, the analysis would be incomplete. However, perceiving the individual mind as a semiosphere provides vital information about images of electricity. For example, on page 171, individual thought process about the meanings of the darkened skyline inform the understanding of the group perceptions.

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First, concerning structures, both case studies can be used to explore economic, political, social and cultural structures as connected to energy and electricity, however, the explanation of which particular structures come to the foreground shifts from case to case. The focus in the hurricane case is on the social and community structures while the focus in the protests case is on the political and economic ones. This is most likely reflective of the reasons for loss of electricity in either case. Since the hurricane case presents an environmental disaster, energy loss is more closely connected to individual and community survival, while in the protest case, inability to afford electricity is the result of a series of political decisions and the economic context in Bulgaria.

Second, concerning the image of a space, both case studies examine how electricity is used to predefine particular spaces, from the home, to the public and any spaces in between. In the Sandy case, all three types of spaces are discussed in both the online data and in the interview narratives. In the Bulgarian case, the focus, as seen through the prism of the thematic and content analyses, was on the home space exclusively.⁸⁷ The thematic discussions surround the image of the home and the role electricity plays in creating this image where the home is a symbol of comfort, security and safety.

Third, concerning perceptions of the use of place, where there is the human interactive element, both case studies show the impact loss of electricity has on damaging a place. With the hurricane, the disaster was seen to have brought significant damage to home, public and any other places that fell within the geographical impact region. In the Bulgarian case, however, the impact loss of electricity has on places was shown through the public space, the place where the protests took place. The juxtaposition of the home spaces as one with electricity to one impacted by the loss of electricity was achieved through the use of the public places as the platform from which the Energy Protests took place. This juxtaposition shows a particular shift of control, the ability to define the image of a space through signs without existing in that space. As a man-made disaster, there is a further element of control that is seen in the data; a control gained through the type of response, namely the organized protests that people engage with. In the hurricane case, there is no element of control of the event itself because it is a quick event that happens and then the focus is more on recovery from the damage already caused. Thus, arguably in the hurricane case, there is no shift because as an environmental disaster, all three spaces were re-defined and all three spaces were

⁸⁷ This was not the case in the semiotic analysis as seen in the later chapters.

impacted by the loss of electricity, which is why images were produced about all three spaces in relation to both themes.

Fourth, concerning time, both case studies serve to illustrate energy loss as a disruption that occurred at a particular time. The length of time, however, differs greatly from case to case. The hurricane was a relatively quick event, which resulted in quick loss of electricity. With quick loss of electricity, there is the expectation of a short recovery period after the event. The protests, on the other hand, were the pinnacle of a long process of energy loss or ‘energy strangulation’. Such a long process of energy loss and destabilization would infer a just as long recovery period needed to fix the energy situation in the country.

Fifth, concerning perceptions of loss and hope, with energy loss, both cases contain images of hope for the better. These images also differ greatly because with the Hurricane Sandy case and the quick loss of electricity, the quick recovery expectation leads to a hope for a rapid return to the ‘norm’, as determined by a pre-disaster criterion of ‘norm.’ With the long process of loss of electricity, and even expectation of even longer recovery time, in the energy protests the hope refers to a hope for ‘change’, anything (undefined) that is different from the current situation.

In summary, five main themes were identified in both cases: relating to the political, economic, social and cultural structures, electricity re-defined spaces, loss of electricity impact on places, temporal consideration and hope for either return to the norm or for change. The identification of these themes was very important because most of the symbolism of the electricity-related images revolved around them and they informed the theoretical analysis of the images as signs in both case studies. The similarities and differences of their interpretation further contributed to understanding the influence of disaster events on understanding human perceptions and social communication concerning energy and electricity.

Case Study Comparative Energy-Related Symbolism

This section will present a comparative summary of energy-related symbolism in both case studies as discussed in Chapters 6 and 7. Visual, narrative, and performative symbols were selected that were common for both case studies. Five of the more prominent sets of symbols have been chosen to illustrate the similarities and differences of their use.

First, one of the most prominent sets of symbols that existed within both empirical data is that of the light/dark dichotomy. In the Hurricane case, symbols of

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light and dark were primarily used to re-define public, private and spaces in between. The absence of light, for example, in the borough of Manhattan helped re-interpret the city of New York as a city in trouble. In the Sandy case, the absence of light was perceived to refer to the loss of control, lack of safety and security, trouble, distress, etc. In the Energy Protest case, loss of electricity is also seen as a challenge to the image of the comfortable, safe and secure home, but the symbols of light and particularly the lightbulb were more often used to signify a threat or a warning. This occurred in two main ways, either by using the lightbulb to re-interpret the energy companies as symbols of 'evil' or to re-interpret the signs of the lightbulb as symbols of death.

Second, in both cases, symbols of electricity were seen to re-define spaces. With the hurricane, any change to a space was perceived as an equivalent to distress, a city in trouble or a home in trouble. In the Bulgarian case, the public places were re-defined as protest spaces as a response to the lack of affordable energy at cost. The private places, such as the home space, remain largely *unseen* in the visual materials, but rather perceived through an image of the home developed in the narratives that was seen as having been either destroyed or at least left unfulfilled.

Third, with loss of electricity and hope for recovery and/or change, there were symbols referring to the loss/hope dichotomy. Energy loss is seen to bring instability and insecurity so in both cases people desire improvement. While in the Sandy case the focus is on the hope of recovery to a pre-specified norm, in the Bulgarian case the focus is on the hope for change, an improvement upon the current situation.

Fourth, both case studies contain references to the fairytales genre where the narratives are structures to refer to both the actions of the 'evil' and the actions of the 'good'. This is the case where the good/evil dichotomy is highlighted. There is a personification of the disaster as 'evil' in both cases. In the first case, Hurricane Sandy is anthropomorphized in narratives and perceived as 'She', or the 'Evil One.' In the second case, the energy companies, company supporters and interest groups such as investors and politicians as well as those who stay silent and do not participate in the protest are vilified and re-interpreted as 'Evil'. Every villain in fairy tales prompts the rise of the hero, the second part of the dichotomy. 'Heroes' appear in both case studies, but again, they differ in how a hero is identified. For both case studies, the 'heroes' come from the 'common' people but while in Sandy heroes are those who help other people in the community, in the Bulgarian case, heroes are all those who participate in the protests, help provide strength in numbers and help social cohesion and unity.

Fifth, in both case studies, the importance of the individual, the community and the society is explored as reflected in shared images of electricity. In the hurricane case, the focus is on survival, which is based on a pre-conception of a life of technology and energy dependence. So, when power loss occurs, the everyday ‘normal’ energy consumption based survival is shattered. However, the main effects of the power loss that disrupt the image of ‘norm’ that accompany them are seen to be negated or at least dulled by help from society. This help further adds toward the strengthening of community identity. In the protests case, the focus is on the support of social goals, which seek change to the energy systems in Bulgaria. This support has arguably resulted in the strengthening of national identity through the solidarity the protests exhibited. In other words, the image of what electricity consumption and affordability should be serves as a symbol that has united the people and the communities in both cases.

In sum, the symbols presented in this section share common aspects across the two case studies, but also differ in many aspects of interpretation. The differences reflect the types of case studies, the types of disaster events and the way in which electricity was lost.

Case Study Specific Energy-Related Symbolism

Just as there are case study comparative energy-related symbols, there are case study specific ones. This section will briefly show one example for each case study that is particular to it and does not have a comparative one in the other case.

In the Hurricane Sandy case, there are many symbols of ‘electricity recovery’ that span from workers fixing fallen power lines and digging out electricity cables to images that show coping mechanisms and the ability to adapt to the situation until power could be restored. These symbols are case specific because the type of disaster and the type of expected response can impact the images that are produced, but also reflect the perception of the energy loss situation – as one that can be fixed, one that can recover to the ‘norm.’

In the Energy Protest case, there were performances that were used to communicate the message of asking the energy company to leave Bulgaria such as ‘EVN Out of Bulgaria.’ Some of these performances were based on universal signs, or elements that can be seen in the basic structure of any protest, such as the posters, statements, speeches, and protest walks, while others were very culture specific performances that use culturally shared codes to communicate protest messages such as

funeral rites, burning of effigies and bills as well as *kukeri*. These performances all reflect the call to change the existing 'norm.'

Future Research Opportunities

Having shown some of the similarities and differences within the thematic and semiotic analysis, there is one further comparative point that should be addressed, namely, which other parameters may be used for further comparative analysis of the empirical materials collected for this thesis.

It would be productive to apply a semiotic view of changing sign forms, comparison of mediums used in sign communication, presentation of signs in the concept of the first and secondary sign modeling systems, analysis of change of meanings over time or transference of meanings as part of social communication.

Another possibility is to conduct a discourse analysis of the data. Communication is a prominent part of this research, but also there has been many references to power relations and structures within both case studies.

Yet another possibility is to do a linguistic analysis of posters and narratives or even a quantitative analysis of images coded for there is a sufficient sample with about 500 for case I, the hurricane and over 1000 for case II, the protests. Some very basic quantitative analysis was presented here regarding the sample of rituals in case II, but all posters can also be categorically divided and analyzed.

Finally, if the ability to collect further research arises, there is the opportunity to follow through the cases for a couple of years to determine lasting impacts of the energy loss and to observe which symbols have remained in circulation and which ones that occurred in the immediate responses have dissipated over time.

A Real World Application Example:

How Images of Electricity Can Influence Sustainable Energy Development Policies

Loss of electricity was shown in this thesis to have prompted the creation and distribution of a wide variety of images of electricity. In both case studies, the energy loss was shown to symbolize more than a loss of technology and to allude to further contexts, emotions, values, ideas, and beliefs. Understanding the images of electricity this loss prompted can be used to also understand political and policy-based decisions within a particular cultural context. In other words, an analysis of such images can help us understand other processes beyond those directly linked to everyday consumption and distribution of electricity. The example that will be presented in this section shows

how an understanding of images of electricity can help us understand how and why sustainable energy development policies can flourish in particular countries and not in others (Hulshof 1992; Pearce 1993; Dahl et al 2007; Bell and Morse 2008; Boyd et al 2008; Collin 2009; Grin et al 2010; Bridge et al 2012; Droste-Franke 2012; Holthaus 2012).

The ‘Assessment of the Effectiveness of Policy Implementation for Sustainable Energy Development in Southeastern Europe’ study, which was conducted in 11 countries in South Eastern Europe, noted that in relation to efficiency of sustainable energy policies “the most favourable situation was observed in Bulgaria [which has a] unique commitment to sustainable development [and] to implement activities that increase the energy efficiency level”. (Dodic et. al, 2012, pp 346-347) Even though in Bulgaria, the GDP is within the regional average, the efficacy of the energy politics is much higher than average, as illustrated in Figure 8.1, p 361, from the study.

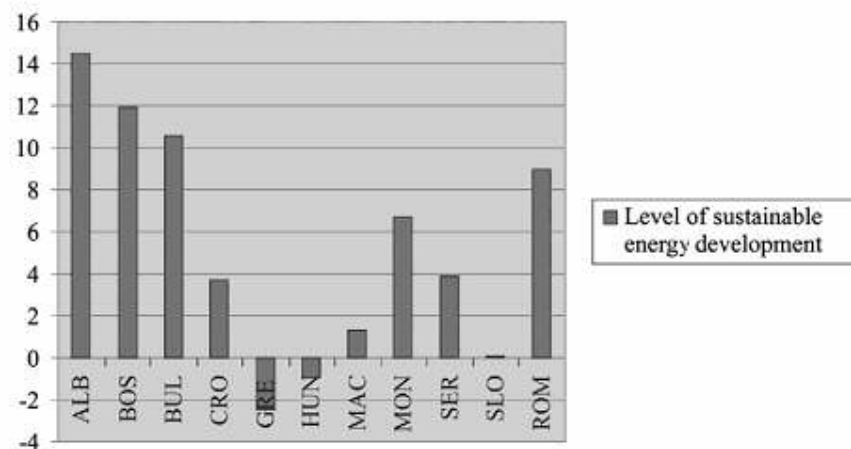


Figure 70 Level of Efficiency of Sustainable Energy Development Policy in Individual Countries of Southeastern Europe

According to this graph, Bulgaria is third ranked on levels of sustainable development in the region. Sustainable development is determined by energy efficacy and renewable energy available. Sustainable energy development, as suggested by the term, implies a development or a change to the pre-existing structures and ideas about the exploitation of energy that also takes into a consideration how to maintain the energy supply for future generations. Individual perceptions influence the way in which sustainability practices are viewed and approached as a solution to the energy problem.

In the Bulgarian context, both the technology available for energy production is at its peak as well as a wide array of renewable resources made available, which

CASE I "HURRICANE SANDY" AND CASE II "ENERGY PROTESTS"
COMPARATIVE PRESENTATION

continue to be improved to this day. The cultural context of Bulgaria provides a particular platform for sustainable energy development discussions due to the historical use of energy in the country as well as certain deep-rooted assumptions about the types of energy that exist. Historically, for purposes that surpass the need to modernize, the Bulgarian people have related closely to 'green' energy, which is a fundamental component of sustainable development. As wind and water mills have existed for the better part of 1500 years in Bulgaria, they are rather common place. Today, with technological advances that enable renewable sources of energy to become available, in the Bulgarian case, no new idea assimilation is required. Sustainable energy development in the Bulgarian context is about re-scaling, rather than requiring adaptation, as the concept of green energy is an integral component of culture and individual mentality already. In other words, the success of the sustainable energy development policies arguably corresponds to the images people have of particular technologies, energy sources, practices, and electricity in general. Since the images of electricity that are generated from renewable sources in Bulgaria are positive, programs that focus on such resources tend to flourish.

In sum, this example served to illustrate how an understanding of images of electricity can serve to illuminate other processes. This knowledge can then be used to better inform policy decisions and maintain social expectations in both times of calm as well as times of turmoil when energy supply may be threatened. Further research into the application of images of electricity for the understanding of other processes is recommended.

Concluding Remarks

“We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time.”

-T. S. Eliot

CONCLUDING REMARKS

In this section, I would like to offer some last reflections on this thesis' contributions and limitations as well as some suggestions for further explorations of the topic.

Recently there have been studies of images related to various environmental concerns including climate change, but until this thesis, there have been no particular studies on images of electricity. As images have been used to understand various phenomena such as artworks, literature, communication, theater or films, *images* are used in this thesis to understand something new about electricity. On the other hand, there are many studies of electricity, but the scholars mostly focus on either the symptoms of electricity, i.e. the physical manifestations of electricity or on the abstract dimensions of electricity that include the mental frameworks related to electricity production, distribution, and consumption. This thesis attempts a third approach, which is to study the phenomenon of *electricity* through a combined and multilayered theoretical frame that would include social, psychological and cultural characteristics. This approach encompasses both physical and mental aspects of electricity while preserving a direct focus on electricity as a phenomenon. In other words, the choice of research topic for this thesis gave me the unique opportunity to look into different aspects of electricity as perceived and communicated through imagery.

The complex character of the electricity-related images necessitated a research design that would reflect an adequate and comprehensive approach to their study. Various publications in social sciences and humanities, which provided the conceptual context of this thesis, demonstrate that electricity is usually studied either on a micro level by examining individual perceptions and interpretations of electricity or on a macro level by revisiting how electricity affects a community or a society. For instance, there are studies of electricity in everyday life and practice that show individual perceptions, while at the same time there are large sample surveys that help capture aspects of the communal ones. It is rare to see the micro and macro levels approach within the same research project. This thesis was, therefore, seeking a way to combine and highlight the complexity of electricity-related images on both micro and macro levels.

The combination of the two analytical levels was implemented by observing situations that reveal social amplification of risk. In general terms, such situations occur as a result of either a natural disaster event potentially made worse by human management or a man-made event that could reflect the involvement of socio-political systems. Electricity could be lost in both of these situations, and the effects of that loss

can be observed on both individual and community levels through responses related to social amplification of risk.

The two case studies for the thesis were selected to illustrate human reactions to electricity loss in both types of situations. Even though both are disaster situations, they affect electricity loss differently. The environmental situation causes electricity loss quickly and both the individual and community responses gear toward mitigation of the event and a hope for a 'return to the norm', while in the man-made situation the electricity loss is a slow process where both the individual and community responses are in line with the adaptation perspective, while 'hoping for a change' at the same time. The combination of the two case studies in one research project provided for a deeper and more comprehensive understanding of human perceptions/reactions to electricity loss in moments of turmoil.

There are no secondary data available on images of electricity due to the lack of prior publications or archival documentation. Additionally, the two cases chosen for this study were based on events that were to be observed as they were occurring. That is why primary data were gathered through fieldwork. A great variety of data were needed to create a holistic picture of each situation. The different types of empirical materials collected were combined in a large data corpus that allowed for a multi-faceted approach and a comparison between visual, narrative and performative images of electricity. The variety and quantity of data collected became the basis for my analysis, but many of the data sets also could be made available to other researchers who might want to use it as secondary data for alternate research topics.

To collect visual type of data for analytical interpretations is not a new idea, but the specific approach used in this thesis for gathering and analyzing of such data is rather rare. *First*, the primary visual data for this thesis was gathered on a large scale using a qualitative approach. In existing research, visuals are often collected during interviews or focus group discussions, but the sample size is usually very small. Visuals are also gathered after the events took place and the research questions that address them are related to either memory or everyday practices. In the few cases when a large visual data sample is collected, the analysis is quantitative in nature, as would be the example within climate change research. By contrast, in this thesis, despite the large sample size of the visual data for both case studies, the analysis follows varied qualitative approaches. *Second*, the visual data were collected as the events were occurring. Due to technological advances in recent decades, there are further opportunities for a faster reaction that would allow for the collection of larger data

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samples. Before that, and especially in the pre-internet time, fewer materials could be collected during an event, and the focus was to collect enough as to aid in the more substantial after event documentation of memories. Additionally, because of the internet and increased speed of communication globally, events can unfold faster as do responses and ability of the researcher to track and collect data. This has the added bonus of being able to track simultaneously developing several occurrences in different geographical locations.

The interpretation of the empirical data was limited by certain ontological and epistemological assumptions. Based on the major concepts of the cultural constructivism, the assumption in the thesis is that both knowledge and reality are associated with the cultural context, in which they exist. That being said, there are certain methodological contributions that arguably were achieved despite the limitations of the ontological and epistemological assumptions that informed the research design, including the choices of field and analytical methodologies. With regard to field methods and empirical materials, the visual data opened new possibilities for the interpretation of electricity by providing an opportunity to see everyday practices through the lens of energy loss situation in addition to prompting images that have no physical manifestation and may be expressed solely through the use of abstract symbolism. The semi-structured interviews also allowed for probing the participants' views in-depth by keeping them focused on images of electricity while at the same time allowing a great degree of freedom for the interviewees to raise topics that were not expected to be discussed or even considered relevant to the study of electricity. The use of both the visual and the interview data side by side, however, tested the extent to which each of the field methods can be applied to collect diverse materials, which in further analyses were needed for deeper understanding of the complex layers of meaning attributed to images of electricity both individually and socially.

The systematization of materials arguably is the transition from field methodology to analytical methodology in this research project. The systematization was completed using thematic and content analyses, the results of which in turn were used as the groundwork for the semiotic analysis.

Conducting a semiotic analysis of certain empirical data is not new to the social sciences and humanities. The specific application of this methodological framework to this particular topic, however, is innovative. The study of the signs/symbols allowed for a new understanding of electricity, one that was not bound by the textual or limited by the visual, but encompasses both – a multidimensional concept that could reflect more

closely the complex character of such images. Using the cultural context as an interpretative frame, the semiotic analysis allowed me to uncover certain aspects of electricity-related images that have remained outside the research focus so far. Culture-specific characteristics of these images further allowed for more comprehensive exploration of local and regional processes, such as environmental or sustainable energy development policies toward electricity, application of diversified energy in a certain region or relationships between energy use and change of life routines.

There are many different types of semiotic analysis where some scholars focus on linguistic aspects, others on cultural context, yet third on individual thought processes. This thesis is positioned in the conceptual context of the classic theoretical models rather than the more recently developed applications of semiotics onto particular topics such as visual semiotics or biosemiotics. The classic models allow for a view unconstrained by current tendencies in academia that have positioned semiotic knowledge to a manageable and repeatable application of particular versions of the classic theories. Often in current research, some of the original theoretical approaches have been oversimplified or limited to structural approach. In this thesis, the semiotic analysis is used to reflect the dynamics of a process thus interpreting signs on both paradigmatic and syntagmatic levels.

The use of semiotics for interpreting signs as integral parts of a syntagma as well as a paradigm highlights my approach as one focusing more on dynamics than on structures. In both case studies, this approach is related to interpretation and communication of images of electricity and presents one of the key developments of this thesis. This type of analysis was informed by existing interpretative analytical models used both in risk research as well as in semiotics, albeit those models were never before applied to the study of images of electricity. The interpretative analytical models help highlight further the functionality of signs and the role signs have in communicative processes i.e. the importance of the communication strategies for the development and use of signs as well as how signs can influence the type and transformations of communication processes. In this thesis, the analysis focused on the use of particular signs as part of the communication process and how the meaning of those signs can change with any change within one of the main three components of the sign structure – the form, the referent or the context.

As a way to further observe the dynamics of electricity signs, the changes of the three components were communicated using a written analysis illustrated with quotes, photos or still-image captures of video footage alongside sets of graphic representations

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(triangles). A written analysis of signs along with illustrations is common in published works on semiotics, but the sets of triangles presented in this thesis are rather unique. These sets of triangles attempt to illustrate the dynamic modifications/transformations of signs as described in the textual written analysis. The two or three triangles presented beside each other for most examples attempt to demonstrate the changes of meanings (in images of electricity), thus communicating these changes as a process of transformation that was aided by the loss of electricity in both cases. Communicating results in a way that reflects the assumption about the dynamics of signs and their role in the communicative processes plays an important role in demonstrating an understanding of signs of electricity and their place in human communication.

Having read existing literature on classical semiotics as well as interpretative theories, a theoretical interpretative-semiotic model was needed that would allow for the study of the complex phenomena such as images of electricity - as a multi-dimensional concept that is continuously transforming and as related to communication processes. This thesis then presents a merger of a cultural approach with the Peircian model to produce *one syncretic model* that would allow for both examining the data on macro and micro levels, and for their analysis as integrated into the complex process of human communication. Since the Peircian model is a cognitive based model (individual, micro level) by combining it with the cultural frame (group, macro level), my model was expanded to include individual cognitive processes and tendencies as well as social influences.

In addition to responding to the analytical need of the research project, this 'expanded' Peircian model has allowed me to interpret the individual mind as a semiosphere and the society as the space that surrounds it, which is a new application of the semiosphere semiotic model. Lotman's semiosphere model can be applied to any complex process that is described as contained by certain, albeit blurry, boundaries. The only expectation is that this process, even if independent and dynamic, can be seen to react or be influenced on occasion by outside forces. This thesis presents a unique argument that the individual mind can be perceived as the semiosphere, which is surrounded by social factors that on occasion enact enough pressure as to influence the pre-subscribed individual tendencies. The images of electricity obtained from the visual data and the interviews show individual perceptions of images of electricity (as within the semiosphere of the individual mind) as well as communally shared aspects across the large visual data sample (that is arguably the by-product of social influences).

Perceiving the individual mind as a semiosphere is in part a reflection of the ontological and epistemological assumptions that underpin this thesis, and show a semiotic analytical model that was selected and applied to include a cultural interpretative frame. Since the sum of individual experiences is how the world is decoded as per the constructivist ontology, a typology based on culture as a supplement to the analysis of individual experiences can be perceived as an integral framework to the cultural constructivist ontology and epistemology.

As a way to add some final observations with a dimension of reflection over the two case studies, a final chapter was added where an analysis was conducted of the two cases intertwined. Thus far in the thesis, the two chapters were treated as unique cases, but this chapter allowed for an analysis of commonalities between the cases. That is to say; this chapter is not for the provision of any general conclusions based on common elements found in the two cases; but serves to highlight some cultural tendencies that seem evident in both case studies through an analysis of methodologies, thematic and content analyses, and semiotic analysis.

Images of electricity could be identified and studied in many different ways but if we are to continue collecting them through fieldwork and interpreting them in the theoretical context of the semiotics, I would suggest that we broaden our research to include analyses of their function in the secondary and tertiary modeling systems, including an in-depth analysis of artworks. This will allow us to see how electricity-related images become expressions of social issues, hesitant cultural identities or even place them in the context of global vs. local in the present day world.

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Appendices

Note*

A letter only appendix title refers to general information for the whole thesis. A letter and a number (1 or 2) title refers to either Case 1 Hurricane Sandy or Case 2 Energy Protests respectively.

**Appendix A:
Ethical Approval**

Original Project Title upon Submission for Ethical Consideration:

Electricity Supply, Consumption and Demand Reduction: Visual Culture and Corporate Worlds

This is an application for ethical approval of research procedures as part of my three year PhD program in Psychology. The supervisors for this project are Prof. Nick Pidgeon (Psychology) and Prof. Karen Henwood (Social Sciences). The project is co funded by the ESRC and EPSRC.

The Project

Electricity is invisible and yet it has been turned into a product to be sold and consumed by society as both a necessity and as a commodity. This product as any other one has its visual form. The visual representations of electricity are also associated with a wide range of emotions, meanings and social practices. That is why the focus of this research is on the primary and secondary images of electricity, where an *image* here could refer to a physical image as in the example of the photographic image, or it could also refer to an abstract concept or an idea that is introduced through a variety of signs, narratives as well as shapes, tones and movements.

Therefore, the overarching goal of this research as well as the main outcome of it would be a new understanding of electricity demand viewed from yet another aspect of it - the perspective of the corporate (and other) images associated with it. The focus will be on visual representation of concepts, intentions or expectations as produced by corporations and as interpreted by members of the non-corporate world in either narrative or visual forms during times of compromised energy security. This will hopefully help us answer some of the *why* and *how* questions when it comes to communication between the electric companies and the society and to understanding (or misunderstanding) of encoded/decoded messages as carried by visual (or other) images. Also, the comparison between narrated images and visualized stories will lead us to a better understanding of diversified strategies for energy demand reduction.

The combination of narrative and visual methodological approach will hopefully contribute to the creation of new models of communication based on better understanding of the entire communicative process concerning energy use.

Case Selection

In order to study primary and secondary images of electricity, research is being carried out at two countries, following two specific events – Hurricane Sandy in the United States 2012 and the Energy Protests in Bulgaria 2013. Both of these cases are from countries considered part of the developed and thus energy depended world, and they both fit within the compromised energy security framework selected for this project, albeit be it for different reasons. In the United States, Hurricane Sandy caused much destruction and mayhem thus leading to a disruption to energy security. In Bulgaria, new government policy and management resulted in the perception of destabilization to energy security and there were massive protests. These cases were selected as convenience samples so that I may study production, perception and response to images of electricity on both the macro (group reaction) and micro

(individual reaction) levels tied to a specific event that caused disruption to energy security.

Research Phases

This project has three empirical phases, each carried out at the two research sites.

- **Phase 1:** Online data collection of media articles and photo galleries-Already Completed
 - Hurricane Sandy Case
 - CNN and BBC news and life stories, but also photos and videos of the disaster
 - Energy Protests Case
 - Facebook and various online articles, which cover primarily photos, some narratives, few cartoons, few videos and many posters

- **Phase 2:** Gathering first person perspectives/reactions via short semi-structured interviews with participants at both research sites - initial interviews with the actors involved in both cases i.e. the people and the electrical company
 - Hurricane Sandy Case
 - Residents of communities affected by Hurricane Sandy
 - NJES – Electricity Company for North Jersey
 - Energy Protests Case
 - Participants in the Energy Protests
 - Nuclear Power Plant

- **Phase 3:** Elite/expert long semi-structured interviews at both research sites as well as follow up interviews for participants from phase 2.
 - Hurricane Sandy Case
 - Journalists (patch.com)
 - Government Officials
 - Scientists
 - Energy Protests Case
 - Journalists (...utre.bg)
 - Government Officials
 - Scientists

This ethical proposal is for PHASE 2 ONLY. A separate application will be submitted for phase 3 at a later date.

Methods

The research methodology behind this PhD is that of Multi Modal Qualitative Research, where Multi Modal is to be understood as a) multiple field methods used to study the same phenomena from different angles, b) multiple layers to the analysis of said phenomena.

Phase 2 of my research is an attempt at gathering first person perspectives/reactions via short semi-structured interviews with participants at both

research sites. These are the initial interviews with the actors involved in both cases i.e. the people and the electrical companies. Further interviews for this PhD will be part of Phase 3.

Data Collection

Phase 2, which is the focus of this application, is based on a series of semi-structured interviews, which will last between 30 and 45 minutes. These interviews will be followed by a short 10 minute clarification interview due to the nature of the data collection techniques involved. Therefore, total contact time should not exceed 1 hour.

The data for Phase 2 will be recorded using a Sensory Camera, where permission can be obtained. This is why these interviews will be split in two parts. Part I allows me to relive the events with the participant at both sites through their eyes. The Sensory Camera captures what the participants 'see'. Part II is the 10 minute follow up interview straight after Part I, during which the participants review some of the footage from the Sensory Camera and further reflect on their practice and understanding of electricity in relation to both events, as well as in general.

I have some training on the gathering and analysis of Sensory Camera data from a specialized series of seminars I have undertaken in the first 6 months of my PhD. The data will also be complimented by extensive field notes and observations. Please see Appendix A for more information on Sensory Camera research.

Data Management

A secure database will be created for validation and clarification purposes in accordance to the Data Protection Act 1998. This database can be accessed by both myself and my supervisors. Please see Appendix B for consent form, Appendix C for database information sheet to be retained by the participants and Appendix G for demographic data, which will be collected and stored. *Note: for the Bulgarian case all consent forms have been translated in Bulgarian accordingly to ensure that language would not be a barrier to participant comprehension.

Further, the data will be imported in the following data management software tools – NVivo for narratives and Compendium for images.

Participant Selection

The participant sample for Phase 2 will be the result of initial introduction by a series of gatekeepers which I already have in place from previous research in both countries. These gatekeepers will help facilitate communication and trust as well as accompany me in the field. If further samples are needed, snowball sampling will allow me to obtain them.

Phase 2 Gatekeeper Information

- Hurricane Sandy Case
 - Gatekeeper 'S.S.', a journalist, who has covered personal life stories of residents of communities affected by Hurricane Sandy. She already has access to those communities and has built trust with them.
 - Gatekeeper 'I.K.', building manager in New York city with ties to NJES – Electricity Company for North Jersey.
- Energy Protests Case

- Gatekeeper ‘H.N.’, artist who is also one of the organizers for the ‘Save the Mountain’ and ‘Save Irakli’ Protests. As a protest organizer, he has considerable trust with participants in the Energy Protests.
- Gatekeeper ‘N.B.’, Nuclear Power Plant manager

As my gatekeepers already exist and I have discussed my research with them, I do not require a Gatekeeper’s letter. They have agreed to provide me with the following:

In general:

- Each of the gatekeepers will make the appropriate introductions and come with me to the interviews
- Further, they will be available for Phase 3 as well, if they are needed

Hurricane Sandy Case:

- S.S will provide me access to 7 interviews from the most devastated communities
- I.K will provide me access to 3 interviews including building manager and company employers in charge of evacuations during Sandy and maintenance before and after

Energy Protests Case:

- H.N will provide me access to 7 interviews with participants in the protests
- N.B will grant me access to the plant and to 3 interviews with representatives of electricity generating companies

Participant Protection

For the protection of the participants there will be complete transparency. They will be fully informed about the aims of the research in a manner that is clear. They will be fully informed about the purpose of wearing a Sensory Camera and the data it can provide. Opportunities will be made available for them to ask any questions they may have should they feel they require any further information. They will be provided with an information sheet and a debriefing form, as well as be required to sign a participation consent form prior to partaking in the study. For the information sheet, please see Appendix D, for the informed consent, please see Appendix E, and for the debriefing form, please see Appendix F.

Confidentiality

As mentioned earlier, all contact details will be stored in a secure database, which will be accessible only by myself and my supervisors. The participants will be informed of their right to delete all their information from the database during or retrospectively at any time. All data will remain confidential in accordance with British Psychological Society (BPS) ‘Ethical principles for conducting research on human participants’.

The participants will also be informed that in the thesis, as well as in any further publications/presentations, their names will be substituted by an alias that cannot be linked back to them in order to ensure their protection.

If for illustration purposes, an image from the Sensory Camera is used in the thesis, or in following publications/presentations, that image will not have faces or car license plates if no prior authorization has been received. If the image needs to be used,

any data that may lead to identifying an individual will be blurred or barred over using the appropriate software. Please refer to Appendix H for Photo/Video release form.

Control Over Data

The participants will also be informed that they have the right to stop/delete the data from the Sensory Cameras at any time as well as to withdraw fully from the interview during or in retrospect.

Return to the Field

I will leave my university contact details (and those of my supervisors) for all participants and offer to provide them with a summary of the results or a virtual copy of the dissertation after it is completed. Further communication with the participants will be maintained as I would need to follow up for further interviews in phase 3.

My Role as Researcher and Safety

My role as a researcher and my own safety are also important. For my protection, my interview schedule will be made available to people who know me but are not part of the interviewing process, with regular communication maintained. Further, as I will be with the Gatekeepers, I will not be alone at any part of the interview process, which is important especially as I will be going into people’s homes for most of the interviews. If anything goes wrong during an interview process, I will have an appropriate exit strategy in place.

Project and Research Phases Duration

The project duration is 3 years (October 2012-October 2015).

The data gathering schedule for the three phases is as follows:

- **Phase 1** was completed between the 24th October 2012 and 20th March 2013
- **Phase 2** is scheduled from 15th July 2013 to 23rd September 2013
- **Phase 3** will be scheduled sometime after March 2014

Clarification:

Sensory Camera Research	
Background	<ul style="list-style-type: none"> ✓ Sensory Cameras, or SensCams, were first developed by Microsoft at the University of Cambridge about 10 years ago. Originally, they could take photographs and were motion activated. With technological developments ensuing, the SensCam is now a small camera that records both audio and video in HD.
Theoretical Background	<ul style="list-style-type: none"> ✓ Builds on Theories of Perception – ‘Seeing what someone sees’ ✓ Builds on Theories of Types of Thought Present Before any Conscious or Subconscious Action – Good for the study of actions that have become ‘second nature’ ✓ Builds on Theories of the Sensory Experience through a Camera Lens – ex. Prof. Sara Pink – to feel another dimension of comprehension you wouldn’t have otherwise
What does it do?	<ul style="list-style-type: none"> ✓ 1st and 3rd Person Perspective Digital Recordings ✓ Allows the researcher the ability to study difficult topics – sensitive ones and currently abstract ones (as I propose)

How would I use it?

- ✓ Will use 1) on the street to enhance protesters narrative (BUL), 2) individuals' homes (USA), 3) and in Electricity Companies (BUL, and if possible, USA)
- ✓ 2 cameras – one on the researcher (3rd person), one on participant (1st person). As the participant tours the street/home/facilities, they provide me with a narrative in response to interview questions or stimuli. This narrative is now supplemented with images
- ✓ Then, the researcher and the participant will review parts of the participant's recording inviting the participant to comment and assume the role shift from 1st to 3rd person. Additionally, more direct questions will be asked in relation to electricity from the images inviting a more detailed commentary
- ✓ Silences and Pauses will also be better analysed in that context

Interesting Phenomena

- ✓ Temporal Effect so interesting to pursue Theories as to Why Temporal Effect – Analysis in Relation to Images
- ✓ Unique and more complete way to record perceptions and reactions, even when not consciously noted as such by the participant

Ethics

- ✓ Participant has full control over the recording. Can rewind, delete, turn off etc.

Appendix A1:
Project Information and Consent Forms in English

Project Information Sheet

Project Title

Electricity Supply, Consumption and Demand Reduction:
Visual Culture and Corporate Worlds

Researcher: Luba Pirgova - Postgraduate Student (e-mail: pirgovalp@cardiff.ac.uk)
Supervisors: Prof. Nick Pidgeon (pidgeonn@cardiff.ac.uk) and Prof. Karen Henwood

What is the project?

This is a project that aims to study images of electricity, or how have you perceived and interacted with electricity during a specific event. In order to study these images of electricity, a series of interviews are being conducted at two sites – in Bulgaria and in the United States. The data gathered as part of this project will be written up as a Doctoral Thesis, further publications as well as presentations to a wide range of audiences. The project has been reviewed and ethically approved.

What should you know?

These are interviews that will take usually about 1 hour of your time, in the convenience of your own home. The interview will be completed in two stages. During the first 30 minutes of the interview, *stage I*, you will wear a Sensory Camera, provided by me. This camera is attached to glasses and it will allow me to see what you see. I will ask you a series of questions in order to prompt you to explain your preparations and adaptations pre and post Sandy, but I would also need you to show me – for example, if the electricity stopped working, in which room were you, where you went to and what you did wherever you went. In the second 30 minutes, *stage II*, we will view some of the footage together, than I will ask you further questions specific to your previous answers.

The data from this interview will be held confidentially by myself and my supervisors, and your name will be substituted by an alias in my thesis, any future publications and/or conferences for your protection. You can discontinue your part in this interview at any point. You may stop and delete footage from the Sensory Camera, at any point, during or retrospectively. Remember, this interview is completely voluntary and there are no potential risks/harm to you from the Sensory Camera.

For your participation, you will be paid \$20.

Thank you very much for reading this introduction!

Project Consent Form

School of Psychology, Cardiff University
Consent Form - Confidential data

I understand that my participation in this project will involve answering a series of open-ended questions in two stages and tracing back my steps for a past event. The whole interview process will take approximately an hour of my time.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason and without loss of payment.

I understand that I am free to ask any questions at any time. I am free to withdraw or discuss my concerns with Prof. Nick Pidgeon, project supervisor.

I understand that the information provided by me will be held confidentially, such that only Luba Pirgova (Postgraduate Student) and her immediate supervisors' Prof. Nick Pidgeon and Prof. Karen Henwood can trace this information back to me individually. The information can be retained indefinitely, unless I chose to have it deleted/destroyed. I understand that I can ask for the information I provide to be deleted/destroyed at any time and I can have access to the information at any time.

I also understand that my name will not appear in any publicly available documents and my identity will be protected by an alias.

I agree / disagree (please circle the applicable) to wear a Sensory Camera for the duration of the interview. I understand that I may stop/delete the recording at any point during or after the interview.

I agree / disagree (please circle the applicable) that my image may be used for research and illustration purposes in publications.

I agree / disagree (please circle the applicable) that my image may be used for research and illustration purposes in presentations.

I also understand that at the end of the study I will be provided with additional information and feedback about the purpose of the study.

I, _____(NAME) consent to participate in the study conducted by Luba Pirgova Postgraduate Student in the School of Psychology, Cardiff University under the supervision of Prof. Nick Pidgeon (pidgeonn@cardiff.ac.uk)

Signed:

Date:

Database Information Sheet

My name and email address are held in a list (database) so that I may be contacted about future studies or progress of the research if I so choose.

Luba Pirgova (Postgraduate Student), and her supervisors Prof. Nick Pidgeon and Prof. Karen Henwood, are the only researchers with access to the database that contains my contact details.

My contact details will be kept indefinitely, but I understand that I am consenting only to receive adverts and information, and am under no obligation to take part in any future studies.

I understand that I may remove my name from the list at any time by emailing Luba Pirgova at pirgovalp@cardiff.ac.uk or her supervisor, Prof. Nick Pidgeon at pidgeonn@cardiff.ac.uk. Any contact I receive due to the list will contain details of how to remove my name from the list.

I understand that this list will be used only for the purpose described here and will not be made available to anyone beyond those agreed above, so my details will not be published or shared with anyone apart from those with access to the database.

Participant Database Consent Form

I am willing for my name and email address to be held in a list (database) so that I may be contacted about future studies, as agreed below.

I understand that I am consenting only to receive adverts and information, and am under no obligation to take part in any future studies.

I understand that this list will be used only for the purpose described here and will not be made available to anyone beyond those agreed below.

I understand that I may remove my name from the list at any time by emailing Luba Pirgova at pirgovalp@cardiff.ac.uk, or her supervisor, Prof. Nick Pidgeon at pidgeonn@cardiff.ac.uk. Any contact I receive due to the list will contain details of how to remove my name from the list.

I would like to be contacted about future studies conducted by (tick all that apply):

Luba Pirgova (Postgraduate Student)

Understanding Risk Research Group

Other members of Cardiff University School of Psychology •

I, _____ (NAME) consent to enter my contact details onto the list held by Luba Pirgova (Postgraduate Student), School of Psychology, Cardiff University.

Signed:

Date:

Debriefing Form

Project Title

Electricity Supply, Consumption and Demand Reduction:
Visual Culture and Corporate Worlds

Researcher: Luba Pirgova (Postgraduate Student)

Supervisors: Prof. Nick Pidgeon and Prof. Karen Henwood

This is a project that aims to study images of electricity, or how you have perceived and interacted with electricity during a specific event.

The Sensory Camera you wore, allows me to see what you see and how you interacted with your environment. The two parts to the interview also had their role to play. In the first part you were the participant where you relived the preparations for Hurricane Sandy/Participation in the Energy Protests. In the second part, you inadvertently switched between the participant and a researcher. This switch allowed you to reflect more fully over your relationship with electricity and to make your thoughts more explicit to me.

The data gathered today will be held confidentially, but please remember that you have the right to withdraw your data without explanation and retrospectively, if you so choose.

Thank you very much for taking part in this study!

Looking forward to speaking with you again!

Luba Pirgova (researcher)	Prof. Nick Pidgeon (supervisor)	Further contact for complaints
Postgraduate researcher	Professor	Secretary of the Ethics Committee
School of Psychology	School of Psychology	School of Psychology
Cardiff University	Cardiff University	Cardiff University
Tower Building	Tower Building	Tower Building
Park Place	Park Place	Park Place
Cardiff	Cardiff	Cardiff
CF10 3AT	CF10 3AT	CF10 3AT
Tel: 029 2087 4007	Tel: 029 208 74567	Tel: 029 2087 0360
Email: pirgovalp@cardiff.ac.uk	Email: pidgeonn@cardiff.ac.uk	Email: psychethics@cardiff.ac.uk

(Note: Standard Photo Release Form for NGOs and researchers. The legal language is necessary as it shows I take the protection of the participant's image seriously, which is what legal language symbolizes for both of these cultures. However, I also reminded them verbally that they may ask me any questions should they need any clarification.)

Photo/Video Release Form

For good and valuable consideration, receipt of which is hereby acknowledged, I (We) agree to and do hereby give and assign to you, your successors and assigns, permission to photograph/take a video of _____. Luba Pirgova has the right to publish, project, televise, lease, sell or otherwise dispose of these at any time.

I also release Luba Pirgova (Postgraduate Student) from any claims or demands of any kind of compensation, profit or expenses arising by reason of Luba Pirgova taking such photographs of _____, or by publishing, projecting, televising, leasing, selling, or otherwise disposing of same.

Name _____

—

Signature _____ Date _____

Signature of Parent or Guardian if subject is under 18 years of age.

Signature _____ Relationship _____

For information:

Researcher: Luba Pirgova - Postgraduate Student (e-mail: pirgovalp@cardiff.ac.uk)

Supervisors: Prof. Nick Pidgeon (pidgeonn@cardiff.ac.uk) and Prof. Karen Henwood

Fieldwork Data Sheet

Number _____

Corresponding to: Tape No. _____ Photo No. _____

Video No. _____ Other _____

Name of collector: _____

Circumstances of interview:

Name of informant: _____

Address: _____
_____ zip _____

Phone (s):
(home) _____ ;(work) _____ (cell) _____

—

E-mail: _____

Others present at interview (names and addresses):

Place and date of
birth: _____

Occupation: _____

Gender: Male/Female

Education, apprenticeship, and training
experience: _____

Electricity
Supplier _____

Type of Electricity Supply (solar, wind, nuclear, coal
etc) _____

Appendix A2:
Project Information and Consent Forms in Bulgarian

Информация за Проекта

Наименование на проекта

Електроснабдяване, потребление и намаляване на търсенето:

Визуална култура и корпоративни светове

Изследовател: Люба Пиргова - аспирант (електронна поща:

pirgova.lp@cardiff.ac.uk)

Надзорните: проф. Nick Pidgeon (pidgeonn@cardiff.ac.uk) и проф. Karen Henwood

Какво представлява проекта?

Това е проект, който има за цел да изучи първичните и вторични образи на електроенергията по време на две определени събития. Тези събития са Енергийните протести в България и положението след урагана Санди в САЩ. От данните, събрани като част от този проект, ще бъде написана както докторска дисертация, така и допълнителни издания и презентации пред широк кръг от хора. Проектът е одобрен от факултета по психология, Cardiff University.

Какво трябва да знаем?

Интервюто ще отнеме един час от вашето време. То е разделено на 4 части - разказ за протестите (около 25-30 минути), енергия и електричество (25-30 минути), идентификация на снимки (3 минути) и асоциации (2 минути). За първата част ще помоля да ми покажете къде е бил протеста и там да се състои интервюто.

Самото интервю се записва с звуково записващо устройство и с очила с камера които ще ви помоля да сложите за първата част от интервюто. Целта на камерата е да мога да видя къде гледате когато ми разказвате за географското разпределение на протеста (или ако пожелаете да демонстрирате нещо) а и също така като вторично звуково записвателно устройство.

Достъп до суровите записи ще имам само аз и моят научен ръководител (но той не разбира български). :) Ако бихте искали повече информация за нещо, с удоволствие ще отговоря.

Гарантирам пълна анонимност. Можете да прескочите всеки въпрос на който не бихте искали да отговорите по каквато и да било причина. Можете да прекратите участието си в това интервю във всеки един момент. Можете да поискате или изтриете записа за видеото, по време или със задна дата. Не забравяйте, че това интервю е напълно доброволно и няма потенциални рискове / вреда на вас причинена от техниката.

За участието Ви, ще Ви се заплати.

Благодаря Ви много за четенето на това въведение!

Формуляр за Съгласие за Участие в Проекта

Факултет по Психология, Cardiff University

Разбирам, че участието ми в този проект ще включва да отговоря на серия от отворени или директни въпроси, на два етапа и проследявайки стъпките ми за минали събития. Целият процес на интервюто ще отнеме около един час от времето ми.

Аз разбирам, че участието ми в това проучване е напълно доброволно и че мога да се оттегля от изследването по всяко време без да посоча причина.

Аз разбирам, че съм свободен/на да задавам въпроси по всяко време. Аз съм свободен/на да се оттегля или да обсъдя притесненията ми с проф. Nick Pidgeon, надзорник на проекта.

Разбирам, че предоставената от мен информация ще бъде поверителна, така че само Люба Пиргова (аспирант) и нейните преки ръководители проф. Nick Pidgeon и проф. Karen Henwood могат да се проследят тази информация обратно към мен лично. Информацията може да се запази за неопределено време, освен ако те не решат да я заличат / унищожат. Аз разбирам, че мога да помоля за информацията, или да изискам нейното изтриване / унищожение по всяко време и мога да имам достъп до информацията по всяко време.

Разбирам също, че моето име няма да се появи във обществено достъпни документи и самоличността ми, ще бъдат защитена от чуждо име.

Съгласен/на съм /// не съм съгласен/на (моля оградете приложимото) да нося камерата по време на интервюто. Разбирам, че мога да спра / изтрия записа във всеки един момент по време на или след интервюто.

Съгласен/на съм /// не съм съгласен/на (моля оградете е приложимо), че моят образ може да се използва за научни изследвания и с цел илюстрация в публикациите.

Съгласен/на съм /// не съм съгласен/на (моля оградете е приложимо), че моят образ може да се използва за научни изследвания и цели илюстрация в презентации.

Разбирам също, че в края на изследването ще бъдат снабден/а с допълнителна информация за изследването.

I, _____ (ИМЕ) съм съгласен/на да участвам в проучване, проведено от Люба Пиргова (аспирант) във Факултета по Психология, Cardiff University под ръководството на проф. Nick Pidgeon (pidgeonn@cardiff.ac.uk)

Подпис:

Дата:

Информация за Базата Данни

Моето име и имейл адрес, ще се съхраняват в списък (база данни), така че да мога да бъда потърсен/а за бъдещи проучвания или напредъка на изследванията, ако така реша.

Люба Пиргова (аспирант), и нейните научни ръководители проф. Nick Pidgeon и проф. Karen Henwood, са единствените изследователи с достъп до базата данни, която съдържа координатите ми.

Моите данни за контакт ще бъдат запазени за неопределено време. Аз съм съгласен/на да получавам реклами и информация, и не съм задължен/а да участвам в бъдещи проучвания.

Разбирам, че мога да извадя името си от списъка по всяко време, като изпратя имейл на Люба Пиргова в pirgova1p@cardiff.ac.uk, или на научния ѝ ръководител, проф. Nick Pidgeon в pidgeonn@cardiff.ac.uk.

Всеки имейл получен поради моето сегашно участие в това проучване ще съдържа подробности за това как да си премахна името от списъка.

Аз разбирам, че този списък ще бъде използван само за целите, описани тук и няма да се предоставя на разположение за други, извън тези, договорени по-горе, така че моите данни няма да бъдат публикувани или споделяни с никого, освен с тези, които имат достъп до базата данни.

Съгласие за Данните от Участието да се Запишат в База Данни

Аз съм съгласен/на моето име и имейл адрес, да се запишат в списък (база данни), така че да може да бъде потърсен/а за бъдещите проучвания, както е договорено по-долу.

Аз разбирам че съм съгласен/а да получавам реклами и информация, и не съм задължен/а да участвам в бъдещи проучвания.

Аз разбирам, че този списък ще бъде използван само за целите, описани тук и няма да се предоставя на разположение за други, извън тези, договорени по-долу.

Аз разбирам, че мога да премахна името ми от списъка по всяко време, като изпратя имейл на Люба Пиргова в pirgovalp@cardiff.ac.uk, или на научния й ръководител, проф. Nick Pidgeon в pidgeonn@cardiff.ac.uk.

Всеки имейл получен поради моето сегашно участие в това проучване ще съдържа подробности за това как да се премахне името ми от списъка.

Бих искал/а да се свържете с мен за бъдещи проучвания, проведени от (отбележете всичко, което важи):

Люба Пиргова (аспирант)

Understanding Risk Group научни изследвания

Други членове на Cardiff University факултета по психология

Аз, _____ (ИМЕ) съм съгласен/на да въведете координатите ми в списък, притежаван от Люба Пиргова (аспирант), факултета по психология, Cardiff University.

Подпис:

Дата:

Отчет

Електроснабдяване, потребление и намаляване на търсенето:
Визуална култура и корпоративни светове

Изследовател: Люба Пиргова (аспирант)
Надзорните: проф. Nick Pidgeon и проф. Karen Henwood

Това е проект, който има за цел да изучи първичните и вторични образи на електроенергията и как се възприема и взаимодейства с електричество по време на определено събитие.

Камерата която носихте, ми позволява да видя това, което Вие виждате и как взаимодействате с околната среда. Всяка част на интервюто също имаше своята цел. В първата част вие сте били участник, и ми разказахте събитието през вашия поглед. Във втората част, вие преминавате между участник и изследовател, изказвайки тези и правейки анализ на събитията в допълнение на обсъждане на теоритични и хипотетични ситуации. Последните две части са за цел да извадят част подсъзнателните ви идеи до колкото това е възможно.

Пълна анонимност се гарантира и не забравяйте че можете да поискате или изтриете записа за видеото, по време или със задна дата.

Благодаря ви много за Вашето участие в това проучване!

Люба Пиргова (изследовател)	проф. Nick Pidgeon (надзорник)	Оплаквания
Аспирант	Професор	Секретар на Комитета по етика
Факултет по Психология	Факултет по Психология	Факултет по Психология
Cardiff University	Cardiff University	Cardiff University
Tower Building	Tower Building	Tower Building
Park Place	Park Place	Park Place
Cardiff	Cardiff	Cardiff
CF10 3AT	CF10 3AT	CF10 3AT
Tel: 029 2087 4007	Tel: 029 208 74567	Tel: 029 2087 0360
Email: pirgovaalp@cardiff.ac.uk	Email: pidgeonn@cardiff.ac.uk	Email: psychethics@cardiff.ac.uk

Позволение за Снимки / Видео

Аз (ние) съм (сме) съгласни да позволим на вас, и вашите наследници и правоприменници, разрешение да снимате и записвате на видео _____(име).

Люба Пиргова има право да публикува проекта, излъчва по телевизията, отдава под наем, продава или по друг начин да се разпорежда с видео / снимковия материал по всяко време.

Аз също освобождавам Люба Пиргова (аспирант) от всякакви претенции или изисквания за всякакъв вид компенсация, печалба и разходи, възникнали по причина на предприемането на такива снимки от Люба Пиргова на _____(инициали) , или чрез публикуване, проектиране, излъчване по телевизията, лизинг, продажба или разпореждането им по друг начин.

Име _____

Подпис _____ Дата _____

Подпис на родител или настойник, ако участникът е под 18-годишна възраст.

Подпис _____ Фамилна _____
Връзка _____

За информация:

Изследовател: Люба Пиргова - аспирант (електронна поща:

pirgova1p@cardiff.ac.uk)

Надзорните: проф. Nick Pidgeon (pidgeonn@cardiff.ac.uk) и проф. Karen Henwood

Теренната Работа / Информационна Карта

Номер _____

Съответстващ на: Файл No. _____

Видео No. _____

Other _____

Име на изследователя:

Обстоятелства на интервюто:

Име на информатора:

Адрес:

Телефон (и): (дом) _____; (работа) _____ (gsm) _____

Е-поща:

Други присъстващи на интервюто (имена и адреси):

Място и дата на раждане:

Професия:

Пол: Мъж / Жена

Образование, стаж, опит и обучение:

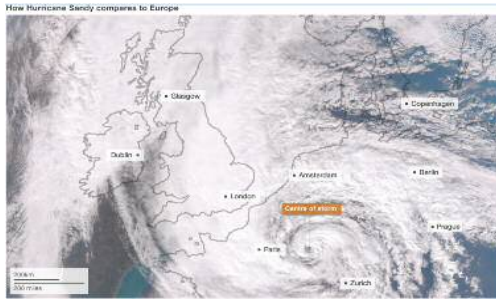
Електрически

Доставчик _____

Тип на електроенергия (слънчева, вятърна, ядрено гориво, въглища и т.н.)

Appendix B1:
Visual Sample Case I Hurricane Sandy

Additional Examples Not in Main Body of Thesis



Hurricane Sandy Overlaid Over a Map of Europe – Before the Storm



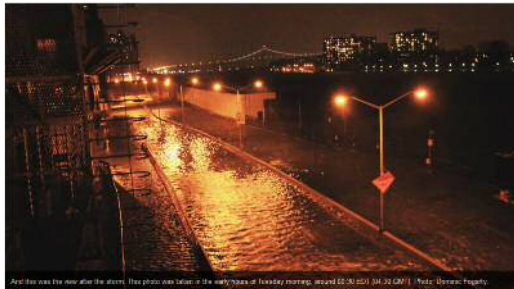
Preparations for the Storm



A Storm is Coming and Rain has Started



Not Everyone Hid from the Storm



Early Morning Hours On Tuesday After the Storm



Early Morning Hours On Tuesday After the Storm



The Morning After – Cables Everywhere



Fallen Power Lines Damaged Property as well as Caused Electricity Loss



Roller-coaster at the Shore – No Amount of Electricity Would Get That Started Again



This Ferris Wheel Will Doubtfully Ever Run Again – Cables in Foreground



The Crane – A Symbol of the Storm



The Ferry was one of Few Transports Still Working



Manhattan is in Darkness



People had to Walk Very Far for Basic Services due to Power Loss



Recovery Efforts – Restoration of Power Line



Recovery Efforts – Restorations of Traffic Lights



Lines for Gas



Many Appliances Were Destroyed Because of Water Damage or Power Surges



Trying to Get back to Normal – Coping with Power Outage



Generators for the Public



Charging of Phones and Other Technological Devices



Charging of Phones



Manhattan is Getting Back to Normal

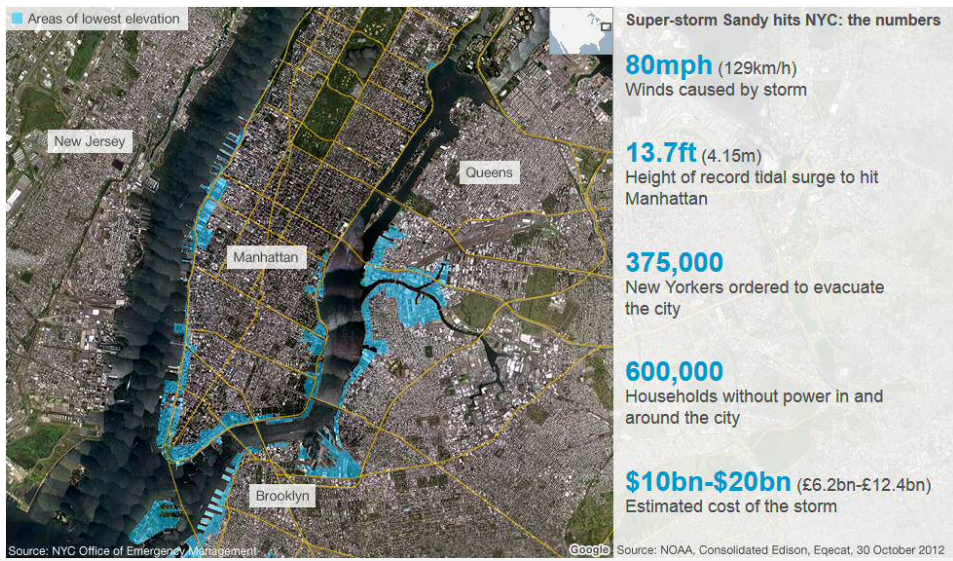


Lights are Coming Back On

33rd Street



Assessing the Damage – Before and After Photos



Assessing the Damage – In Numbers



There is Hope even if in Many Places the Damage Persisted for Many More Months

Appendix B2:
Visual Sample Case II Bulgarian Protests

Additional Examples Not in Main Body of Thesis



Bulgaria Divided Amongst the Three Energy Monopolies



Bulgaria: the Country with the Most Expensive Electricity, A Study



What Brown Energy Does to Our Planet



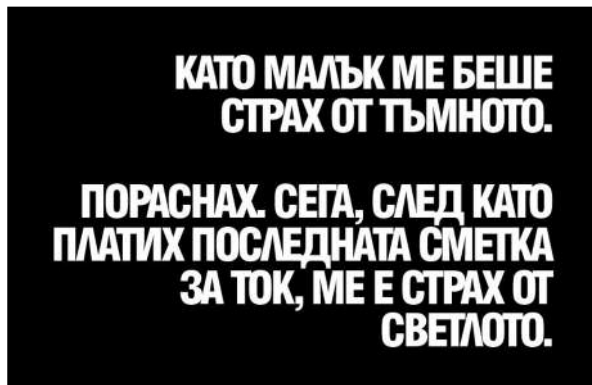
The Positive Outlook to Green Spaces and Energy



Please don't use the doorbell – electricity is expensive – knock and shout!



Light switch TV/Brain



The text reads 'when I was young, I was afraid of the dark. I grew up. Now, after I paid my last electricity bill, I am afraid of the light.'



Meme: The text on the top image of the meme reads 'EVN: You the Bulgarian, pay your energy bill or we will stop your electricity', while the text on the bottom responds with 'well, then we will fight in the dark'.



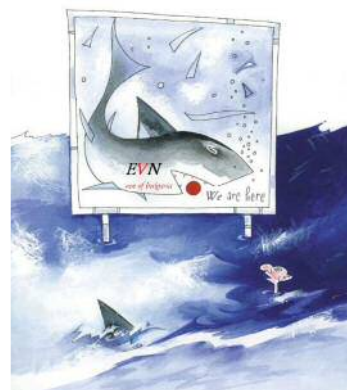
reads 'Super promotion! Pay us for 200 Volts and you get another 20 free!'



Peddling for Energy



How 'high' are high prices?



Sharks are coming for us!



ИзСЕЗвайте от България



Let's See if Politicians can Get Rid of Them...



Време е да събудим ЛЪВА

лешоядите може да ги прогони само един лъв

"Time to Awaken the Lion!"



Energy Companies Vilified



©BulFoto

Policemen are also People



Stereotypical Police Jokes



Artefacts Used: Cardboard Kalashnikov



Artefacts Shared: Energy Bills



Energy Vampires We Won't Accept



Vampire Skull and Bones



“Pay and We Will Turn Your Electricity On”



“Electric Chair, Energy Bill 3069 lv.”



Effigy of Energy Company



Effigy of the Bulgarian Public – The Fool



Chasing Energy Company Out of Bulgaria



Baba Iaga on a Broom Flying Away:
'Share me and I won't come back!' and 'I am going far away!'



Dancing For Solidarity

Appendix C:
Sample Questions for Interviews in English

Part 1: Biographical Data – Who are you and what happened prior, during and post Hurricane Sandy.

*Please remember, that your anonymity is fully protected and that you are free to skip over any questions you are not comfortable with.

Name

Place and date of birth

Occupation

Education

How did you first hear about the hurricane?

From where?

What emotions did the news of hurricane Sandy inspire? nuisance or even down right fear? have to pump water again!? not another one like Irene? When did you begin, if ever, to take the coming hurricane more seriously than you would a regular storm?

What were the main themes surrounding hurricane Sandy, from news, neighbors, family? What was the chatter?

Now think of the hurricane and tell me a story. What happened during the hurricane? What did you see, hear, smell, touch, think?

Where did it start? Where did it end? What do you remember seeing around you when it happened?

Did some images appear online prior, during or after that might have surprised you? Shocked you? Interested?

Any stories that may have surprised you? shocked you? interested you?

Were there any actions outside of the normal preparation and mitigation of the disaster? Did you see more community spirit for example, more care, or quite the opposite - distancing and selfishness? Please elaborate.

Imagining Structures - political, economic, social, cultural?

Imagining Spaces - the home space, the spaces in between, making the familiar unfamiliar?

Imagining Hope - people heroes, divine intervention, artistic expressions, time to heal

Sandy Discourse: A Message about the 'Power of Power'

Part 2: Energy and Electricity

Who is your electricity supplier?

What comes to mind when you hear the companies name? Please just list the first few words or associations that come in your head.

What type of electricity supply do you have (solar, wind, nuclear, coal etc.)

How does your electric company communicate with you? Letters, internet, other leaflets.

How often would you say?

Have you ever attempted to communicate directly with the energy company? If yes how so? Which medium did you use? If not, why not?

Do you ever hear about alternatives to your energy supplier? From where? Who – environmental, governmental, independent organization etc? What types of energy? Please elaborate.

Are there any emblems, logos or symbols you associate with electricity companies?

What about with energy in general?

When you think of the words 'green energy', what energy sources come to mind

What about 'brown energy'?

Do you connect the type of energy with themes such as climate change or rises in global temperature as such?

What symbols do you associate with green energy? With hydro-energy? Wind? Solar? What about with nuclear? Coal?

What do you use electricity for in your daily life, at home, at work? Just provide the first few examples that come to mind.

Would you say, in your own words, that you use a lot, a little, or just right amount of energy for a comfortable living?

Are there any energy requiring devices that you use that you would consider a need to use, while others as a want to use? Which?

Now, imagine that you had to reduce your energy consumption and demand by 50 percent. Which of your electrical items would you give up, or limit your use of?

How do you think your family and friends would react if you did? How would you react if they did?

Would you be willing to change your lifestyle if it came to that?

Who do you think is responsible for producing and implementing energy reduction strategies? How?

Who do you think is responsible for regulating energy supply and demand? How?

To finish, just two quick rounds of associations – one is with images and one with words.

For this part, please look at the following 2 sets of 6 images

First: from the protests and tell me what you associate with them? The first thing that comes to your mind.

Second: more general images tell me what you associate with them? The first thing that comes to your mind.

The last segment is just like an association game, list the first words or words that come to your mind:

Sky	Protection
Ocean	Civilization
Grass	Progress
Mountain	Climate
Dirt	Growth
Coal	Danger
River	Fire
Wind	Water
Sun	Home
Uranium	Energy
Comfort	Electricity
Safety	Corporation
Nuclear	I
Radioactive	Us

To clarify some of these. Why did you say ... with ...?

Just to end, some contact details:

Address-----Phone

E-mail-----Facebook

Appendix D:
Common Photos Used for Both Interviews



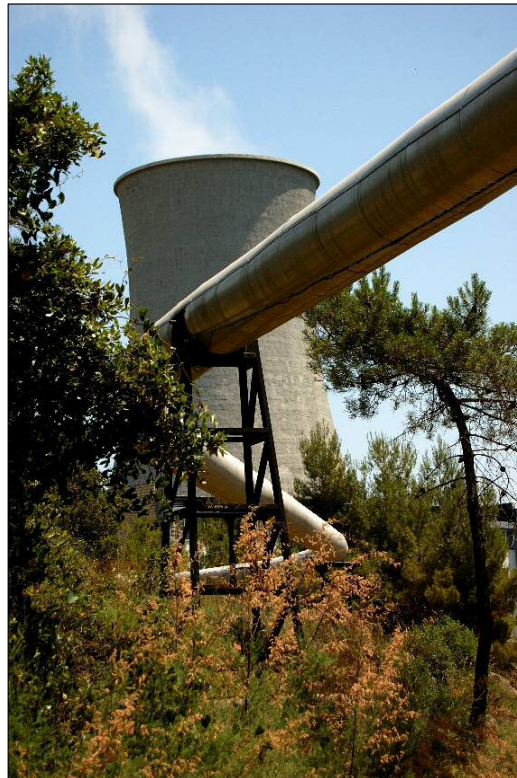
Solar Panels on Roof



Wind Turbines



Hydro-Electric Plant



Nuclear Reactor



Coal Energy



Artistic Rendition of Electricity

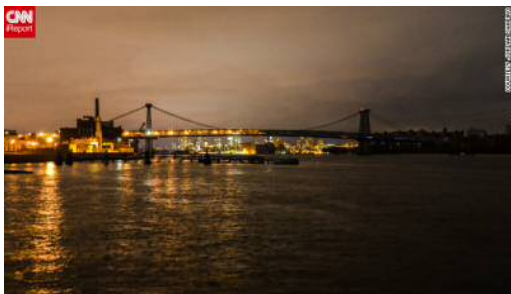
**Appendix D1:
Photos Used in Case I Interviews**



Satellite Image of Hurricane Sandy Coming



Cape May Lighthouse Pre-Storm



The Lights Going Out over the Brooklyn Bridge



Damage After the Storm – An Uprooted Tree



Façade Blown Apart By High Winds



Fallen Electricity Lines



Do It Your Self and Debris



Learning How to Make Solar Panels in School



Community Support and Sharing



Statue of Mary in Queens After Electrical Fire

**Appendix D2:
Photos Used in Case II Interviews**



“Until When? Electricity Kills!”
 Photo by Nasko Krustev



Fictional Funeral Procession for the Energy Companies



Burning of an Effigy of the Energy Company EVN



Burning of Energy Bills During the Protests



A Stone Pile to Mark the Fallen Energy Companies



Kukeri Leading the Protest and Chasing the Energy Companies Away



Energy Protest Procession in Varna

Appendix E:
Energy Statistics for New Jersey and New York

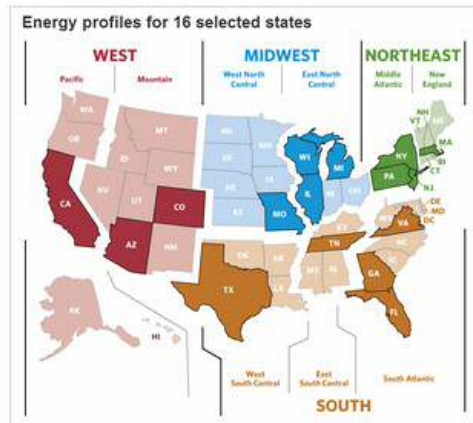
State fact sheets on household energy use

RECS 2009 — Release date: August 13, 2013 ([Correction](#))

The RECS gathers information through personal interviews with a nationwide sample of homes and energy suppliers. The 2009 survey was the largest RECS to date and the larger sample size allowed for the release of data for 16 individual states, in addition to national, regional, and division-level estimates.

See a closer look at residential energy consumption in a two-page format with graphs and text for these 16 states:

-  [Arizona](#)
-  [California](#)
-  [Colorado](#)
-  [Florida](#)
-  [Georgia](#)
-  [Illinois](#)
-  [Massachusetts](#)
-  [Michigan](#)
-  [Missouri](#)
-  [New Jersey](#)
-  [New York](#)
-  [Pennsylvania](#)
-  [Tennessee](#)
-  [Texas](#)
-  [Virginia](#)
-  [Wisconsin](#)



States that are highlighted have fact sheets.

Detailed information on the fact sheets cover many areas of interest:

- Overall energy use, electricity use, and expenditures
- Residential consumption by end use (air conditioning, heating, appliances)
- Main heating fuel
- Use of cooling equipment
- Housing types and year of construction
- Numbers of TVs and refrigerators

Household Energy Use in New Jersey

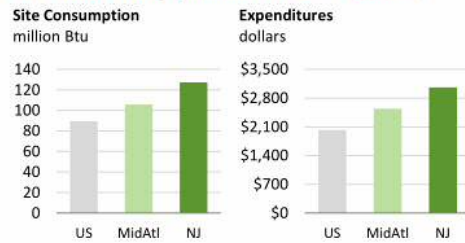
A closer look at residential energy consumption

All data from EIA's 2009 Residential Energy Consumption Survey
www.eia.gov/consumption/residential/

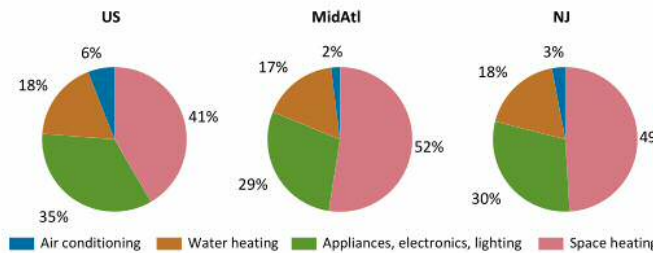
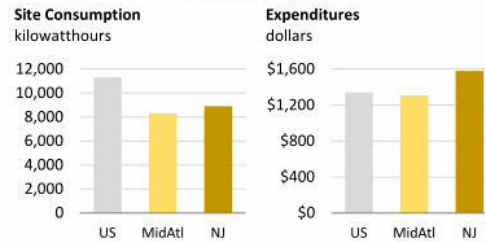
- Average energy consumption (127 million Btu per year) in New Jersey homes and average household energy expenditures (\$3,065 per year) are among the highest in the country.
- Although New Jersey households consume less electricity on average (8,902 kWh per year), higher than average electricity prices in the state means residents pay more for electricity than the average U.S. household.
- New Jersey homes are 20% larger than the average U.S. home.



ALL ENERGY average per household (excl. transportation)



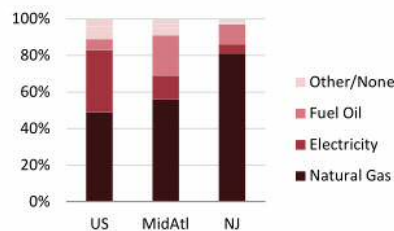
ELECTRICITY ONLY average per household



CONSUMPTION BY END USE

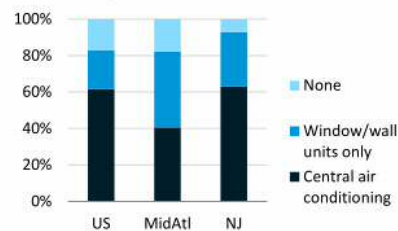
Nearly half the energy consumed in New Jersey homes is for space heating. Air conditioning accounts for a larger share of household consumption than other Northeast states, but still only accounts for 3% of the total energy used in homes.

MAIN HEATING FUEL USED



Over 80% of New Jersey households use natural gas as the main source of heat, among the highest rates of natural gas use for residential heating in the country.

COOLING EQUIPMENT USED



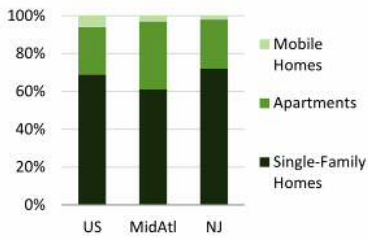
Nearly all New Jersey households (93%) use air conditioning equipment and a majority (63%) rely on central air conditioning systems.



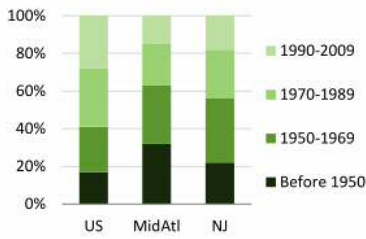
More highlights from RECS on housing characteristics and energy-related features per household...

US = United States | MidAtl = Middle Atlantic | NJ = New Jersey

HOUSING TYPES



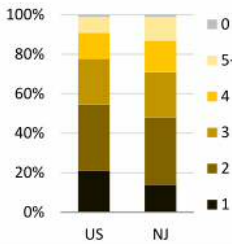
YEAR OF CONSTRUCTION



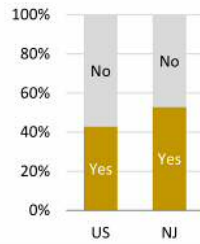
AVERAGE SQUARE FOOTAGE

US	1,971
MidAtl	2,080
NJ	2,399

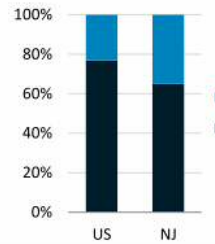
NO. OF TELEVISIONS



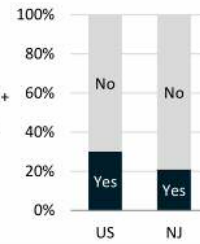
HAVE A DVR



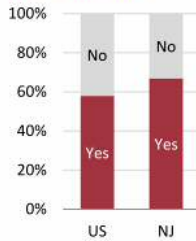
NO. OF REFRIGERATORS



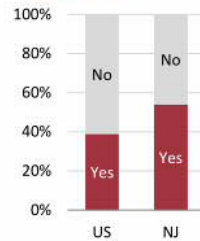
HAVE A SEPARATE FREEZER



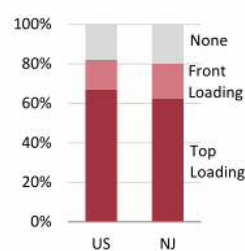
HAVE DOUBLE/TRIPLE PANE WINDOWS



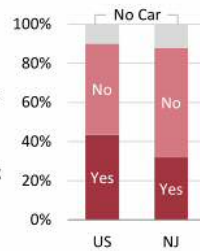
HAVE A PROGRAMMABLE THERMOSTAT



TYPE OF CLOTHES WASHER



CAR IS PARKED WITHIN 20 FT OF ELECTRICAL OUTLET



About the Residential Energy Consumption Survey (RECS) Program

The RECS gathers energy characteristics through personal interviews from a nationwide sample of homes, and cost and consumption from energy suppliers.

The 2009 RECS is the thirteenth edition of the survey, which was first conducted in 1978.

Resulting products include:

- Home energy characteristics
- Average consumption & cost
- Detailed energy end-use statistics
- Reports highlighting key findings
- Microdata file for in-depth analysis

www.eia.gov/consumption/residential/

Household Energy Use in New York

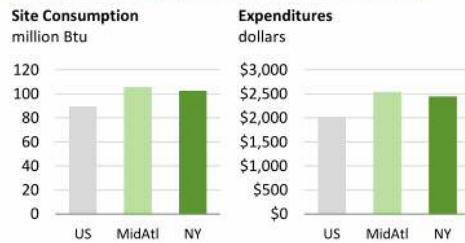
A closer look at residential energy consumption

All data from EIA's 2009 Residential Energy Consumption Survey
www.eia.gov/consumption/residential/

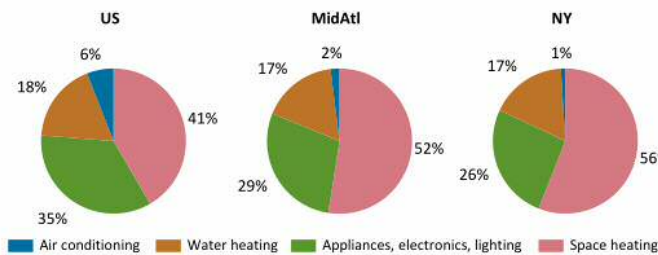
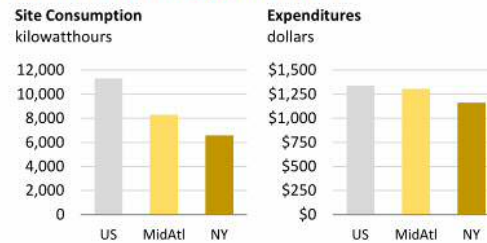
- New York households consume an average of 103 million Btu per year, 15% more than the U.S. average.
- Electricity consumption in New York homes is much lower than the U.S. average, because many households use other fuels for major energy end uses like space heating, water heating, and cooking. Electricity costs are closer to the national average due to higher than average electricity prices in the state.
- New York homes are typically older and, with a higher percentage of apartments, are smaller on average than homes in other parts of the country.



ALL ENERGY average per household (excl. transportation)



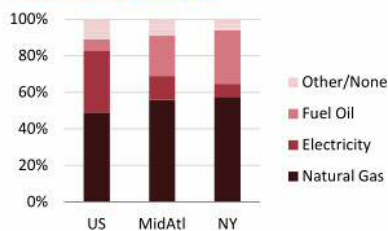
ELECTRICITY ONLY average per household



CONSUMPTION BY END USE

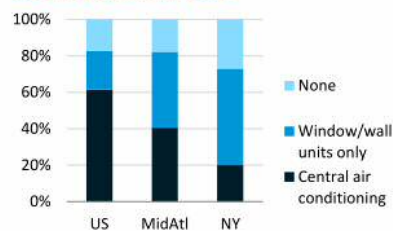
Since the weather in New York is cooler than most other areas of the United States, space heating (56%) makes up a greater portion of energy use in homes compared to the U.S. average, and air conditioning makes up only 1% of energy use.

MAIN HEATING FUEL USED



Natural gas provides space heating for 57% of New York households. Fuel oil (29%) is still a popular choice, despite declining usage nationwide.

COOLING EQUIPMENT USED



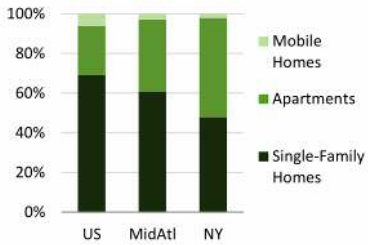
More than half of New York households (53%) use individual window/wall air conditioning units, while only 20% have a central system.



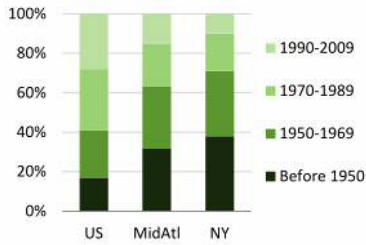
More highlights from RECS on housing characteristics and energy-related features per household...

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HOUSING TYPES



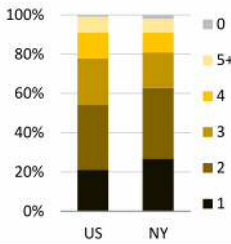
YEAR OF CONSTRUCTION



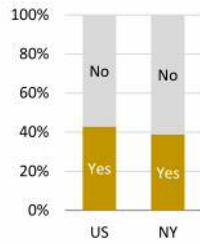
AVERAGE SQUARE FOOTAGE

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NY	1,832

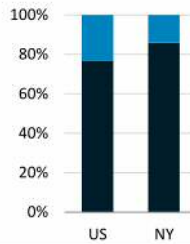
NO. OF TELEVISIONS



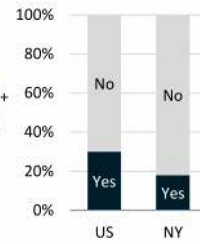
HAVE A DVR



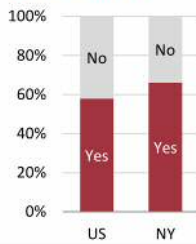
NO. OF REFRIGERATORS



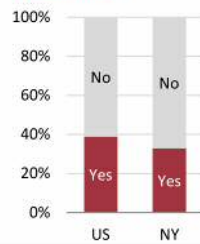
HAVE A SEPARATE FREEZER



HAVE DOUBLE/TRIPLE PANE WINDOWS



HAVE A PROGRAMMABLE THERMOSTAT



The RECS gathers energy characteristics through personal interviews from a nationwide sample of homes, and cost and consumption from energy suppliers.

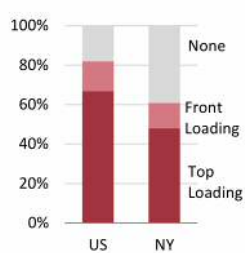
The 2009 RECS is the thirteenth edition of the survey, which was first conducted in 1978.

Resulting products include:

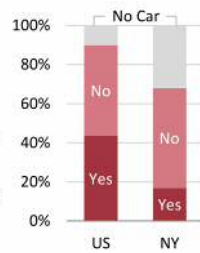
- Home energy characteristics
- Average consumption & cost
- Detailed energy end-use statistics
- Reports highlighting key findings
- Microdata file for in-depth analysis

www.eia.gov/consumption/residential/

TYPE OF CLOTHES WASHER



CAR IS PARKED WITHIN 20 FT OF ELECTRICAL OUTLET



Appendix F1:
Case 1 Data Systematization Chapter
Further Examples

More on Online Data

Headlines: 'Trust', 'Intimidation' and 'Fear'

Specifically relating to electricity, the 'trust' and 'intimidation' themes are very prominent. In relation to trust are headlines inviting the reader to engage with advice on how to charge electrical items and where, both during and after the event, while some of the more repeated phrases emphasize intimidation, as for instance 'in Sandy's wake' and 'in the dark,' both phrases from CNN, highlight elements that induce fear. A fear that occurs as the result of phobias relating to lack of light, some of which based in folklore and myth such as the early hours of the morning, or before people wake/in the dark when bad 'things' happen. BBC articles, on the other hand, rather than to intimidate, focus on the attempt to lure the reader to browse photographs of the events, such as power shortages and other destruction caused by Sandy.

Body of Text: 'Consequences of Power Loss'

In the body of text of the articles there are several main themes that related to energy and electricity. *First*, the losses of power impacted people physically, such as the inability to get access to electricity or death as the result of electric shocks, but also by the creation of an image of people-without-power as either 'customers' or 'victims'. Both of these terms place the individual in a power relation to the company they buy from or to Sandy for taking away something that was 'necessary' or even a 'right'.

Second, the loss of power theme shows that despite that the power shortages affected close to 9 million households, the ones that are most discussed and victimized are those in New York City. This includes Manhattan and the financial district as the symbol of wealth in the United States, but also Queens and the electrical fires that caused a neighborhood to burn to the ground. New York City is the centre of attention for the news narratives both before and after Sandy made landfall thus illustrating the importance of the New York City in New York over that of any part of the New Jersey State. In addition to that, the interest in Manhattan and in Queens was also enlarged by the multiple pre-existing images and associations of the neighborhoods in cinematic and in literary representations.

Third, as a consequence of the loss of power, a discussion of a variety of power sources such as private generators, solar, wind, took place. Interestingly enough, all these sources are referred to as substitutes, or a way to make do, until 'norm' can be restored. This is important for it illustrates the image of how electricity should be obtained to power a home, not by being self-reliant and having own sources, but rather, by depending on energy companies 'take care of it'.

Photos Embedded in Articles: Visual Presentations of the Major Themes

An analysis of the photos embedded in articles shows on first glance that these photos are used for illustrative purposes – a text paired with a corresponding photo. For instance, there are satellite images of Sandy and the projected paths used to illustrate the narrative in the story. However, there are some cases where the photos have a different, and even stronger, narrative than the text. Examples are articles where the text is factual and informative, or 'what happened' while the photographs are the ones that carry the variety of discourses that shape the context of the text. In order to elaborate on this, the photo stories and photo galleries section will present some of the themes present within the photos.

Photo Stories and Photo Galleries: Understanding the Power of Power

The photo stories and photo galleries can be divided into three categories – *pre-*, *during* and *post-sandy*. Each of these categories has a unique set of images with their

own encoded purpose pending on the time during which and for which they were created.

There are two types of images in the category of *pre-Sandy*. The *first* type is satellite images or computer animations tracking where the storm is as well as its projected path and predicted destruction. The *second* type is photographs. Some of these photos show destruction and power loss in areas that have already been affected, such as Jamaica where 70% of households lost power. Closer to Sandy's landfall, other images of warning include the images of dark clouds over the New York skyline or 'bracing' or 'braving' the high winds and waves. These images were used as a warning and a prompt for evacuation in the United States whose impact with Sandy was still to come. Evacuations, apart from residents and pets, included hospitals and hospices. In the hospital setting there were multiple stories illustrating the difficulty of evacuating people, and specifically infants, which depended on electricity powered machines to survive in addition to maintaining a sterile environment. The dependency on electricity whether in hospital, financial or political setting, revealed the difficulty created in social mobility and ability to perform certain social functions, such as the ability to vote in the upcoming presidency elections or to simply breathe as was the case with one of the evacuated prematurely born infants.

In addition to evacuation, there are also many images of other types of preparation for the storm. Examples are the boarding up of houses, shops and New York subway systems as well as protecting electricity outlets, cables and electricity generators. However, not all images related to electricity pre-Sandy were warnings. Some of the images were also images of hope. For instance, there is an image of Cape May's light house (as illustrated in the photo on the next page), which appears in the smog as a beacon of hope.



Light House at Cape May, New Jersey; Photo Copyright CNN Photography

After all, light houses are 'hope' for the sailors who search for their path back home even in the direst circumstances; a 'hope' that is then transferred into a new context as part of the Sandy photo gallery.

The photographs in the category of *during* mostly focus on the flooding caused by the natural disaster, but there are also some images of electricity such as photos of power going out during the storm.

The photos in the category of *post-* are the most abundant in images of electricity. As the name of the category itself suggests, there is an inherent semantic

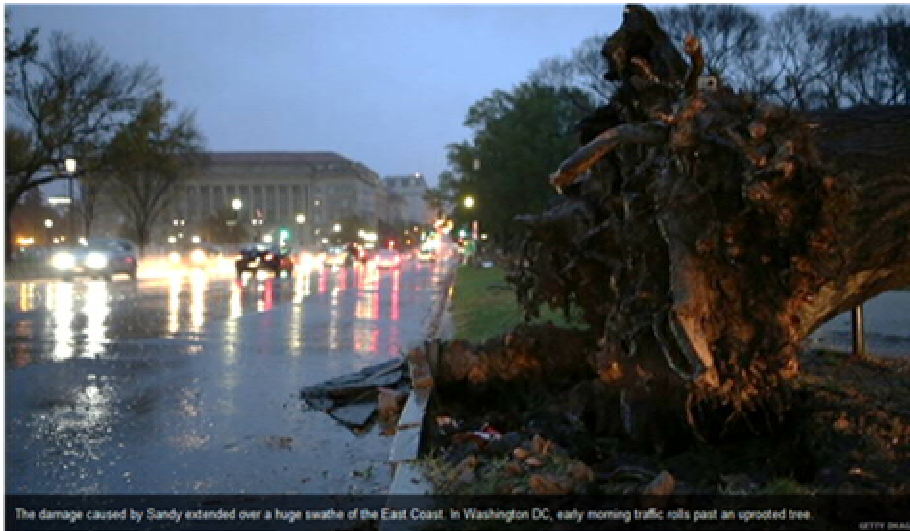
dichotomy, a comparison of the *post-* to the *pre-* Sandy images. Additionally, in this category there are multiple other semantic dichotomies that exist such as: civilized vs barbaric, organized vs chaos, security vs insecurity, certainty vs uncertainty, routines vs emergencies, stability vs fragility, luxury vs lack thereof, necessity vs lack thereof, etc. The dichotomies serve to illustrate opposite meanings, interpretations and realities. Therefore, they can bring in a heightened understanding of the social and cultural dependency on electricity and how these perceptions change in time of ordeal.

There are multiple images created as part of such semantic dichotomies, which are also related to different temporal dimensions. Here I would discuss only those associated with the themes of ‘memories’, ‘power’ and ‘expectations’.

In the theme of ‘memories’ are images that preserve and compare a person, place or thing to its previous ones prior Sandy. These are images that frequently depict the human fascination with the destructive power of Sandy, but also some photos which are created for insurance claims to energy companies, memory preservation or to provide up to date information. Up to date information suggests that all themes previously discussed as part of *pre-* and *during* Sandy are also carried over.

In the theme of ‘power’ are images that depict a variety of political, economic, social and cultural structures, which in many cases reflect key discourses presented in the textual narratives, as well as images that show the ‘power of nature’ versus the ‘power of man’. These are images that show more reflexive type of themes and are very complex in nature.

In the theme of ‘expectations’ are images of how social reality should be construed and what problems Sandy has caused. This is where the dichotomy of civilized vs barbaric can be noted where for example, the following photo illustrates the expectation of ‘civilization’, or a space with technology and electricity, as oppose to the destructive power of nature, or the uprooted, almost barbarically, tree.



“The Damage Caused by Sandy Extended Over a Huge Swathe of the East Coast. In Washington DC. Early Morning Traffic Rolls Past an Uprooted Tree”;
Photo Obtained from BBC Online Galleries but Photo Copyright Getty Images

The photograph is extremely powerful, and it also alludes to the presentation of the discourses through an artistic manner in order to demonstrate the full impact of the event, as evident in this highly stylized image.

More on Interview Data

Hurricane Sandy is Coming! – Personal Accounts

The first memory most participants have from Hurricane Sandy was hearing the warnings from TV and radio news or social media. Those who were to be evacuated were often told by police or fire brigade who drove through the streets repeating the announcements through a megaphone.

Frequently the information provided by various sources was contradictory as to whether the storm would hit or dissipate, whether it was a storm, a hurricane or something else. As one of the participants described the situation:

“Well... They... they were talking about it for I guess for a week or two before it that ...that it was down south and they weren't sure it was a pretty big hurricane they just weren't sure which way it was going to come and that kind of stuff and then as the week went by it got closer and closer and they... they started to say it was going to be pretty bad storm and that you know that it would probably downgrade possibly and so therefore you know it would be just a storm they don't consider it a hurricane they still don't. They call it a super storm Sandy they call it that” (Participant Citation)

The news of Hurricane Sandy approaching in whatever form conceived was frequently paired with some advice as to how to prepare for the storm. For those who lived in areas frequented by storms, preparing for an incoming storm was a common practice. As one participant from Ocean City explained about preparing for the storms:

“Yeah it happens every year, I mean not on the level of Sandy but ...its always some sort of big hurricane, some sort of storm ... yeah I mean we definitely haven't had something that big in a very long time, but there is always something and it usually there is a scare too like Irene ... something yeah that we think its going to be bad and then ... kind of just think that I am immune to being worried about the storms at this point yeah” (Participant Citation)

Many of the participants did prepare their homes for the storm by a) boarding of windows, b) covering of cars, c) stocking of provisions, d) tying down anything that may be blow away or e) building small levees? [sand bag piles] to prevent water from entering the basement areas of the house.

In addition to protecting the existing home structure, there were two further main areas of concern prior to the coming storm Sandy that many believed Sandy may cause – flooding and power cuts.

“My calculation was I thought I would probably get two a half to three feet of water in my house. So I would try to put things up as much as... As high as I could. So that is what I did. I went... I put stuff three feet and above that way I had... I had a water bed, I piled stuff on my waterbed, I... To get as much stuff off the floor and up three feet above” (Participant Citation)

In addition to anticipating flooding problems, some also anticipated power cuts. Power cuts were dealt with in different ways. Some had prepared with generators that are powered by gasoline, while others were less concerned about the darkness and as one participant stated:

“Most people were just content to wait it out with candles ... you know, cause people you know, people get so many storms in this area that people like know how to prepare and storm proof their house, their business ... stock up on food so everyone is always ready for the worst but um ... yeah that's basically what everyone does most of the time. [and] losing power, it happens a lot [...] any time we hear hurricane, we are like alright ... lets wait for a couple of days without power. We just know its gonna happen. So ... Its not a huge amount of concern when the power goes out.” (Participant Citation)

Therefore, in order to reduce concern, many homes prepared by stocking up on candles and food thus prepping to hold out should the storm require a few days of stabilization afterwards or time to return the infrastructure to the pre storm level. Many stores ran out of candles, flashlights and generators.

Many people didn't take the coming of Hurricane Sandy seriously, so they chose not to leave.

“Heard about Hurricane Sandy on the news. Heard it was coming up the coast and needed to evacuate family. We haven't had a crazy storm since the 60's, (Hurricane) Irene wasn't that intense, I didn't think it (Hurricane Sandy) was going to be as bad as it was.”
(Participant Citation)

The media hype that was created surrounding Hurricane Irene only a year prior, which ended up not affecting many of the communities, caused for people to take with a pinch of salt what they would hear on the news. So even though many of them knew Sandy was coming, and they partook in some small preparations, the gravity of the storm coming was obscured by the prior experience of 'cried wolf' phenomenon. As another participant said more directly:

“Irene was really nothing much and it didn't affect here it affected North Jersey more and in land more so people just assumed that you know what we had Irene and they told us to all leave we all left and there was nothing so that's why some people have decided to stay” (Participant Citation)

Perceiving Hurricane Sandy to be just a media hype similar to Irene, many ignored the preparation warnings and were left completely depended on the state and power companies to come to their aid. Even the others, who were evacuated, packed either an overnight bag or for up to three days believing that they would be able to return home. Many did not get to return home for many months after the storm with 2 of my interviewees still not being able to return 8 months after.

Gaining of Power after Hurricane Sandy

After the Sandy made landfall, many people were left displaced, out of home, out of power. As part of the interviews, there were questions regarding the aftermath directly but often they were briefly answered before moving on in the interview. The aftermath impact would actually become prevalent in the later part of the interview when questions about the participant hearing of any stories around Sandy that may have surprised them, interested them, or shocked them were asked. All responses to those questions were their perceptions of the aftermath.

These responses shared some common themes. The most dominant one was that of heroes and people who provided hope when everything around the participant seemed to be in shatters. There were also sub themes regarding the political structure and organization after Sandy as well as the economic and social shifts experienced. Specifically to energy and electricity, there were also the themes regarding the breaking of structures such as the communication and information ones due to lack of energy and electricity.

Many people's experiences as told in the biographical portion of the interview related to how they prepared for Sandy, how they were surprised by the magnitude of the storm, and their experiences in the aftermath. However, the theme that was threaded through all of their recollections was that of energy and electricity – the loss of power, the loss of self due to lack of ability to communicate with the outside world and to receive information as well as the loss of home and property due to inability to get

home because of live wiring or lack of electricity that could transform a house into a home. To end this section with the words of one of the participants that resonated in all the emotions, gestures, and unspoken mimics of all the interviewees:

“The way I look at it I was traumatized. I was traumatized by this storm when I saw my house [that was no longer my home].” (Participant Citation)

Perceptions of Energy and Electricity

The interviews in addition to the biographical portion also included a section that was tailored more specifically to ask about people’s perceptions of energy and electricity. Some of the questions, *first*, related to their particular energy provider regarding the relationship and communication experienced between the individual and the energy provider as well as what type of information they received regarding type of energy received, costs or environmental impact. Many of these questions people answered without me asking in the biographical section of the interview. *Second*, there were also questions about particular types of energy and emblems, logos and symbols associated with them as well as particular attitudes or value systems. These were the questions that explored people’s attitudes toward topics such as sustainability, various renewable and non renewable technologies, climate change and global warming. *Finally*, the last series of questions in this section focused on the themes of consumption and energy demand reduction. These questions also included self comparative perspectives with others as well as reflection on social and familial attitudes toward possible changed in consumption, with a focus and reduction.

‘A Knowledge Gap’

The answers in this section of questions, which were directly tailored to perceptions of energy and electricity rather than through the hurricane context, showed that most participants were very ill informed, but willing to learn more, about energy, where it comes from, how much it costs, the production and distribution cycles as well as environmental impact. They all commented on that there were no readily available sources of information that they knew of. Therefore, they were readily aware that there is quite a gap in their knowledge, but also faced with the dilemma of having no idea how and from where to acquire the knowledge to fill that gap.

‘Renewable Technologies – Exotic and Foreign, Efficacy and Cost’

Most people were unaware of what type of energy they received through the grid or if there are any alternative energy sources. With regard to renewable technologies, many had seen some, such as solar or the wind farms near the beaches, but they would describe them as exotic or unusual and their efficacy was often questioned. Efficacies on the one hand, and cost on the other, were the two major factors discussed in relation to renewable technologies. These discussions, however, were nothing more than catch phrase repetitions as most of the participants are actually unaware as to what their current energy sources might be. Further, many of the participants could not list any renewable technologies, they only responded after the prompts and even then some were not aware of what some of these energy sources are. For example, none of the participants knew what geothermal energy was. Many of the participants would attempt a guess and some would back out saying that they would like to look it up further. However, my follow up conversations revealed no such further research took place. Once I revealed a bit about renewable sources many would they respond with that they would like to have that as their source of energy if at the same price and able to do the same job.

'Renewable Technologies – In the Shadows'

Upon reflecting on the lack of knowledge, some of the participants attempted to explain it in various ways. For instance, one participant thought that green energy is not something one hears or discusses outside of specialized circles of experts because "it's just neutral, it's not a big... You know why... Because it's not a big thing yet you know it's not a big push if it was like in the limelight yeah see that's why." (Participant Citation) Therefore, the participant argued that if a topic is not in the news, in social media, or another form of 'limelight', it frequently goes unnoticed and that would explain lack of general knowledge about it.

'Nuclear Power and Clichés'

On the other hand, nuclear power is one of the topics that have been in the media quite frequently after the disaster at Fukushima Daichi I and the following social movement to reduce or completely remove nuclear technologies from the energy mix in some countries. This is what one of the participants had to say about nuclear power:

"However that same nuclear plant, the same ... can be taken over by a terrorist and its really easy to make a dirty bomb out of that dirty water. That heavy water. Its really not too complicated. An average eight grader knows how to design ... a nuclear weapon. Yeah ... I mean ... you know ... if its close enough to the ocean, or an earthquake, or you know ... its just ... its ... they have made it relatively safe ... But if there is a chance ... even if its one in a billion chance ... that it can over load and it can ... make a whole lotta people sick and generations sick ... I am sorry ... I don't care how inexpensive it is and how great it is ... a great idea is a great idea when it doesn't take life." (Participant Citation)

Surrounding this quote there is no understanding of what nuclear power is, and how it is produced or even for what percent of the participant's own energy usage it accounts for. The quote reads like a series of newspaper headlines. This headline mentality could often be registers with multiple of the interviewees. This meant that nuclear energy was seen in the sensational light through the topics of terrorism threat, dirty bombs, lack of safety and security, possibility of illness that persists over generations and general risk associated. Thus, many of the conversations ended with a direct cliché such as the one above '[...] a great idea is a great idea when it doesn't take life.' (Participant Citation). Therefore, due to the lack of understanding and simply headline repetition, many of the participants did not have an engrained value system associated with nuclear energy that would allow them to make a firm choice of their perceptions of nuclear. In other words, the individual perceptions of nuclear power seemed to change as the headlines in the news do – quick and with violent pendulum swings where nothing sticks to either side.

'Man Make Disasters'

However, there was one topic that permeated the sensationalist perspective – the notion that humans are fallible. For example, even if a nuclear power plant is deemed secure, there is still the possibility that something could go wrong because since humans are fallible so are the machines and technology they built.

'Climate Change and Human Fallibility'

The topic of human fallibility was also evident in some of the conversations about climate change. Some of the participants were climate change skeptics and argued that "I don't think so ... that's mother nature I'm sorry but... No... There's no way. How can we change the weather pattern, if a storm is going to come is going to come." (Participant Citation). For these participants people were not responsible for the climate

and climate change did not exist as a phenomenon. On the other hand, many of the participants believed that the weather could have been influenced by what humans have done to the environment.

“I believe that ... um ... being a student of history ... that weather climates do change ... however, that we are responsible for the damage to the ozone. I believe that they should stop just slaughtering the forest the rain forest down and I think there is plenty of cures for plenty of diseases in there that we don't even know about ... and we are just eating that up.” (Participant Citation)

It is important to note that all thoughts on climate change were considered prior acquired knowledge unconnected to Hurricane Sandy. The hurricane sparked no discussions of climate change or global warning, just an imminent disaster.

‘Energy Consumption – Comfort, Security vs Commodity, the Self’

Energy and electricity, however, were at the center of discussed themes after the Sandy. Faced with loss of energy, many people re evaluated their perceptions and needs related to energy consumption. So when the participants were asked that energy devices they would give up, many replied with readily available answers, which according to them they did not realize they could ‘live without’ prior to Hurricane Sandy. Examples of electronic devices people listed being able to give up were electric leaf blower, electric mowing, hair curlers, nail driers etc. That being said, one of the participants stated that they would readily give up the electric mower, but would then “have to go to gas and that would be pollution” (Participant Citation). This showed that even if that person stated how readily they could give up certain technologies, they were so dependent on them that they had already figured out an alternative way of having that technology back or, in this case, use the alternative as a justification as to why they keep carrying on with their already existing practices.

‘Self Choices’

This inability to change seems to be at an individual level though, as there didn't seem to be a perceived possible social sanction for changing one's energy consumption. All participants stated that family members didn't discuss energy consumption and as such if one was to lower his or hers, that would make no difference in the family or social dynamic in any evident way.

‘Case Narrative: Life without Electricity for 3 Years’

To conclude this section, there was one participant that stood out for actually knowing what it means to live without electricity for years at a time. Their story is a compelling one and provided much food for thought, which would be analyzed further in the later chapters.

“I lived without electricity for three years [...] Yeah ... we couldn't afford it ... we couldn't afford it ... my father was a drunk and said we couldn't afford it. He was so busy drinking, we couldn't afford it. Eat the winter. [...] We just ... bundled up. In those days it was just like normal, it felt normal. [...] Computers wouldn't have even been ... They weren't around [...] When I was young, a calculator was unheard of ... I mean ... I think the UNIVAC had come out ... that would have been enough to take up this whole block. [we lived without a fridge or a TV] We would tell stories, made up stories ... put on shows ... by candle light. You know when you have to you can learn how to entertain yourself. [The happier times were] actually, the times without electricity. The times when I was the poorest, were the best times. [...] It seemed that like we were more closer as a family. As like you know ... I see the TV and the computer ... and kids getting on the computer and the laptop and this and that ... now you can do all kinds of stuff with just an Xbox ... that there is no need for human contact anymore. Dating sites and sex talk

sites and this site and that site and ... whatever site ... think, I think we are losing human contact. I think we have gotten afraid of touching each other ... Oh My God!"
(Participant Citation)

Interpretation of Electricity as a Reaction to Photo Prompts

The next section of the interviews consisted of the photo prompts. The photos were pre selected to include various images of electricity with the exception of the first one, which is a satellite photo of the hurricane. The photographs were divided into two main categories, namely Sandy induced images of electricity and general images of electricity. The first category was shown to include pre, during and post hurricane photos, while the latter category included images of the different types of energy such as hydro, solar, wind, nuclear and coal as well as one artistic rendition of electricity.

Hurricane Sandy Induced Images of Electricity

For many of the photographs the responses were about awe or self recognition in the images. Some of the images sparked more specific thoughts, and many of those were not related to energy or the disaster, but to other more abstract topics such as what a home is or a modern day lighted up street.

Pre-Hurricane Sandy: 'Dependence and Reliability on Energy'

The first two photos were from prior the Hurricane making landfall. The first photo is a capture of a satellite image of Hurricane Sandy as it is approaching.



Satellite Image of Hurricane Sandy Approaching the US East Coast

Some were fascinated or scared when they saw how massive the storm was, how big so as a participant stated “yeah ... obviously you know you are kind of glued to the weather channel when you see, when at that point in the game”. (Participant Citation)
One of the participants who is also a poet called the image ‘Gathering Storm’. However, others took the more practical approach and saw the satellite images as purely an information sources. For them, the focus was on getting ready for the storm’s approach.

“Yeah ... we just kind of sat there and watched it obviously we didn’t have ... it was only in our free time that we were able to watch it you know most of the time we were like well lets get our food, get our ... get prepared ... especially cause we have businesses on the island so ... we were basically forwarding up everything and moving stuff around so ... um ... this is ... at this point in time we were probably doing a lot of that stuff you know ... getting prepared. (Participant Citation)

Interestingly, even the descriptions about this photo show people’s reliance on energy and electricity because without it they would not be able to view or ‘watch’ the hurricane’s approach. Further without it, there would be no prior communication about the intensity of the storm that would allow people to prepare.

Pre-Hurricane Sandy: 'Energy Blind spot'

The next photo in the series was of the Light House in Cape May, where the waves are beginning to get violent ahead of the storm, or as the poet-participant re-named it 'Dangerous Waves'.



The Light House at Cape May, Photographed as Sandy Approaches

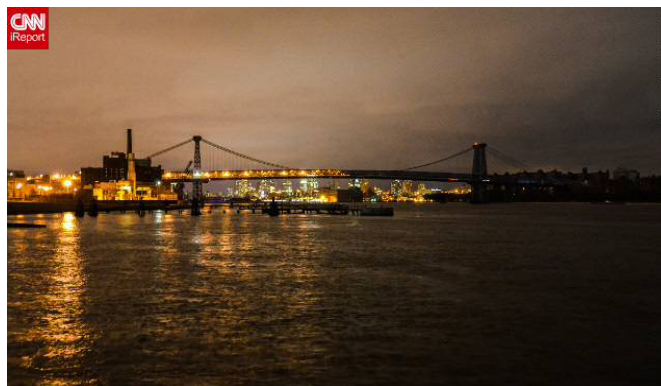
Many of the participants who reacted to this image were people who lived on the shore so they could tell truly how different the ocean looked from how it does usually. Some even recalled seeing the ocean like that right before they were evacuated.

“Well that's... That's what I saw... Yeah I knew it was that... I knew on Sunday when I saw that at three thirty up at the ocean [...]I knew it was going to be bad... it was going to be bad... I could just tell by the waves already... They were angry they were very angry waves” (Participant Citation)

For many that live on the ocean coast, the waves were the first warning of the impending disaster. Additionally, people who did not live on the shore also reacted with fear at the rage of the ocean, or as one inland participant stated “Oh if I saw that coming towards me, I wouldn't ... I'd be running!” (Participant Citation) What these responses all illustrate is what they are all not seeing. All participants seem completely oblivious to the lighthouse that is at the focal point of the image. It was as though they could see everything around it, but not registering that there was an energy source there.

During Hurricane Sandy: 'Light is Security, Lack thereof is Obscurity'

The next photograph is from during the storm when the power went out over the Brooklyn Bridge that connects the Manhattan burrow to the Brooklyn one.



Brooklyn Bridge as the Lights go Out due to Sandy

For most participants it was a very artistic, 'beautiful', calm picture. "It seems like a very peaceful picture to me [...] It just seems so peaceful. Like the calm before the storm. Auuu turning dark before everything hits." (Participant Citation) The loss of power was seen as the beginning of the terrible event. Many of the participants spoke of how electricity and light in particular, made them feel secure and the lack there of, made them feel out of place. An example of the latter was provided when a participant recounted their memories of Manhattan in the dark and how people walking on the street were like "shadows that made you feel as though you were in a ghost city, [...] something un human."(Participant Citation)

Post Hurricane Sandy: 'Reparations and Home Spaces'

The following photograph was the first photograph the participants were presented with that showed the aftermath of the storm. The photo includes a building in which one can see the wiring fully exposed.



House in Manhattan post-Sandy

Many were shocked at the exposure, and lack of privacy. Some even commented on the change of how the home space was perceived, and yet, there were many others who focused on the material damage. They focused on the reparations needed or the anger they might have felt if that was their home due to costs involved.

"I ... it's not the fact that there is not a wall there and there is not privacy there, but if you look real closely you can see that the walls are torn down [...] The ceiling is torn down ... all that has to be taken down [...] So ... the furniture has to be moved out if any of it is even salvageable ... just cause its there, it doesn't mean its okay to sit on." (Participant Citation)

The focus of the participants was on the home as a private zone, or the damage that needs to be repaired in order to make it a home again, once again developing a blind spot that electricity is wired throughout that home space; yet when raised, people immediately defined the home space as one that is based around energy consumption for comforts, safety and security.

Post Hurricane Sandy: 'Dangerous', 'Hidden', 'Irreplaceable'

The following three photos all focus on fallen objects – fallen energy pole, fallen electricity cables and a fallen tree in contrast to a lit up street. The first of these photos shows the loss of electricity following the falling of an electricity pole.



Fallen Energy Pole post-Sandy

This was an image many of the participants could recollect seeing in their towns. Some even recalled seeing or hearing power transformers ‘just burst up and explode.’ They all acknowledged the danger from the explosions and the risk the fallen power lines posed for passerby people. For instance, one of the participants recalls their emotions regarding seeing one of the transformers exploding:

“Oh that was probably the scariest part of the whole thing cause we were like just alright ... cause we were about to walk back through the water and then we were, we saw that happen and we were like lets go to the next street and then try ... and at that point we were like lets not go in the water, we tried walking on, ... we walked through like people’s houses.... Not houses but like porches and you know lawns and trying to stay out of the water ... but we were all in wet suits which are like partially rubber”
(Participant Citation)

The fear caused by the fallen power lines or explosions was strong enough for people living in the areas to attempt to avoid them, and those who were evacuated to listen and obey the evacuation orders and not return until told to do so three weeks later. This was a theme discussed earlier in the interview about the safety of live wiring, which was reiterated by many of the participants after looking at the photo. It was almost as though the photo served as some sort of a confirmation to their prior stories.

The next photograph illustrated a makeshift reparation by making a pole to hold up the cables thus allowing the energy supply to flow and/or remove live wires from the ground.



Do-It-Your-Self Energy Pole for Fallen Wires post-Sandy

Most participants, however, would focus on the debris behind the photo and completely ignore the foreground. Even when it was pointed out what else is in the photo, it was as though the participants didn’t or couldn’t see it, so once again a blind spot when

confronted with electricity in the foreground. This photo then helped show how for most participants electricity is invisible, blending like a background noise to other topics, even if in reality it is at the foreground both figuratively and literally meaning.

The next photograph attracted most participants to comment on either the flooding as the water is quite visible on the road or the up rooted trees that were quite common after the hurricane.



Uprooted Tree post-Sandy

Yet, despite the focus being the uprooted trees and the flooding, many of the participants still had some understanding of the role of electricity. “Uprooted tree. That’s all I can get out of that. Uprooted tree. Wow, that’s that’s awesome what nature can do. . . . tough time for electricity.” (Participant Citation). For many participants there was a direct link between natural disasters and loss of energy and electricity. The uprooted trees were linked to fallen power cables in the context of the American over ground run electricity cables. The notion that natural disasters challenge the preexisting everyday norms, which for most of the participants include many electrical appliances as well as the topics of safety, security, comfort and communication all of which also depend on energy use, was very dominant. This pointed to a dichotomy of nature on the one hand versus electricity on the other. This could perhaps help explain why some of the participants had difficulty connecting electricity to nature and its raw forms that provide the building blocks for their energy supply, but rather connected their understanding of energy to energy use, to consumption, to socially construed values and ideas.

Post Hurricane Sandy: ‘A Community Reconnected’

The next photo shows the community spirit that existed after the hurricane when people who might not have known each other prior, gather around an electrical socket to charge their phones. This photo was selected in the hope of sparking discussions about what impact the hurricane had on community spirit and/or how new dialogues were opened or communications about electricity occurred as the direct result of the energy loss.



Community Get Together around Energy Plug post-Sandy

The poet-participant referred to this photo as ‘Weathering the Storm’. There was a perceived strength in unity, so many recall a closer bond with their community right after the Hurricane, but most of them stated that these community bonds have all but dissipated eight months after the storm. Very few narratives of continued communal support existed and one of those was about organized relief such as the Blankets for Brigantine that depended on community volunteers.

Post Hurricane Sandy: ‘A Community Enlightened (About Solar)’

The following photograph shows a teacher who was teaching her students how to make solar panels in the aftermath of the hurricane. This was the only photograph of anyone picking up renewable technology after the hurricane that I could find and there was no further development that I am aware of.



Learning About Solar Panels post-Sandy

When faced with the photograph, some of the participants expressed a wish that they would like to learn how to make solar panels as well. “Interesting. I wish that had happened here. Like I would like to know how to make a solar panel. [...] I could put that on my house.” (Participant Citation) They were seen as a useful way to reduce energy costs, but not consumption, if anything, solar panels provided a guilt-free freedom to expand energy consumption. The poet-participant described the photograph as ‘Giant Black Slots, Glistening.’

Post Hurricane Sandy: ‘A Symbol of Hope’

The final photo was from the wreckage in Queens, one of the New York City burrows, where an electrical fire resulting from the hurricane, burned down over 200 homes to the ground. The statue must have been inside someone’s home and is one of the few things left standing after the fire.



A Statue of Mary Left Standing post-Sandy

The image evoked the most powerful emotions from the participants out of all the photographs. “Yeah, its standing! I don’t know who is getting it but its standing! Wow!” (Participant Citation) They would comment with awe and a sense of reverence. Further, most participants, regardless of religious affiliation perceived the photo as a symbol of hope. “It looks like something from world war II. Total devastation ... its what I get from that... but there is hope in the picture.”(Participant Citation) No one commented on the electrical fire aspect of the photo, but rather as evident in the quote, the focus was on the theme of hope. The hope that participants had was related to that something may be left standing amidst all the wreckage, but also because if the hurricane left an area this bad and they have managed to rebuild, then there is hope for all to do so as well.

Interpretation of Electricity as a Reaction to a Word Game

The last part of the interviews, which served to both wind them down, but also to reiterate some of the participant’s understandings about how some of the topics raised relate, consisted of a word association game. The game included about 25 words, all of which were raised as part of the interviews, for the full list please see the Appendix.

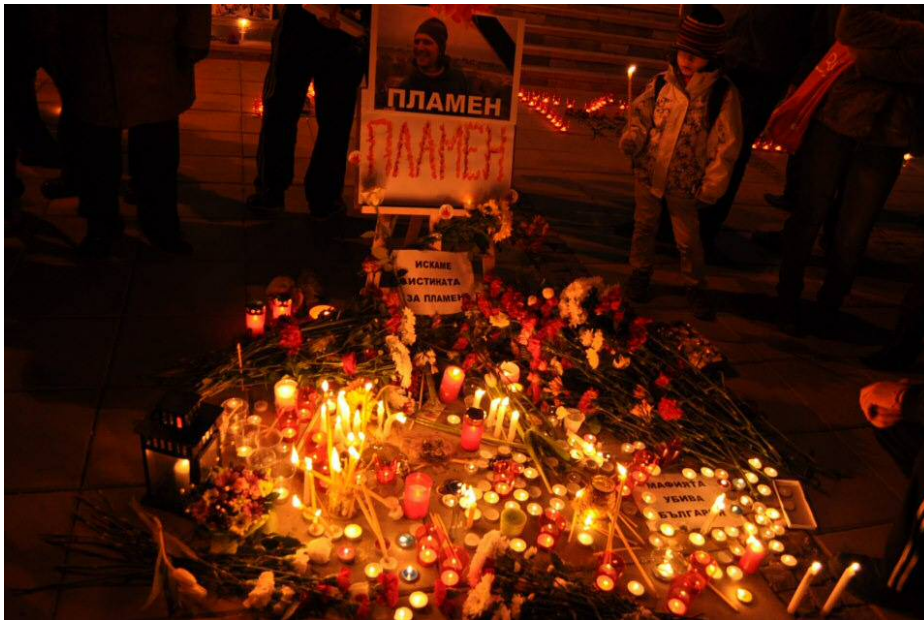
Word Associations: ‘Colors, Emotions, Clichés’

For most of the words, people had specific color association as for example *sky* and *ocean* were blue, and *grass* and *mountain* were green, *coal* was brown etc. From these only the *sun* was described with a characteristic, the most frequent being heat. For others, they had a particular emotion as for instance *nuclear* was seen as radioactive, dangerous. *Growth* was defined by the economy and money making, while *civilization* was equated with progress or technological advancement. For some civilization then was further seen as ‘borderline’ as progress not always good if for the sake of progress. As one of the participants described following, “it is just my personal view ... I have been alive a little bit ... anything that they can make energy out of ... they can make a weapon out of ... and they seem to make a weapon out of it.”(Participant Citation). No one saw progress in terms of saving the plant and the environment and for most climate change was skipped or left blank. As for energy, it was seen as electricity or e equals mc squared, and electricity was described as energy flow current.

Appendix F2:
Case 2 Data Systematization Chapter
Further Example

The protests were marked by several immolations. Immolations are not common in Bulgaria as a form of protest, which explains why there were no further ones in the following political protests after May 2013. In fact that are not seen as something reverent, but rather, as a nuisance or something quite negative that serves to illustrate the desperation in which a person must be in order to go through with it. As one of the organizers commented: “after that uh ... [the bill and effigy burning]...led to other uh...events very unpleasant because many people immolated.” The hesitation in the speech and the general discomfort of the topic were enough to illustrate the negative reaction to the situation in addition to the description of the immolations as a ‘very unpleasant’ event.

The first of the five immolations that took place was the greatest shock to the nation as it was done by Plamen, one of the organizers of the protests in Varna, a city on the coast of Bulgaria. According to Gambetta (2012), due to technological advancements and photography, a single immolation can have a potentially dramatic impact on a huge audience and the Plamen one, most certainly did as it was the most commented case in both social media and as raised by my participants. In order to illustrate, the following photograph has captured the candles that people kept burning for him to commemorate his memory with his name in Bulgarian and his photo in the middle of the image.



Photograph of Vigil for Plamen Goranov in Varna

There are many causes that can lead a person to undertake the act of immolation. All immolations are highly ritualized and are not just a method of death, but also imbued with further symbolism and messages. According to Gambetta there are two generalizations that are made possible in relation to immolation. *First*, “movements or causes that attract self-immolation do not incline towards suicidal terrorism, or indeed any actions intended to kill their opponents.” Immolations are both highly personal, the choice to take one’s own life, but also serve as means of communication or a social act, the message imbedded in the immolation that is meant for someone or a collective. *Second*, immolation occurs when “an individual is ready to die.” Immolation then is seen as a choice of which ‘death’ to take as ‘death’ is perceived as inevitable. The causes for this inevitability can be as in the Bulgarian case, feeling that you have a choice to make as one participant put it, “to starve to death or to freeze to death as you

don't have enough money for both", or it could be the 'death' of a heart as was and is the case with the immolations that take place in India, which require the widow to jump on the burning funeral pyre of her deceased husband. In all cases, immolation is seen as an ultimate message, one that in Bulgaria caused for even more people to join the protest movement, even more fire to be used as part of it and even more burning to take place as judging by comparing before and after Plamen immolated photographs.