





This is to certify that the  
dissertation entitled

THE HIDDEN WOUNDS OF VIEQUES: A POLITICAL  
ECOLOGY OF DISEASE AND COLLECTIVE ACTIONS IN A  
MILITARIZED LANDSCAPE

presented by

VICTOR M. TORRES-VELEZ

has been accepted towards fulfillment  
of the requirements for the

Doctoral degree in Department of Anthropology

Scott Whiteford AR

Major Professor's Signature

5/11/07

Date

**PLACE IN RETURN BOX** to remove this checkout from your record.  
**TO AVOID FINES** return on or before date due.  
**MAY BE RECALLED** with earlier due date if requested.

DATE DUE	DATE DUE	DATE DUE

The Hidden Wounds of Vieques: A Political  
Ecology of Disease and Collective Actions in a  
Militarized Landscape

By

Víctor M. Torres-Vélez

A DISSERTATION

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY

Department of Anthropology

2007



## ABSTRACT

### THE HIDDEN WOUNDS OF VIEQUES: A POLITICAL ECOLOGY OF DISEASE AND COLLECTIVE ACTIONS IN A MILITARIZED LANDSCAPE

By

Víctor M. Torres-Vélez

Infant mortality rates have decreased in all industrialized countries, including Puerto Rico. Yet in Vieques' municipality this rate has increased by 12 percent. This and other dramatic changes in public health have taken place within the last 20 years. Recently, the inhabitants of Vieques have massively organized around issues of health, mobilizing collective actions unheard of in Puerto Rico. This social movement, which has captured international attention, has cut across religious and political lines never before traversed within Puerto Rican history. What are the factors triggering this social movement? How do the people of Vieques experience and make sense of these changes in public health? How have these changes affected people's perceptions of health, illness and self?

I suspect that by exploring the interplay between (1) changing perceptions of health risks and (2) shifting notions of self as (3) experienced by being and dwelling-in-a-world of environment crises, we can get insights into these questions. By situating at the center of the analysis the relationship between illness and identity we can gain insights into the emergence of environmental movements as processes of identity formation. This project explores how shared experience of illness can generate new questions, knowledge and understandings within communities experiencing critical health problems. I sustain that peoples embodied understandings of the relationships between environment and disease trigger— within militarized or industrialized landscapes— powerful cultural critiques that offer insights into both modernity's failures and the emergence of social movements.

# Contents

List of Tables .....	v
List of Figures .....	vi
Introduction .....	1
<b>1 Political Ecology of Disease: A New Approach</b>	<b>8</b>
1.1 Political Ecology: Theoretical Legacies .....	8
1.1.1 Structuralism vs. Materialism .....	9
1.1.2 The Production of Nature .....	11
1.1.3 The Construction of Nature .....	13
1.1.4 Political Economy .....	14
1.1.5 Political Ecology and Environmental Justice .....	16
1.2 Medical Anthropology: Political, Critical and Ecological Approaches ..	19
1.2.1 Political Economy in Medical Anthropology .....	20
1.2.2 Bioculturalism or Ecology and Biomedicine .....	22
1.2.3 Critical Medical Anthropology .....	27
1.2.4 Critical Medical Anthropology: Theoretical Limitations .....	30
1.2.5 Interpretative vs. Critical Medical Anthropology .....	32
1.3 Political Ecology of Disease: A New Synthesis .....	35
<b>2 Where, How and Why?</b>	<b>40</b>
2.0.1 Research Site .....	40
2.0.2 A Genealogy of Collective Actions .....	59
2.0.3 Health: The Missing Link .....	67

2.0.4	Methodology . . . . .	68
2.0.5	Participant Observation, Personal Experience and Activism . .	72
<b>3</b>	<b>The Making of a Militarized Landscape</b>	<b>87</b>
3.1	Spaces of Domination: the “Local” as Produced by the “Global” . .	89
3.1.1	Puerto Rico: The Gibraltar of the Caribbean . . . . .	92
3.2	Geographies of Resistance: the “Local” as Produced by Transnationalism	98
<b>4</b>	<b>Reification, Biomedicine, and Bombs: Women’ s Experiences at the Heart of Vieques’ Social Movement</b>	<b>106</b>
4.1	On Reification and Subjectivity . . . . .	108
4.2	Women’ s Experiences . . . . .	111
4.2.1	Everyday life, Illness and Bombs . . . . .	111
4.2.2	Legitimation Crises . . . . .	116
4.2.3	Illness, Identity and Collective Action . . . . .	119
<b>5</b>	<b>Testing, Health and Epistemological Struggles</b>	<b>126</b>
5.1	Testing and Diagnosis: Tropes of Contestation . . . . .	128
5.2	Contesting Prognostic Determinism: the Case of Chelation . . . . .	133
5.3	Working within the Fences: Occupational Hazards and Testing . . . .	144
5.4	After Testing: Reparation Debate . . . . .	153
	<b>Conclusion</b>	<b>162</b>
5.5	The Aleph as the Body . . . . .	162

# List of Tables

2.1	Employment by Occupation in Vieques . . . . .	45
2.2	Employment by Industry in Vieques . . . . .	45

# List of Figures

2.1	Map of the Caribbean . . . . .	42
2.2	Map of Puerto Rico . . . . .	43
2.3	Map of Vieques and Navy's Military Facilities . . . . .	44
2.4	Campamento Justicia y Paz . . . . .	53
2.5	Camp Garcia's Gates Guarded by the Police . . . . .	53
2.6	Shooting Range: Painting on Military Base's Fence . . . . .	54
2.7	Statue of Liberty: Painting on Military Base's Fence . . . . .	55
2.8	Pitirre: Painting on Military Base's Fence . . . . .	55
2.9	<i>El Referendum Criollo</i> Campaign . . . . .	56
2.10	Campaigning for Option Two: Posting Signs . . . . .	81
2.11	Campaigning for Option Two: Handmade Poster . . . . .	82
2.12	Option Three Poster: Marx the Specter of Communism . . . . .	83
2.13	<i>El Referendum Criollo's</i> : Option Two Victory . . . . .	84
2.14	<i>El Referendum Criollo's</i> : Option Two Victory . . . . .	84
2.15	The Death of Option Three: March . . . . .	85
2.16	The Death of Option Three: Arriving to Camp Garcia . . . . .	85
2.17	The Death of Option Three: Digging Up the Hole . . . . .	86
2.18	The Death of Option Three: Buried in the Grave . . . . .	86

# Introduction

Industrial and military activities have torn apart whole landscapes throughout the world. From Bhopal to Iraq, the scars left on environments and people are unspeakable. Those responsible for these scars benefit greatly not only from their infliction, but also from keeping them hidden. Making these scars visible is at the center of my dissertation. This is the story of how an island was used for military exercises and shaped by powerful economic interests. It is also a story of how the wounds of a landscape are the wounds of its people. Finally, it is the story of a group of people who awakened to cast away the invisibility of their unspeakable suffering.

The island is Vieques, Puerto Rico, and the military exercises were carried out by the U.S. Navy for more than 60 years. The negative environmental consequences have been extensively documented, as have the resulting sharp increases in chronic diseases such as cancer. What has not been documented, however, is how the people of Vieques made sense of these changes and how people came to terms with disease, suffering and death. What has not yet been analyzed is the conspiracy of invisibilities<sup>1</sup> that created and maintained the conditions under which military and economic interests superseded human life.

The military presence in Vieques has a long history, and while resistance to their activities has always been present it was not until as recently as 1998 that a social movement with popular support emerged. How can we explain this overdue popular support to the movement, despite the obvious negative environmental and health

---

<sup>1</sup>Through this concept, I want to call attention to discourses that, even when generated by different institutions (the state, capital, biomedicine) have the same effect: obscure the origins of oppressive circumstances. This structural articulation of multiple discourses, that reinforce one another in their mystifying effect, is what I call conspiracy.

effects of the military? How can we explain the initial silence, despite the visible environmental and health destruction left by the military? What factors sparked the emergence of the powerful movement and its support throughout the island? These questions led me to the examination of how important institutions, particularly the biomedical establishment, participated in the “conspiracy of invisibilities.” That is, through their everyday encounters with people these institutions obscure the causal connections between environmental degradation, people’s health problems and the political economic system that depend on military presence. Could it be that, the unspeakable suffering of sick and diseased bodies was silenced, not because of an impossibility of assigning meaning to this experience, but because of this conspiracy of invisibilities?

Another part of the answer lay in the manner in which social institutions, such as the health department, also function as bastions of public trust. As such, they have the power of shaping not only people’s basic ontological assumptions — or what is the nature of reality — but also a person’s place within the social order. This institutional ability, however, is weakened when key institutions are unable to explain emerging environmental and health crises. The emergence of multiple contradictions environmental, health, institutional, and existential — offers a moment in which the conspiracy of invisibilities becomes visible. This dissertation is about this precise juncture where people become aware of and confront the forces affecting them. In this sense, it is about different perceptions of reality: on the one hand, the reality fostered by economic theory and biomedicine, and on the other, the reality of people experiencing the negative consequences of global accumulation.

This dissertation, thus, explores two facets of the same process. It explains the process by which Vieques’ landscape became militarized and how this militarization is an integral part of a global regime of capital accumulation. It explores the role biomedicine plays as a system of political legitimation for this regime. Biomedicine, however, is not going to be studied from within; on the contrary, it is going to be studied from people’s experiences confronting it. As such this dissertation is a cultural critique that stems from people’s own criticisms of biomedical and other institutions.

## Research Problem

Infant mortality rates have decreased in all industrialized countries, including Puerto Rico. Yet in the municipality of Vieques in Puerto Rico the infant mortality rate has increased by 12 percent. Vieques also experienced a 40% increase in overall mortality rate, a 34% increase in cancer mortality rates and a 253% increase in liver disease mortality. These dramatic changes in public health have taken place within the last 20 years (Nazario, 2001). Over that time, the inhabitants of Vieques have massively organized around issues of health, mobilizing collective actions unheard of in Puerto Rico. This social movement, which has captured international attention, cuts across Puerto Rican religious and political lines never previously transcended. What are the factors triggering this social movement? How have people's experiences of ongoing increases in health risks been integrated in this social movement? How do the people of Vieques experience and make sense of these changes in public health? How have these changes affected people's perceptions of health, illness and self?

I will compare how lay people, scientists and government officials articulate competing discourses on disease etiology, as these feed into new identity formations leading to collective action. I aim to develop an analytical framework for understanding how drastic environmental changes affect people's perceptions of health and self within their everyday lives.

At the individual level, the experience of illness more often than not disempowers (Taussig, 1980). However, sometimes a collective and shared experience of illness can be empowering (Good, 1994a). The literature on critical medical anthropology, political ecology and social movements seldom examines this issue of socio-cultural empowerment connected with disease. This dissertation explores how shared experience of illness generated new questions, forms of knowledge, shared understandings and innovative identities within communities experiencing critical health problems, questions, knowledges, understandings and identities which culminated in collective action. I argue that people's explanatory models of disease, introduced explanatory models that include social health and environmental factors and departed from and



challenged biomedical interpretations in a manner that enabled emergent collectives to challenge the scientific and socially atomizing medical status quo. I will argue that these challenges are rooted in the facts that, under the above-described conditions: health risks became more obvious, biomedical explanatory models failed to address people's concerns and experiences and new transnational discourses (e.g., risk, rights and globalization) aided the reframing of individual and social health issues.

My dissertation seeks to understand the interplay among changing perceptions of health risks and notions of self as experienced by being and dwelling-in-a-world of environment crises (Doyle, 2001; Lefebvre, 1974).

I will explore relations between changing environmental and health conditions and their role in new forms of identity and collective action. I will develop an analysis that understands how the drastic environmental and health changes on Vieques have affected the perceptions of health, disease and self within the everyday lives of the people on the island.

I will explore the effectiveness of these arguments as they relate to the social and environmental health crisis that has developed over the past twenty years on Vieques but that until recently did not provoke a strong social movement.

The analysis of this case study will contribute to anthropological theory with a framework to understand other cases similar to Vieques (Maxwell, 1998). My research contribution, therefore, will demonstrate how Vieques particular case clearly reveals environmental and health contradictions typical of "our modern" condition. By studying these contradictions my research will contribute also to the understanding of processes that could lead to social movements. Because of the increasing omnipresence of these environmental and health contradictions, Vieques can reveal general lessons applicable to many places: hence, Vieques relevance to understanding a wide spread yet narrowly recognized problem.

In Chapter 1, I explore the historical development, strengths and weaknesses of the two main theoretical traditions that inform my theoretical framework. These two

are critical medical anthropology and political ecology. I not only criticize the shortcomings of dominant approaches to environmental and health problems but I offer an alternative that I call the political ecology of disease. What makes my approach different is that I look at links between capital accumulation, environment and health through the analytical lens of an anthropology of disease.

The methodology of my dissertation is explained in Chapter 2. In this chapter I explore how the fit between my “data” gathering methods and the purpose of my dissertation. That is, if the dissertation is trying to demonstrate –among other things– the ontological validity of embodied experiences in Vieques, my “data” gathering methods also follow this epistemology. In other words, I explain the ways in which my research design is consciously rooted in my subjective experiences as a Puerto Rican doing research in a highly political colonial context. I explore the implications for my research of my own experience of becoming politically active in Vieques’ social movement. Moreover I reflect on the implications of my personal experience with disease and death, which guide me in understanding people’s narratives of suffering.

In Chapter 3, I explain the process by which Vieques’ landscape was made in the image of capital. Here, the militarization of this landscape is connected to development economics. I argue that the expropriation of two-thirds of the island speaks of the necessity to secure capital investments, access to markets and access to raw materials in Latin America and capital accumulation by military business (selling weapons and renting the lands to other nation-states).

The aim of this chapter is to illustrate how the underlying assumptions of economic laws, create a fictitious separation between productive activities, and the places and the bodies upon which they depend (Polanyi, 1957). This fictitious separation allows industries to conceptualize industrial waste products as externalities, thus making people and the environment responsible for the high public health costs.

Chapter 4 will address women’s everyday life experience of being sick and the social implications of dealing with disease. I will explore oral histories that exemplify what it is like to confront chronic diseases such as cancer in a militarized landscape. I will look

at the ways in which people struggle to make sense out of their painful experiences. Moreover, I will explore the creative ways – such as alternative medicines – developed to cope with sickness.

The aim of the chapter is to show the connection between disease and identity. I argue that the experience of disease can, instead of victimizing, be empowering for it forces the subject into a re-evaluation of his/her place in the social scheme that in most cases is political. This re-evaluation of the self is possible, at least in part, because the disciplinary power of governmental institutions has faded away in the face of health crises and people are able to re-articulate their subject positions in empowering ways. These re-articulations find the status quo no longer acceptable and generate active where there used to be passive subjects. This new subject position is what explains the emergence of the social movement on Vieques – a movement that finally proved capable of forcing the Navy off the island. Hence, the connection between disease, identity and social movements becomes clear.

In Chapters 5, I argue that health and environmental crises reveal the contradictions of current systems of political legitimation. However, a crisis of governability does not come solely from the negative impact of externalities, but is intimately connected to the political system's ontological stance. That is, a political system that, because it is based on modernist ideals (of rationality and science), eclipses participation and democracy thus undermining its own legitimacy. I will show that in the case of Vieques not only economic but biomedical rationality obscures unequal relationships. In this sense, and in the context of Vieques' public health crises, biomedicine obscures more than it reveals.

In specific terms, I will be looking at the epistemological struggles between two different explanatory models of disease (embodied perception vs. disembodied science). Wherever expert knowledge (be it governmental or biomedical) produces and relies on the exclusionary and undemocratic discourse of science, science itself may become a terrain of struggle. In the process, the biomedical institutions of the state was thrown into legitimation crisis and scientific discourses were bent and reshaped by activists

in ways that demanded public participation.

If scientific discourse is the ultimate source of validation and legitimation for the state, then any questioning of such a system is a questioning of the state itself. I argue that these crises — of the environment, the body and of legitimation (biomedicine and the state) — foster social movements such as those in Vieques, social movements that try to resolve their problems through unconventional ways (conventional meaning through the traditional governmental channels). In this sense these crises are also a crisis of the self — in which the worldview of those affected by disease is fundamentally altered.

# Chapter 1

## Political Ecology of Disease: A New Approach

The present chapter will explore the historical development, strengths and weaknesses of the two main traditions that inform my theoretical framework. These two are critical medical anthropology and political ecology. In the end of this chapter I provide a new theoretical synthesis that attempts to overcome their main limitations. This new synthesis I call political ecology of disease.

### 1.1 Political Ecology: Theoretical Legacies

Intellectual genealogies of political ecology (Peet and Watts, 1996; Paulson, 2003) locate anthropology's theoretical contribution somewhere between cultural ecology and political economy. For example, Paulson et al. noted that,

During the past two decades, a basic notion of political ecology as the coming together of political economy and cultural ecology has been applied and developed through research, analysis, and practice across disciplines (Paulson, 2003, 3).

What is common to these two approaches is a materialist conception of reality. For political economy the most effective way of explaining reality is through the study of

market relations. Within this approach culture and ecology are not taken into consideration. Cultural ecology, on the other hand, do not take into account larger political forces at work in the transformation of environments. Thus, political ecology's development has to be understood as an attempt of overcoming these limitations. I will explain the development of political ecology through a discussion of structuralist and materialist theories as they play an important role in both political economy and cultural ecology.

### **1.1.1 Structuralism vs. Materialism**

Structuralism was, as Ortner (1994) asserts: "the more-or-less single-handed invention of Claude Lévi-Strauss, [and] the only genuinely new paradigm to be developed in the sixties" (379). This paradigm centers its analysis on the linguistic phenomena and establishes that the structure of the mind/brain reflects, through language, the structure of society. The target of study then was the concepts and ideas that people articulate to explain their world. For this paradigm, speech was a compound of surface-structures and deep-structures. Surface-structures represent the conscious speech, whereas deep-structures the unconscious, the internal grammar that makes possible any meaningful communication. These internal structures are not concrete manifestations of reality, but cognitive models of reality. It is clear that Lévi-Strauss' analysis borrowed from linguistics the distinction between language and speech. This approach does not take terms, concepts or symbols as independent entities; it rather analyzes the relationships between them. In this way no symbol has meaning by itself but only in relation to others; therefore the notion of a conceptual system is introduced. Through this particular analytical methodology the aim was to discover general laws of human cognition: the unconscious regularities of human thought. The principle argument was that all humans share something in common: to distinguish binary oppositions. Within this framework another important dichotomy is presented and is that of culture/nature. Basically this conceptualization expresses that human beings not only take control, through culture (reason), over nature, but over their own animal instincts they therefore transform themselves into cultural (rational) beings

as well as transforming the “natural” world into their habitat.

Cultural ecology emerges as a materialist response to both American Symbolic anthropology and French Structural anthropology: both of which share the same theoretical assumptions. Structural anthropology centers its analysis on the linguistic phenomena and establishes that the structure of the mind/brain reflects, through language, the structure of society. For cultural ecologists to access the “structure of the mind” was a futile enterprise, hence they proposed to understand social organization through the observable relationship between human and their environments. Therefore, environmental conditions could be treated as fixed, measurable and objective.

Because of its association with evolutionary theory, cultural ecology developed a teleological notion of cultural development based on a hierarchy of stages of social complexity and advancement. Within this framework industrialized countries represent the latest stage of development whereas non-industrial societies represent the earliest ones (Ortner, 1974, 377). This logic is best observed in developmental agendas that since the fifties have justified interventions (biomedical, developmental or otherwise) in “Third World” countries. Other proponents within cultural ecology argued that instead of having a grand homogenous evolution, different cultures adapted to their specific environment in particular ways. Thus, similarities in adaptation respond to similarities in environmental conditions.

Ecological anthropology is another strand sharing most of cultural ecologists’ assumptions. The difference is that its proponents argue to make ecosystems the center of the analysis, as opposed to culture. Human populations, thus, are treated as one more element within a biophysical system. The classic example of this approach is Rappaport’s ethnography on Papua New Guinea. The pig killing rituals serve to control pig overpopulation in order to protect the balance of their tropical ecology. The thermostatic character of culture in this approach is salient (Paulson, 2003, 3). Despite these differences, both ecological anthropologists and cultural ecologists conceptualize culture pragmatically as either the cause or the effect of adaptation to the environment.

This trend within cultural ecology could be characterized as the homeostatic model in which, instead of looking at how the environment stimulates the development of culture, culture was posed as the regulator of the environment. In other words, culture functions as a mechanism to maintain an existing relationship with the environment (Ortner, 1994, 378).

### 1.1.2 The Production of Nature

Structuralist approaches are predicated upon a dualist epistemology— at the core of Modernity itself— that views nature as a discrete ontological entity outside of society. Ecological Marxists understand (Harvey, 1996; O'Connor, 1998; Smith, 1984b), on the other hand, that “nature” is the outcome of social processes.

nature separate from society has no meaning . . . The relation with nature is an historical product, and even to posit nature as external . . . is absurd since the very act of positing nature requires entering a certain relation with nature (Castree and Braun, 1998, 7).

In his seminal book, *Uneven Development* (Smith, 1984a), Neil Smith demonstrates the ways in which capitalist processes produce and reproduce whole landscapes in the image of exchange-value. The production of landscapes as exchange-value is the result of the object/subject distinction that made everything that is “external” the object of profit. Smith argues that although society/nature relationships are utilitarian by default— since human beings have to satisfy material/semiotic necessities— the transformation from use-value nature relations (non-capitalist) to exchange value nature relations (capitalist) have created unforeseen social and environmental contradictions.

James O'Connor is, among others who build upon Smith insights, an important exponent of ecological Marxism. In his work, O'Connor theoretically links current environmental crises with capitalist production. Capitalism, as O'Connor argues, is a crisis-ridden and a crisis-dependent system. It is a crisis-ridden system because



overproduction creates a fall in the prices, which leads to economic crises. It is a crisis-dependent system because it necessitates from this crisis to expand its productive activities. In its attempt to resolve this crisis of accumulation, capital restructures its productive forces and its productive relations. Cost-cutting in the production process— or in variable capital: reduction in wages, seizing workers, etc.— is one of the two alternatives to deal with its internal contradiction. The other one is through geographical expansion— through the invasion of new domains for commodity production. Actually the geographical expansion is a consequence of this cost-cutting strategy. Because of this, capital is always seeking places in which the preconditions of production are the most favorable for its cost-cutting strategies. The “Second Contradiction of Capital” arises when production conditions <sup>1</sup>are put into risk by this process of cost-cutting or transference of costs to the “external” world of production. In other words,

Increasingly generalized, the externalization of costs by capital is increasingly degrading the “external” conditions necessary for the production and reproduction of labor and nature, and therefore degrading the conditions necessary for the production and accumulation of capital (Rudy, 1994, 98).

A shortcoming of this model is that—and similar to structuralism— subjects are conceptualized as passive and structural changes can only emerged from within the system itself, in this case through environmental crises. Also, capitalism is depicted as homogenous, unchanging and teleological.

---

<sup>1</sup>Within this Neo-Marxist framework, O’Connors is trying to illustrate that the production conditions are not only situated in labour power (as traditional Marxism sustained) but also in the production relations (type of mediations with the natural and the social realm and its consequences). In other words, the production conditions imply more than the reproduction of labour power, because it also implies the reproduction of the conditions (environment, social relations, etc.) that enable labour power to exist. This not only includes the technical and social preconditions but also the “external nature” as well. Any impairment in the reproduction conditions, might lead capital to crises defined by barriers to production.

### 1.1.3 The Construction of Nature

Poststructuralist understandings of nature within political ecology, point out that that which materialists recognize as the bedrock of reality, namely nature, is in fact the product of social constructions. The emergence of the discourse on nature, as an independent entity is indeed historically and culturally specific. Authors such as Soper (1996) argue that the record of the practices that went into producing nature have been erase. In Haraway's words nature "cannot pre-exists its construction" (1992, 296). This is, because nature apart from the human activities that produce it cannot exist ontologically. This separation of nature from society, however, serves the purpose of privileging certain practices of knowledge production over others.

Science is that privileged site of knowledge production because it is based upon the assumption that unmediated transcendental truths can only be attain through the objective and unbiased ways of scientific practices. This epistemology discredits other ways of knowing categorizing them as "traditional," "irrational," "rural/pastoral" or simple beliefs. Nonetheless, as feminists have point out, "Every aspect of scientific theory and practice expresses socio-political interest, cultural themes and metaphors, and professional negotiations for the power to name the world" (Bird, 1987). These powers to name the world inherently obscure or perhaps disappear - as a magician's trick - the socio-political causes of environmental problems. For instance, Taylor (1997), in his discussion of the social construction of "global environmental problems," explains that,

researchers know that climate change is a social problem since it is through industrial production ...that generate greenhouse gases. Nonetheless, it is physical change ...that is invoked to promoted policy responses and social change, not the political and economic injustices of the present system (Taylor, 1997, 157).

As Harding (1991) explains, how do "we" know what "we" know, and how what "we" know is not only highly situated and partial but it is also systematically crosscut

by power differentials along class, ethnicity and gender. In other words, there is a need for qualifying who personifies the “we” producing knowledge and what are the implications of such knowledge for those left out of its production. The point of these criticisms is to make visible that “power relations become naturalized in our representations of nature” (Castree and Braun, 1998, 19). However as Castree explains, quoting Haraway, that,

stressing the contingency of what counts as “reality” is not a denial of nature’s materiality, but rather, a recognition that nature “is collectively, materially, and semiotically constructed— that is, put together, made to cohere, worked up for and by us in some ways and not others” (Castree and Braun, 1998, 25).

#### **1.1.4 Political Economy**

Political economy emerges questioning the classical economist’s assumption that the international system was based on symmetrical economic relationships between equally standing nation-states. As Rist (1997) reminds us, the “idea of a “nation” current in economic theory — that is, of a tightly knit unit within an international system, each of whose parts is at once autonomous and equal to all the others” is more than problematical because it does not correspond with the reality of world-markets (Rist, 1997, 106).

Political economy, based on Wallerstein’s world-system and the dependency school’s core/periphery theory, was particularly critical of economic relationships between “industrialized” and “developing” countries. “[The] international system, far from guaranteeing the South’s prosperity, brought domination effects to bear upon it and locked it in dependence” (Rist, 1997, 109). The critique was against the transnational companies and US interventions in foreign countries throughout the sixties and seventies.

The prevailing doctrine at the time (which has hardly changed since)

based the development' of the non-industrial countries upon three pillars: massive transfers of (mainly private) capital, exports of raw materials, and the comparative advantage supposed to benefit all market traders (Rist, 1997, 113).

The unequal character of these economic relations overwhelmingly benefited “industrialized” countries over “developing” ones. But this paradigm was not limited to exploring situations of unequal exchange but also of understanding,

the relationship between external and internal forces as forming a complex whole whose structural links are not based on mere external forms of exploitation and coercion, but are rooted in coincidences of interest between local dominant classes and international ones, and, on the other side, are challenged by local dominated groups and classes (Rist, 1997, 116).

The Dependista School posed a radical challenge to the dominant paradigm of modernization.

By arguing in terms of international structure . . . the dependistas brought to light the national and international mechanisms for the appropriation of surplus by the central economies, and demonstrated that the accumulation regime in the old industrial countries could not be reproduced in the periphery (Rist, 1997, 118).

Dependistas, however “did not challenge the basic presuppositions of that system, which come down to the idea that growth is necessary to gain access to the Western mode of consumption” (Rist, 1997, 121). Moreover, dependistas neither consider the cultural aspects of development, nor the possibility of alternative models, nor the ecological consequences of these Western epistemologies outside the realm of economics and politics.

### 1.1.5 Political Ecology and Environmental Justice

Political ecology emerged out of the growing politization of the environment, particularly where changes in land use practices were a result of pressures of the global market economy. Functionalist approaches, based upon systems theories such as cultural ecology and ecological anthropology, became incapable of explaining land degradation under the pressures of the international economy. Ecological anthropologists maintained that the regulation of “culture” would suffice to bring back ecological stability into intensive agricultural practices. Political ecologists, on the other hand, argue that the problem with these functionalist approaches was that they understood, “Culture as a homeostat or regulator with respect [to] environmental stability” without taking into account that societies “were actually part of large, complex political economies” (Peet and Watts, 1996, 5). Land degradation among peasants became the center of this critique because “culture” was not self-regulating the ecological “instabilities” of intensive agricultural practices.

The criticism launched against cultural ecology and ecological anthropology stem from the fact that these two ecological approaches were indeed heavily influenced by evolutionary theory. This is even more so within the quarter of medical anthropology known as biocultural anthropology. We can observe this in the symmetry of their approaches. In the case of cultural ecology and medical anthropology they use as a heuristic device the human/nature/culture triad to understand seemingly “irrational” human/environmental relationships. The heuristic device of bioculturalists, on the other hand, was the host/pathogen/environment triad used to understand adaptation. In both cases, nonetheless, culture is seen homeostatically, as either the cause or the effect of adaptation to the environment.

The emergence of political ecology has been associated with criticisms of ecological anthropology and cultural ecology but not of bioculturalism. Because of this, political ecology has not focused centrally on concerns about disease and health. Moreover, political ecology’s primary concern has been to understand land degradation as a translocal process heavily influenced by global economy, rather than as a close-system

in which “culture” is regulating human/environmental interactions.

Broadly, political ecology explores the relations between human society, (viewed in its bio-cultural-political complexity) and a significantly humanized nature (Greenberg and Park, 1994). In other words, within political ecology, environment and society are conceptualized as dialectically interwoven through processes of “creative destruction” that mutually constitute and reconstitute human/environmental relationships (Baer, 1996; Castree and Braun, 1998). Political ecology approaches human/environmental relationships not as if they were taking place in a spatio/temporal vacuum— as many systems theories imply— but as mutually and unevenly co-evolving through time. The analysis of power relations is key within this scheme because the development of a specific set of human/environmental relationships is not naturally given but is the result of social conflict over resources. Although feminist political ecology has gone beyond asking “who gets what” by raising epistemological, ideological and discursive questions over “who and how” science, local knowledge and the environment gets defined (Ferguson, 1997, 4), this has not happened across the board. We need to remember that “political ecology is an analytical framework use by anthropologists, geographers, political scientists, ecologists and other natural scientists” (Ferguson, 1997, 3).

Recently, political ecology has again become the center of attention within academic discussions, this time in the latest issue of *Human Organization*. The main criticism against political ecology is that it has become too political at the expense of the ecological (Paulson, 2003). Unconvincingly, Vayda and Walters (1999), the main proponents of this criticism— voiced by Paulson et al.— argue that a remedy against this shortcoming is to begin research with ecological events. However, contributors Derman and Ferguson (2003) explain that their,

case study of water reform in Zimbabwe, illustrates a problematic aspect of Vayda and Walters’ (1999) call to identify environmental change as the starting point of analysis. The study calls attention to the importance of a situated, historically aware analysis that considers the political, discursive,

and ecological to be mutually constituted (Ferguson and Derman, 2003, 6).

By looking at the multiple actors' histories, ambiguities, and contestations at work in Zimbabwe's water reform, the authors posed an example in which dominant discourses on development are indeed locally domesticated, hence assuming "varied faces and forms as they are translated from the center outward" (Ferguson and Derman, 2003, 3). The representation of Zimbabwe's water reform, then, do not give analytical primacy to "global forces" – as some political ecologists have been accused of doing – it rather shows how power circulates differentially among multiple scales and actors negotiating their particular positions and interests.

Another important body of literature concerned about ecological problems is the environmental justice literature. This sociological literature has paid great attention to the unequal distribution of toxic wastes and peoples struggle over unhealthy environments. However, it has not paid attention to the impact of such changes on peoples everyday lives and on their equally changing perceptions of self. While the environmental justice literature has explored women's centrality in social movements it has done so in rather a-theoretical terms. In fact, while often acknowledging the negative impact of environmental problems along ethnic and class lines the literature tends to unproblematically represent women as unitary subjects. This overlooks the ways in which women re-situate and negotiate their selves in specific subject positions. Likewise, this inattention to women's identity formation hinders the possibility of understanding the factors triggering a social movement (Di Chiro, 1998; Moore and Head, 1993; Epstein, 1997). Perhaps because it's U.S. focus the environmental justice literature has not paid attention to the translocal transference of the negative consequences of economic processes originating from industrialized countries of the North into the South. Building on the work of feminist anthropologists such as Barbara Rose Johnston (1994: 1997), Bandarage (1997), Rocheleau (1999), Ferguson (1997), whom had paid attention to these issues, I will attempt to address these gaps in the environmental justice literature. As the work of these feminist anthropologist and the environmental literature have pointed out, environmental problems affects

women disproportionately, hence the importance of understanding women's role in these processes.

As we have seen, in its inception political ecology emerged within the dualist paradigm of structuralism. Even when researchers were considering the impact of global forces on land degradation— hence transcending the notion of enclosed systems— their analysis (Watts, 1983; Blaikie and Brookfield, 1987; Blaikie, 1985) was limited to production processes in which male, rural and third world subjects were the center of attention (Paulson, 2003). Hence, the role of women, subsistence agriculture and peasants resistance was overwhelmingly absent (Ferguson, 1997; Rocheleau et al., 1999). Moreover, because of its Marxists materialist's inheritances, the relationship between people and the environment was primarily conceptualized in economic terms— the last determinant argument. The role of people's conceptions and agencies, therefore, was similarly missing.

## **1.2 Medical Anthropology: Political, Critical and Ecological Approaches**

Medical Anthropology is a fairly recent subfield within Anthropology (whether cultural or biocultural); however, it has undergone dramatic theoretical, methodological and practical changes within the last 30 years. For instance, during the sixties applied medical anthropologists were associated with improving interventionist medical agendas within colonies and former colonies. During the seventies, these medical anthropologists' epistemological stance came under fire by a new breed of anthropologists who argue that the former were uncritically invested in the biomedical model of disease, hence disregarding people's understandings. These and other criticisms sparked long-standing debates that generated new theoretical positions within the discipline. Among these theoretical positions we find: biocultural approaches, interpretative approaches, critical medical approaches, ecological approaches and politico-ecological approaches.



### 1.2.1 Political Economy in Medical Anthropology

Political economy within medical anthropology (PEMA), came as a reaction from “Third World” academics who understood that Western representations of the “Other” not only were one-dimensional, a-historical and static, but were the source of justifications to legitimize Western imperialist expansion (Morsy, 1996; Said, 1979; Said, 1993). These criticisms stem from the fact that applied medical anthropology (and cultural ecology in medical anthropology) as a sub-discipline started with the intent to make more efficient medical interventions, primarily within colonies or former colonies, that is, populations marked as culturally or ethnically “Other” (Morsy, 1996). Applied Medical anthropologists’ work was to understand and use natives’ disease explanatory models in order to improve natives’ acceptance of biomedical interventions. These medical interventions were often part of large development projects founded by supranational institutions such as the World Bank and the International Monetary Fund among others. In response to the uncritical applied work done in the name of development, PEMA began to question the rigidly defined boundaries of ecosystems or communities, to understand the health implications of transnational and translocal economic processes within specific locales. PEMA overcomes the traditional treatment of societies or communities as “islands unto themselves, with little sense of the larger systems of relations in which these units are embedded” (Ortner, 1994, 386). As Morsy (1996) explains,

PEMA is an approach to history and culture, including the culture of health and sickness that sees the Other as different but connected, a product of a particular history that is itself intertwined with a larger set of economic, political, social and cultural processes to such an extent that analytical separation of “our” history and “their” history is impossible (Morsy, 1996, 22).

The PEMA approach has also included the insights of dependency theory by looking at the way in which,

the dialectical relationship had been effectively obscured in medical anthropological discourse by models that juxtapose “Western” and “non-Western” medical systems and straightforwardly connect poor health to the inaccessibility of “Western” medicine (Morsy, 1996, 27).

If we recall, this very same logic that situates “industrialized countries” at the top of the evolutionary ladder is also found within cultural ecology. This logic achieves two things: to justify intervention and, to validate such interventions on the basis of superior scientific knowledge.

PEMA, just like Cultural Ecology, is a materialist approach that intends to distance itself from what its proponents consider to be unattainable (or “soft” ) positions of constructivists and symbolic anthropologists. We can observe this in Morsy’s characterization of criticisms of medical knowledge as “postmodern,” “antimedical” vilifications of biomedicine (Morsy, 1996, 31). Quoting Navarro she states that, “capitalist medicine is controlling medicine because it is effective, not vice versa. To think otherwise—as the antimedicine positions do— ...is tantamount to believing that medicine is a complete falsification that people have swallowed in their ignorance” (Morsy, 1996, 31). The problem with this assertion is that it conflates a multiplicity of different layers within a single pragmatic rationality-- medicine works. Firstly, medicine is “effective” in very concrete contexts. To say that medicine is valid because it is effective is a self-referential tautology that asserts its authority even in domains in which it does not work – for instance the amazing health improvements witnessed within the 19th century had to do more with simple sanitation than with emerging biomedical technologies. Secondly, to validate medicine on the basis that “it works” is to obfuscate the highly cultural pragmatic rationality underlining such assumptions. This pragmatic rationality is unique to Westerners in the sense that it is in itself cultural; it is not beyond culture, yet it is seen as the bedrock of a reality that rules out other ontologies. To overlook this is to ignore the ways in which medicine contributes to the reproduction of social power relations in capitalist society.

### 1.2.2 Bioculturalism or Ecology and Biomedicine

Medical anthropology did not benefited only from including political economic concerns within their approaches but also from ecological understandings that allowed them to explore interconnections between disease, culture and environment that were absent from biomedical approaches. This did not meant, however that applied medical anthropology was critical of biomedicine. We can see this in the work of biocultural anthropologists that while keen of the relationship between disease and environment shared with applied medical anthropologists their investment in a biomedical model that would only recognize pathogen/host interactions within a conveniently closed system (biological or environmental). As Brown et. al. (1996) explains “diseases cannot be explained as purely ‘things in themselves’; they must be analyzed and understood within a human context – that is, in relation to ecology and culture” (Brown et al., 1996, 184). Within this model, “disease is a process triggered by an interaction between a host and an environmental insult, often a pathogenic organism or ‘germ.’” but in order for disease to occur, the immunological system of the host has to be compromised by breaking with the host/pathogen balance (Brown et al., 1996, 187). As Brown et. al. (1996) explains, an “ecosystem is maintained through mutually dependent interactions between members of the system and that the common goal of the various species in the system is homeostasis” (Brown et al., 1996, 187). The concept of culture is key within this framework because it is understood as “a mechanism of adaptation to environmental threats, such as diseases, which act as agents of natural selection in the evolution of both human biology and culture” (Brown et al., 1996, 184).

The prime example of considering culture as a regulator, which looks at the relationship between host/pathogens and environment, within medical anthropology is the sickle cell gene. This gene is a trait found primarily in populations of West Africa and is responsible for protecting them from the endemic malaria characteristic of that region. It is the result of complex interactions between man made environmental changes, the abundant presences of the mosquito-vector of malaria and a genetic disorder selected against this disease (Levins and Lewontin, 1985).

One of the fundamental problems with this approach is that its emphasis on homeostasis—the integration of environment, culture and disease into a stable socio/ecological system— neglects the particular ways in which power relations and conflicts are responsible for the man-made creation of both unhealthy environments and disease (Morsy, 1996; Peet and Watts, 1996). The clear boundaries of ecosystems— which are key within this framework— crumbles when larger political/economic processes are taken into account.

Largely influenced by political economy and dependency theory, Critical Medical Anthropology (CMA) emerged as a reaction to the imperialist legacy of these conceptions. Instead of treating societies as islands unto themselves, CMA, similar to PEMA, emphasized the uneven emergence and distribution of disease, which had to be explained in relation to larger politico-economic systems. Where CMA differs from PEMA is in its questioning of biomedicine as a superior healing system.

The presumed certainty, which gives “superiority” to this biomedical model of disease, is based upon the germ theory, which maintains that disease can be traced to a single physiological entity. While this is true of a few infectious diseases (which has been successfully explained by this model) it fails in the face of chronic diseases that cannot be pinned down to a single cause. Despite chronic diseases being endemic in contexts of environmental crisis, the biomedical model of disease has dominated and continues to dominate public etiologic discussions. This dichotomous and atomistic (host/pathogen) understanding of disease validates biomedicine as the bedrock of reality while devaluing other non-Western ontologies (Lock and Sheper-Hughes, 1996; Morsy, 1996). People’s alternative understandings of health and illness are thus denied (Good, 1994c; Kleinman, 1992).

These and other criticisms sparked longstanding debates that generated new theoretical positions within medical anthropology. Hence, before characterizing CMA, let us explore the debates between bioculturalists (Wiley, 1992; Leatherman and Thomas, 1993) and critical medical anthropologists (Singer, 1993; Morgan, 1993) that took place early in the nineties. Particularly the ones that were the result of the 1991

AAA symposium entitled *Political-Economic Perspectives in Biological Anthropology: Building a Biocultural Synthesis*, later published in the *Medical Anthropology Quarterly*.

This debate came as a result of the recognition that “biological anthropology has reached a point where a paradigmatic expansion is both possible and necessary” (Leatherman and Thomas, 1993, 204). Characterizing the theoretical evolution that leads to this assertion Leatherman et al. explains that,

In the 1960’s and early 1970’s biological anthropologists were largely concerned with understanding adaptations to physical and biotic extremes. In the late 1970’s and 1980’s we began to recognize that other stressors, such as undernutrition, were more pervasive and often had a greater impact on human biology than purely physical and biotic ones. At the same time researchers began to note that all stressors and the responses they engender passed through a sociocultural filter (Leatherman and Thomas, 1993, 204).

This theoretical evolution, however, did not emerge from internal self-criticisms; on the contrary it emerged from critical medical anthropologists’ criticisms of bioculturalists’ paradigms.

Critical anthropologists argue that because of this colonial ancestry, medical anthropologists were unwilling (or unable) to see the ways in which their very presence was implicated in the health problems they were seeking to resolve. This myopia was the result of failing to see the role political economy played in the formation of both colonial and epidemiological landscapes. Moreover, critical medical anthropologists made clear that bioculturalists’ attachment to evolution and adaptation “have tended to treat poverty, undernourishment, and disease as environmental insults to which humans must adjust” (Baer, 1996, 452). As Singer (1993) explains,

ideas of inadequate coping or disordered adaptation might be regarded

as the latest incarnations of a blame-the-victim schema in which responsibility for illness is implicitly assigned to the person whose health has been damaged by acculturation or by repeated exposure to events beyond personal control (Singer, 1993, 186).

[Moreover.] The shortcoming of adaptationism is the tendency to separate organism from environment by treating them respectively as the dependent and independent variables of a causal relationship. This is precisely the thinking that underlies efforts to read illness among the poor as an expression of maladaptation while ignoring the social forces that have contributed to their conditions of living (Singer, 1993, 190).

This separation of organism vs. person is fundamental within critical medical anthropologist criticisms of bioculturalism. This separation makes possible the abstraction of people's disease explanatory models from the "physiological facts" of biomedicine. Through this separation "physiological facts" are seen as the basic elements of reality while people's views are treated as simple beliefs (Good, 1994a, 5). Critical medical anthropologists argue that this scientific view of disease obscures more than reveals, because it mystifies the underlying causes of disease, namely, unequal and exploitative socio economic relations. Critical medical anthropologists argue not only for paying attention to politico-economic forces but also for a conceptualization of science as yet another cultural system. Authors such as Singer propose an understanding of science as a human activity that:

is not so alienated from the world of human practice as to produce an absolute truth, absolute facts, or an absolute confidence in itself. Their theory of truth is not one of correspondence— facts simply match the way the world is— but rather a pragmatic one that considers the measure of truth to be in its use. It is in fact a false dichotomy between knowledge and activity that has created the spectre of unconditional and disembodied knowledge (Singer, 1993, 186,underlining mine).

Feminists' theoreticians (Haraway, 1991a; Haraway, 1991b; Harding, 1991; Harding, 1998; Scheper-Hughes, 2001; Shiva, 1989) have been at the forefront confronting this particularly Western conception of scientific practice as outside of culture and disembodied. Morgan notes that critical medical anthropologists "deliberately challenge the myth of scientific objectivity and lack of accountability and argue that researchers should self-consciously acknowledge their roles in a field of power" (Morgan, 1993, 200).

As a result of critical medical anthropologists' criticisms, bioculturalists such as Leatherman et al. (1993) recognized that although they,

have produced critical information for detailing the biological consequences of poverty and inequality in human populations, [they] have generally failed to interpret these finding within the political and economic contexts of marginality (Leatherman and Thomas, 1993, 204).

Hence, new theoretical directions emerged within bioculturalism. Leatherman et al. identifies at least three of those. The first is Political Economy of Health that seeks to start the analysis from macro political economic forces.

With their abilities to provide detailed information on the biological consequences of inequality and related processes, the inclusion of more work from biological anthropologists should strengthen this approach (Leatherman and Thomas, 1993, 205).

The second is Dialectical Adaptation, which takes into consideration that

the environment includes the social and cultural milieus, as well as the biophysical environment[:] the component parts of the environment have no ontological priority. Rather, they take meaning from the whole: parts and wholes are interpenetrated (Leatherman and Thomas, 1993, 205).

The attention is on “cost of adaptation and conflict and contradiction as entry points of the study of change” (Leatherman and Thomas, 1993, 205). Finally Critical Biological Anthropology is characterized by researchers being more self-reflexive of their entanglements within specific fields of power. As Morgan proposes, “all biocultural anthropologists should make clear their agendas, in part by locating researchers’ as well as subjects’ in the research process” (Morgan, 1993, 205).

### 1.2.3 Critical Medical Anthropology

Critical medical anthropology emerged out of the necessity to understand the role political economy played in the uneven distribution of disease along class, gender and ethnic lines. Singer (1986) argues that,

Following in the analytic tradition initiated by Virchow and Engels, critical medical anthropology maintains that discussion of specific health problems apart from macrolevel political and economic issues only serves to mystify social relationships that underlie environmental, occupational, nutritional, residential, and experiential conditions (Singer, 1986, 129).

For CMC, market economy and biomedicine are two of the most prominent mystifying institutions contemporarily. Market economy mystifies because it assumes the existence of symmetrical economic relationships between equally standing nation-states. Historically, though, Northern countries have benefited the most from what in reality are unequal international economic transactions. The negative consequences of these relationships surpass mere NGP calculations and often are felt by the most vulnerable groups within “developing countries”: particularly through public health crises. Biomedicine mystifies because it tries to resolve these public health crises through an atomistic understanding of disease that overlook these larger structural forces.

The Marxists roots of this paradigm are obvious. One of the most important contributions of Karl Marx was to reveal the mystifications that are wrought normal by the objective pretensions of the dominant classes. His main point was to present



that the categories normally used by economists to explain and justify market relations were just another tool of the dominant classes— by means of metamorphosing a historically situated productive relation (capitalism) into a universal law of human development. As Marx explains, “the economic forms in which men produce, consume and exchange, are transitory and historical” (Marx et al., 1978, 138). Critical medical anthropologists apply this same analytical logic to biomedicine and science. It is no chance that market economy and biomedicine are identified as important contemporary mystifying institutions. As critical medical anthropologists explain,

a central arena of analysis within critical medical anthropology is the nature and organization of the health care system that diffused hand-in-glove with capitalism the important point of departure for critical medical anthropology is recognition of the relationship of this medical system to its encompassing political economic environment. [...] The term bourgeois medicine identifies a key feature of this health care system, namely its role in the promotion of the hegemony of capitalist society generally and the capitalist class specifically (Singer, 1986, 129, underlining mine) .

Critical Medical anthropologists argue that not only do biomedical services become a commodity but that biomedicine itself, as an institution, produces, reproduces and legitimizes the interests and views of capitalists. It is argued that the medical system, along with other institutions, produces disciplined subjects that would: “work all right all by themselves” (Althusser, 1971, 181), would never question the logic of capital accumulation, and would docilely accept their subjection as the natural state of things.

The disciplined body of the “patient” (or the “criminal,” or the “mad”) is constituted through technologies of the body that, as Foucault (1980) explains, constructs a subject through knowledge/power relations and through the micropolitics of medical practice. That is the everyday institutional “regulation, surveillance and control of bodies (individual and collective) in reproduction and sexuality, work, leisure and sickness” (Lock and Sheper-Hughes, 1996, 45). The objectification of the person (the

“patient” ) is only achieved by an enormously systematic discipline that ultimately inscribed in the body that which perpetuated its subjection as subordinate. This constitution of subjects occurred through what Althusser (1971) called the interpellation process, which is basically the discursive and material process by which individuals are socialized within specific class roles and worldviews. This way, the “fabulation” of reality takes place (Taussig, 1980). As Taussig explains, “symptoms of disease, as much as the technology of healing, are not “things-in-themselves,” but are... signs of social relations disguised as natural things, concealing their roots” (Taussig, 1980).

In any society, the relationship between doctor and patient is more than a technical one. It is very much a social interaction which can reinforce the culture’s basic premises in a most powerful manner. The sick person is a dependent and anxious person, malleable in the hands of the doctor and the health system, and open to their manipulation and moralism ... This gives the doctor a powerful point of entry into the patient’s psyche, and also amounts to a restructuring of the patients’s conventional understandings and social personality (Taussig, 1980, 4).

People come to understand their immediate socio-cultural context, their position in it (class), and their health problems as something natural that has always been and always will be. This becomes socially acceptable. As Althusser explains, “Ideology subjects’ us in [the sense of] *constructing our subjectivity by persuading us into internalizing an oppressive law*” (Eagleton, 1994, 14, emphasis mine). But this socially acceptable worldview is only possible because we internalize the structural order within our flesh, within our bones, in our daily life. In the words of Singer (1986) critical medical anthropology,

understands health issues in light of the larger political and economic forces that pattern human relationships, shape social behavior, and condition collective experience, including forces of institutional, national, and global scale (Singer, 1986, 128).

Echoing Marx's (1960) dictum in the *German Ideology*, Singer (1995) argues that critical medical anthropology aims not simply to understand and describe biomedicine as a mystifying institution, "but to change culturally inappropriate, oppressive, and exploitative patterns in the health arena and beyond" (Singer, 1995, 81). For critical medical anthropologists (Waitzkin, 1981; Singer, 1986) disease is,

not the straightforward outcome of an infectious agent or pathophysiologic disturbance. Instead, a variety of problems— including malnutrition, economic insecurity, occupational risks, bad housing, and lack of political power— create and underlying predisposition to disease and death (Singer, 1986, 129).

#### **1.2.4 Critical Medical Anthropology: Theoretical Limitations**

As we have seen, critical medical anthropology does not differ from traditional political economy or PEMA in its interest in "studying the effects of capitalist penetration." In other words, "the impact of external forces, and the ways in which societies change or evolve largely in adaptation to such impact" (Ortner, 1994, 386). A shortcoming of this approach, as Ortner has pointed out about political economy, is that history is "treated as something that arrives, like a ship, from outside the society in question. Thus we do not get the history of that society, but the impact of (our) history on that society" (Ortner, 1994, 387).

By paying greater attention to larger politico economic processes critical medical anthropology loses touch with: peoples' experiences of such processes in ways other than subjugating, people as actors and agents of their own histories and, the ways in which larger political structures are also shaped from the bottom-up by people acting against such subjugating forces.

Critical medical anthropology even when it deconstructs biomedicine as cultural systems that maintain, reinforce and reproduce political systems of inequality, maintains a materialist ontology that tends to overemphasize the economic over the experien-

tial. This economic determinism tends— particularly in Singer’s (1993: 1986: 1992) and Morsy’s (1996) characterization of critical medical anthropology— to depict capitalism as homogenous, unchanging and teleological. Because it has been so critical of bioculturalism, critical medical anthropology has failed to include an ecological understanding within their analysis. As a few authors have recently recognized, an integration of ecological and environmental concerns within critical medical anthropology is long overdue (Baer, 1996; Ferguson, 1997; Kalipeni and Oppong, 1998).

Although critical medical anthropologists use of Foucault’s insights on the constitution of subjectivities through knowledge/power regulating practices is fundamental; it does not leave room for human agency and it treats the body exclusively as the basic medium for people’s subjection. This uncritical use of Foucault’s insights is problematic because it forgets human agencies, energies and desires. As Ong explains,

Foucault notes that in social regulation, subtle coercion takes hold upon the body at the levels of movements, gestures and attitudes— but he barely explores how the subjects of regulation themselves draw the medical gaze in the first place, nor how their resistances to biomedical intervention both invite and deflect control. . . . Thus the biomedical gaze is not such a diffused hegemonic power but is itself generated by the complex contestation of . . . subjects pursuing their own goals and needs (Ong, 1995, 1244).

Everything cannot be reduced to the overarching power of discourse, for where discourse ends the body begins. People’s corporeality is not only the canvas upon which discursive inscriptions get materialize and hence the site where subjection most effectively works but also the site of resistance and agency. As Lock and Sheper-Hughes explains,

Sickness. . . is a form of communication— the language of the organs— through which nature, society, and culture speak simultaneously. The individual body should be seen as the most immediate, the proximate terrain where social truths and social contradiction are played out, as well

as a locus of personal and social resistance, creativity, and struggle (Lock and Sheper-Hughes, 1996, 70).

As opposed to critical medical anthropologists who conceptualize the “organic body” as somehow emptied of sociality (a passive canvas of subjection) this approach needs an understanding of the body as the source of agency and identity: a notion of “embodied personhood.” As Lock and Sheper-Hughes have pointed out, the body has emerged as “the primary action zone of the late twentieth century” (Lock and Sheper-Hughes, 1996, 42).

### **1.2.5 Interpretative vs. Critical Medical Anthropology**

To overcome CMA theoretical limitations we need to pay attention to the ways in which macro/structural processes are factored in within micro/social interactions but without losing sight of people’s experiences and their creative ways of negotiating and coping with rapid changes in their health and landscapes. In this respect, an interpretative approach such as the phenomenological one proposed by Byron Good is long overdue (Good, 1994b; Good, 1994c). As an alternative to materialist approaches we need to look at the important ways in which the experience and meaning of illness constitutes the life worlds of people confronting disease. Good (1994b) proposes a phenomenology of illness experiences to understand the ways in which illness narratives and “rituals” reconstruct the world that suffering has unmade by “subjectivizing reality” in the regenerative act of engulfing reality from the sentient position of the body (Good, 1994b, xiii).

We need to understand how the medical system by its atomistic way of dealing with illness systematically breaks with the body as a mediator (through the senses) with the non-human world. This way, people’s bodies and their knowledge of it are negated. The “reification stemming from the commodity-structure” in which the medical system works— based on a Cartesian worldview of universal truths— tell people, “Don’t trust your senses. Don’t trust the feeling of uncertainty and ambiguity” (Taussig, 1980, 5). The particular connections of how a situation of inequality has been pro-

duced are hidden by an atomistic perception of reality. The medical system by negating the validity of people's senses achieved the alienation of people from the possibility of making the phenomenological connections present everywhere, yet which are conceal from their eyes. This is the power of normalizing institution that is to constitute specific types of subjectivities along particular social projects. These social projects gravitate around issues of control, access and distribution over resources.

But subjectivity is not constituted solely within powerful normalizing institutions, such as hospitals, schools or churches. It also emerges out everyday life engagements of people among themselves, with their environments and, with transnational discourses.

I argue that these other aspects of the constitution of identity play a greater role when normalizing institutions fail to address people's experiences and issues. We cannot just look at how an institution imposes meaning on people but also need to look at how people themselves generate meaning by circulating discourses in relation to their experiences. Discourses do not stem only from localized institutions, but increasingly are the result of transnational flows. Transnational discourses on health, environment and human rights then provide an alternative de-territorialized repertoire of ideas from which to draw on when previous systems of meaning fall short to make sense of people's oppressive reality (Appadurai, 1996; Wilson, 1997a).

In contexts of environmental and health crises, the legitimacy of normalizing institutions is called into question because their discourses and practices become incompatible with people's understandings of such issues. This incompatibility opens up spaces in which inscriptions other than the institutional ones acquire greater relevance in people's articulation of their own subject positions. This is not to say that institutional discourses and materials (such as biomedical ones) stop playing a role within the constitution of identities. Instead that such materials are more freely appropriated, modified and negotiated to suit people's attempts to make sense of both an altered environment and an altered self.

Drawing from a sub-field within medical anthropology that follows an interpretative framework— and which has been criticized by CMA for over emphasizing people's

individual experiences, at the expense of political economic considerations— I argue that the experience of illness is key in the transformations of subjectivities. Moreover, by examining the relationship between illness and identity in contexts of environmental degradation my research will contribute to the literature on new social movements, political ecology, and medical anthropology, especially since that literature has seldom explored such connections.

Illness not only challenges people's identity but also challenges the very legitimacy of their world: it touches every aspect of the human experience by virtue of disrupting people's everyday lives. Similar to Elaine Scarry's (1985) description of pain, illness has the power to unmake people's world in the most profound way. And yet, people struggle to remake a coherent lifeworld out of the world unmade by suffering and disease.

Illness and the threat of it deeply affects not only the experiential world of the sufferer but also the lives of the family, intimate friends and co-workers (Kleinman et al., 1992). In this sense, illness and people's experiences of it are fundamentally intersubjective. That is the process of making sense of illness takes place as a collective endeavor of building a livable world. As people "narratively connect the cause and effects of their illness . . . to their ongoing lives, they effectively convert the liminality of [disease] into a social resource. In a fascinating process of inversion carried out through narrative, weakness becomes power" (Hunt, 2000, 99-100).

And yet to only talk about the ways in which the experience of illness is part of people's re-articulation of their subjectivity is to miss how other-than-human actors are part of this process as well. In other words, how the "coming-into-being" of dweller's embodied selves, whether they want it or not, is metamorphosized along with the "coming-into-being" of a polluted environment in which often times they did not assist in creating (Ingold, 2000). This is particularly true of the creation of militarized landscapes that are transformed by the unrestricted release of extremely hazardous substances into the environment.

### 1.3 Political Ecology of Disease: A New Synthesis

Until recently, within critical medical anthropology, the idea of integrating political ecology into the understanding of disease etiology and perception has not been an area of great interest. Some authors have recognized that with few exceptions, medical anthropology and sibling disciplines have not seriously explored the ways in which political ecology can contribute to the analysis of disease, mortality and health (Baer, 1996; Ferguson, 1997; Kalipeni and Oppong, 1998; Mayer, 2000). Ferguson (1997) explains that the belated arrival of political ecology to medical anthropology, despite the ascendance of environmental crises, has to be understood against the backdrop of neo-Malthusian, evolutionary, and systems-oriented theories which monopolized the ecological prism within medical anthropology (Ferguson, 1997, 2). The fact that none of these approaches incorporate the Marxist insights of political economy, dependency or systems theories kept many critical medical anthropologists “away from considering ecological factors” (Ferguson, 1997, 2). Recently, though, an interest has sparked within medical anthropology that seems to be promising.

As Baer (1996) explains, although political ecology has arrived belatedly to the field there is evidence of a growing interest within medical anthropology to “recognize the significance of political-economic factors in the etiology of disease” (Baer, 1996, 451). An example of this growing interest within medical anthropology was the panel organized in 1996 at the annual meeting of the American Anthropology Association titled “A Dialogue between Critical Medical Anthropology and Bioculturalism: Toward a Political Ecology of Health” (Baer, 1996, 451). As the articles of this panel showed (Baer, 1996; Gruenbaum, 1996; Leatherman, 1996; McElroy, 1996), there is now a new dialogue/debate between biocultural and critical medical anthropologists.

This debate stems, as we have seen, from the fact that biocultural anthropologists have paid great attention to ecological and social relations to understand disease, mortality and health, but they have for the most part done so without looking carefully at political-economic factors. Critical medical anthropologists have paid attention to political economy but they have done so at the expense of ecological considerations



(Baer, 1996, 452). This could be further explained in part by the fact that traditional political economy, with its narrow interest on unequal economic exchanges, paid little attention to environmental factors. This ecological myopia within political economy, in turn, explains the emergence of political ecology as an alternative approach— particularly among neo-Marxists. Neo-Marxists, in turn, have for the most part neglected paid the nexus between environmental crises and health crises.

But this emerging interest in integrating political ecology with the understanding of health and disease issues has not been limited to medical anthropology. In a sibling discipline, geography, Mayer (2000) similarly has attempted to apply the insights of political ecology to the understanding of epidemiological changes. He calls his attempt “political ecology of disease.” Like his counter parts within medical anthropology, Mayer recognizes this as “a promising if as yet underdeveloped approach to understand disease dynamics” Mayer (Mayer, 2000, 948). Mayer defines this approach as emphasizing “the unintended human and natural consequences of individual, corporate and governmental projects, and demonstrates aptly that disease has its human-made’ components as well as its natural components” (Mayer, 2000, 948). Mayer explains that applying political ecology’s insights to specific diseases and populations, “can alter the concepts of the causality of disease from a purely biomedical concept to one that also incorporates the unintended aspects of human action” (Mayer, 2000, 949). Indeed,

the meaning of disease causation changes when considering it in social and ecological contexts. The germ theory of disease and the doctrine of specific etiology concentrated much attention on the smaller scale, microscopic and submicroscopic scales of disease. Yet, causation can also be expanded to larger scales . . . by so doing adds to our understanding of disease causation (Mayer, 2000, 938).

Like many of the authors previously reviewed, Ferguson (1997) agrees that the implications of altered environments for health “remains little investigated by critical medical anthropologists” (Ferguson, 1997, 5). This is indeed a limitation for critical

medical anthropologists since “many environmental resources like wild and domesticated plants, land, water and air are also critical and contested health resources” (Ferguson, 1997, 5). Moreover,

new social movements, especially those organized around environmental justice concerns are also health movements, although they are not usually regarded as such in medical anthropology (Ferguson, 1997, 6).

I will add that by the same token, the literature on new social movements have completely overlooked what I will call the health/identity nexus as a pivotal element on the formation of such movements.

In the few cases within political ecology in which health and disease have been explored (Kalipeni and Oppong, 1998; Mayer, 2000; Pedersen, 1996), it has been done from a primarily biomedical perspective. As Ferguson (1997) explains,

Health and illness are often defined in purely biomedical terms with no place for the social construction of illness and no valuing of alternative medical systems, practices or experiences (Ferguson, 1997, 6).

This is the case with the authors reviewed in this chapter who are all trying to integrate political ecology with health, with the exception of Ferguson (1997), Sheper-Hughes (1992), and Harper (2002). As Ferguson (1997) explains, the shortcoming of some authors applying a political ecology approach to health and disease concerns is that they privilege “biomedicine as the only medical reality and fails to analyze its social construction and practices or its role in social control” and in doing so they denied “the reality and value of alternative concepts of health and illness that many people hold” (Ferguson, 1997, 7).

By incorporating the strengths of political ecology and critical and interpretative medical anthropology into a Political Ecology of Disease, we can perhaps destabilize the ontological center. A shift in analytical standpoint, a move from the center to the margins, might enable “us” to envision possibilities for the future.

In my research I intend to contribute to a Political Ecology of Disease using the body as an analytical trope that helps understand the nexus of health/environment/identity that is fundamental to the emergence of new social movements. This will allow me to address the flaws of some of the approaches discussed, which paid little attention to human experience and perception. Even within the literature that has paid attention to the connection between environmental degradation and social movements (environmental justice and environmental sociology), few theoretical and empirical elaborations have been developed that make it possible to understand their emergence as processes of identity formation. I hope to contribute to the literature by using the insights of critical medical anthropology and interpretative medical anthropology<sup>2</sup> (Csordas, 1994; Good, 1994a; Good, 1994b; Good, 1994c; Hunt, 2000; Kleinman et al., 1992; Kleinman, 1992; Scheper-Hughes, 1992), aiming at understanding the disrupting effects of illness on people's notions of self within context of environmental degradation. Yet I remain aware of the dangers of such interpretative frameworks: often they form textualistic approaches in which the constitution of subjects happens exclusively at the discursive level. This renders the body as a passive entity upon which discursive inscriptions get "materialized." Echoing Csordas (1994: 1988), I argue for "consideration of the body as a generative source of culture rather than as a *tabula rasa* upon which cultural meaning is inscribed" (Csordas, 1994, 17,underline mine). In this sense, the constitution of subjectivity, far from being understood as exclusively taking place through discourse, emerges from a historically situated body entangled in complex social, economical, political and environmental relations.

In my research, consciousness cannot be separated from the experiential body because it is in the body that environmental contradictions get expressed and from the body that any awareness of, and action against, such contradictions might emerge. I propose the body— always entangled in definite ways of being-in-the-world— as a

---

<sup>2</sup>According to some authors (Baer 1997, Csordas 1988, Frankenberg 1988) critical medical anthropology is further divided between the ones with a focus on political economy and the ones with a focus on interpretative or constructivist approaches. Hence, I see my contribution to a political ecology of health as incorporating these interpretative or poststructuralist analytical frameworks, since it is only through them that we can reach people's experiences to understand the limitations of biomedicine, science and technology. For a review of these debates and similar plea on the integration of these approaches to critical medical anthropology and see Baer (1997).

trope through which to understand the socio/political implications of current rapidly changing environments. I base this proposition on the simple fact that in the face of polluted environments the body becomes the ultimate register of epidemiological changes by becoming “sick.” In other words, the coming-into-being of the world becomes central in the coming-into-being of people’s selves and well-being. Hence, if in contexts saturated with hazardous substances people’s etiological explanations depart from that suggested by traditionally atomistic biomedical accounts, it is because of the difference in their positioning in relation to the “coming-into-being” of industrialized and/or militarized landscapes.

A synthesis of these analytical insights into a Political Ecology of Disease has the potential to show how the increasing emergence of new social movements can be the marginal standpoint from which the hegemony of science, technology and biomedicine can be challenged. This challenge does not come from the master narratives of science (whether natural or social), but instead from the language of action of an increasingly more active civil society. “Our” disciplinary search for criticisms and solutions to environmental, social, and health crises have perhaps been misplaced all this time. Now is the time for “us” to change “our” monocular lens to a kaleidoscopic view of people’s struggles.

## Chapter 2

# Where, How and Why?

### 2.0.1 Research Site

Puerto Rico is not only the place where I was born, but also the place where I ended up conducting the dissertation research you are now reading. My dissertation, however, did not start there. In its inception it started between the cold winters of East Lansing, Michigan, while working on my graduate studies, and the hot summers of Qu  retaro in Central Mexico, while conducting pre-dissertation research, about eight years ago. The U.S. invasion of Puerto Rico in 1898 –and the colonial status that since has shaped Puerto Ricans’ everyday life– also played a role in this dissertation. It is not an accident that, despite the difficulty of coming to the U.S. to pursue my doctoral studies, it was still easier to come and study here –because of access to federal loans and not having to get visas to pass U.S. customs– than doing it in any other neighboring country. Puerto Ricans after all are U.S. citizens since 1917 when the U.S., some say granted while others say imposed, this citizenship upon us. The “honor” of becoming U.S. citizens for Puerto Ricans happened at the same time U.S. involvement in World War I solidified. It is no accident then that the U.S. has since drafted thousands of Puerto Ricans into military service. Despite their citizenship and having to serve in the military, Puerto Ricans living on the island cannot vote in U.S. elections – this did not change even when in 1952 Puerto Rico was declared Commonwealth in “association” with the U.S., thus allowing self government in matters of local politics. Now that the obligatory draft is over, U.S.

citizenship still secures for the U.S. Army a handsome pool of recruits in the poorest neighborhoods' high schools. If the anti-Vietnam War movement during the seventies brought an end to obligatory draft, it also brought the knowledge that advertising and structural economic pressures were more efficient mechanisms to lure the poor to joining the forces. I know it full well because the U.S. army almost recruited me twice, first in high school and later in college. One of my older brothers did join the forces: a decision that sadly brought him not only disease, when his kidney failed while in service, but his eventual demise when his body could no longer take dialysis. With few economic alternatives, joining the forces becomes a way for upward mobility for the poor. I am weaving these historical events with my own biography because to a great degree this is the experience of Puerto Ricans at large and of *Viequenses* in particular. For instance, civilian veterans in Vieques account for eight percent of the total population on the island. The end of the Hispanic American War in 1898, the U.S. invasion, the granted citizenship in 1917, the military service draft, the declaration of the Commonwealth in 1952, are some of the historical events that explain how Puerto Rico's landscape and the very experience of being Puerto Rican have been shaped within the context of the geopolitical development of the U.S. as an emerging power in the Western Hemisphere.

As we can see in Figure 2.1, Puerto Rico, with a population of 3,950 million, is the smallest and the most eastern of the Greater Antilles — the other three largest islands of the Antilles are Cuba, Hispaniola (Haiti and Dominican Republic) and Jamaica. Puerto Rico is approximately 100 miles from east to west and 35 miles from the north and south, which is about 3,435 square miles (8,897 km<sup>2</sup>). In addition to the main island, the territory of Puerto Rico also includes the following smaller islands: Vieques, Culebra, Culebrita, Palomino, Mona, Monito, Desecheo and Caja de Muerto. The deep ocean waters that surround Puerto Rico and particularly the Mona Passage, which separates the island from Dominican Republic and Haiti, makes of Puerto Rico a very important marine commercial route to the Panama Canal and the rest of Latin America.

The island of Vieques, where I conducted my fieldwork, is located off the East coast

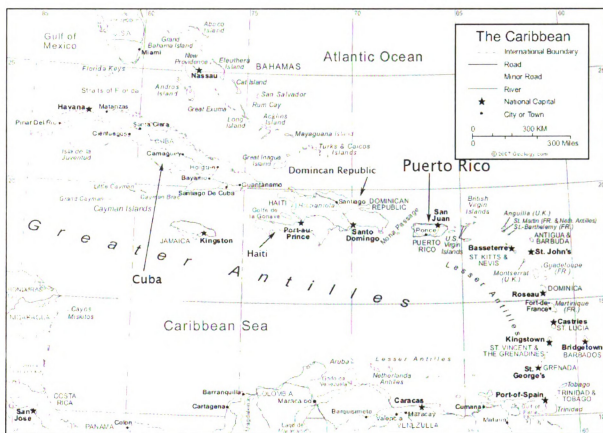


Figure 2.1: Map of the Caribbean.

Source: <http://geology.com/world/caribbean-map.gif>

of Puerto Rico— refer to Figure 2.2. In order to get to Vieques you have to travel by car or public transportation to the Port-of-Entry in the town of Fajardo where you can take the ferry to the island. Driving from San Juan to Fajardo without much traffic – something very unlikely in Puerto Rico given that there are almost as many cars as there are people on the island – can take up to one hour and up to two and a half if it is done during peak hours or using public transportation. The ferry goes to Vieques three times a day and the trip lasts for about two hours. While during the week the ferry is not too busy, on weekends it is another story, especially during the summer, and if you are not early into the port of Fajardo –and I mean two hours early– you run the risk of not boarding it because of how busy it becomes. I know this because I did most of my research in Vieques during the summers of 2001, 2002 and 2003.



Figure 2.2: Map of Puerto Rico.

Source: [http://www.intute.ac.uk/sciences/worldguide/html/997\\_map.html](http://www.intute.ac.uk/sciences/worldguide/html/997_map.html)

While from a geographical point of view Puerto Rico is an island, it is more than that for *Viequenses*. In fact, I would not dare to qualify Puerto Rico as an island while in the company of *Viequenses* involved in collective mobilization. For them, Puerto Rico is an archipelago of which Vieques and other islands are part. This semantic distinction has to do with a long history in which Vieques geographical isolation has translated into political and economical marginalization.

Vieques, Puerto Rico, has a population of approximately 9,400 people who live in the center of the island. *Viequenses* inhabit 22 percent of the 110 square miles while the



remaining 78 percent of the island is occupied by the U.S. Navy military facilities on the East and West coasts of the island. As Figure 2.3 illustrates the west part of the island is where the the U.S. Navy stores ammunitions, while the eastern zone is where the firing range is located and where the military practices takes place— for an artistic depiction of the firing range refer to Figure 2.6 on page 54.

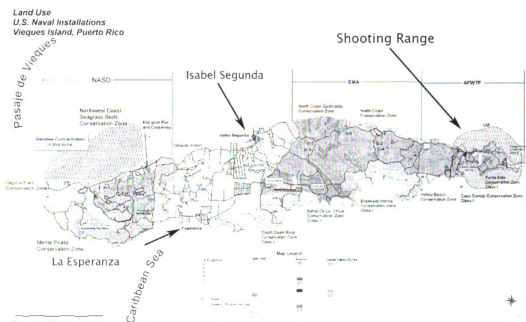


Figure 2.3: Map of Vieques and Navy's Military Facilities.

Source: [http://www.lib.utexas.edu/maps/americas/vieques\\_navy\\_1999.jpg](http://www.lib.utexas.edu/maps/americas/vieques_navy_1999.jpg)

The uneven development of Vieques is best exemplified in the fact that Vieques has among the highest unemployment rate of Puerto Rico's 78 municipalities, with a 60 percent unemployment rate. The main areas of employment for those 1,712 employed people are detailed in Table 2.1. What becomes obvious from Table 2.1 is that almost half of the employed (46 %) are working the low paying service jobs, which are tied to the foreign owned tourist sector. Manufacturing jobs accounts for only 6.8 % of the jobs while construction for 14.5 %, government for 12.7 % and retail trade for 10.0 %— refer to Table 2.2 for detailed information on employment by industries. While fishing and agricultural activities account for only 2 % of employment (mostly self employment) subsistence agriculture and fishing are activities that able people

engage in to supplement their meager economies and diets. The per capita income of those who are employed is 6.562 dollars and over 64 percent of the population in Vieques live below the poverty line.

Occupation	Number	Percent
Management and professional	381	22.3
Service occupations	479	28.0
Sales and office occupations	281	16.4
Farming, fishing, and forestry	34	2.0
Construction, extraction, and maintenance	314	18.3
Production and transportation	223	13.0

Table 2.1: Employment by Occupation in Vieques  
Source: U.S. Census Bureau, Census 2000 Summary.

Industry	Number	Percent
Agriculture, forestry and fishing	29	1.7
Construction	249	14.5
Manufacturing	117	6.8
Wholesale trade	23	1.3
Retail trade	172	10.0
Transportation, warehousing, and utilities	91	5.3
Finance, real estate, and rental and leasing	81	4.7
Professional, scientific, administrative	136	7.9
Educational, health and social services	374	21.8
Entertainment, recreation, and food services	139	8.1
Other services (except public administration)	84	4.9
Public administration	217	12.7

Table 2.2: Employment by Industry in Vieques  
Source: U.S. Census Bureau, Census 2000 Summary.

The harsh economic reality in which the majority of *Viequenses* live, which is so evident in numbers, often escapes the sight of those visiting the island. This happens because this reality is easily hidden behind the breathtaking beauty of this seemingly idyllic place and the hospitality of people depending on tourism. The spatial distribution of residential areas also helps to maintain the separation between the “pristine nature” of tourism and the living quarters of those who do the cleaning in the hotels and serve the tourists their *piñas coladas*. The two biggest urban areas are Isabel Segunda, on the northern coast and La Esperanza, in the southern part of the island.

though there are smaller *barriadas* (neighborhoods) spread out through Vieques. Isabel Segunda is the downtown of Vieques and is where the ferry arrives and the main business district is found. Here you have the traditional layout of the Spanish colonial town with the square *plaza* surrounded by *la alcaldia* (city hall) on one side and the Catholic church on the other. *La Alianza de Mujeres*, a women's activist group who organized around health issues is also located in Isabel Segunda. In La Esperanza, the other important residential area, there is also a small tourist strip along the bay where restaurants and stores are found. Close to La Esperanza there is the bioluminescent bay and some of the most popular beaches in Vieques. In order to go to La Esperanza you take the main road and drive south up the steep hill. This route takes you past: the medical clinic, which used to offer only secondary care often provided by nurses; Monte Carmelo a mythical community founded by squatting (or as they explained, retaking) fenced land that was under the U.S. Navy's jurisdiction; the gates of Camp Garcia which is where the Navy's firing range is located; and El Campamento Justicia y Paz located right in front of Camp Garcia's gate and from which civil disobedience was organized. The trip between Isabel Segunda and La Esperanza is about eight miles long through what I remember being a very narrow, curvy and hilly main road: during the time I was conducting research my only transportation was a bike that my nephew lent me.

The first summer (2001) I went to Vieques to conduct my research I lived in Monte Carmelo. Like most of the houses in this squatting community (around 300 houses) there was no electricity, running water or paved streets and the majority of the houses were built out of whatever materials were available. As Monte Carmelo's name implies, the location of this community was on a mountain, and a very steep one, which made vehicle access impossible. Walking up or down its hills was not easy either and it would take me around a good thirty minutes to go from the top of the mountain, where I was staying, to the main road that connected Isabel Segunda and La Esperanza: going up the hill used to take me even longer. For about three months I experienced the hardships that these remarkable *Viequenses* experience in their everyday lives.

For the other summers I ended up renting a room in La Esperaza. While that made my living situation a little more manageable, not having to struggle with the conditions of Monte Carmelo, it made it harder to attend the important activists' meetings that would take place in El Campamento Justicia y Paz and in different places in Isabel Segunda. During this time was the period that I biked the most under the hot summer sunshine to attend the different activities and to conduct my interviews. One thing that did not change by moving to La Esperanza, however, was the main staples of my diet: canned tuna and bread. In what follows I will include my field notes from those very first few days of my research, because I think that they capture not only my naivete but also the tense atmosphere of a place engulfed by an environmental and health crisis.

Tuesday July 24, 2001

My early departure in the morning, 4:00 am, and the rhythmic movement of the waves kept me in a lethargic state for most of the time on the ferry. I am not sure if it was because I felt so tired, because of my intellectual idleness after being with family, or simply because of research "cold feet," but I was unable to speak to anybody for most of the trip. What an anthropologist! My first "contact" was the complicit look of a person sitting close by, which, like me, overheard and did not agree with somebody's pro-Navy statements.<sup>1</sup>

I had other reasons to be worried besides my sudden shyness; among them were not knowing where to stay once in Vieques and not having any formal contact with activists—despite some phone calls I had managed to make before my arrival. In the ferry there were many people and all I could think was how to start some casual conversation with somebody to feel that I was finally starting my fieldwork. I looked around and I could not decide whom to approach until I saw this eighty-year old grandma holding

---

<sup>1</sup>While the majority of *Viequenses* wanted the retreat of the Navy from the island, there were still people whom for various reasons wanted the Navy to stay. People in favor of leaving the Navy in Vieques were called *pro-marina* or pro-navy people.

a flagpole with a Puerto Rican flag bigger than her. The fragility of her figure in stark contrast with her defiant gesture was truly puzzling.

To my surprise I later learned that the enchanting grandma was not eighty years old as I thought but ninety-three. However the age of Doña Isabelita Rosado was not the real source of my surprise, instead who she was. During the turbulent and repressive nineteen-fifties the Partido Nacionalista, lead by Don Pedro Albizu Campos, was the spearhead of the national liberation movement in Puerto Rico against the U.S. colonial regime. As part of this struggle the Blair House was attacked and numerous members of the party ended up in jail. The Partido Nacionalista's attack of the Blair House in Washington D.C. was an attempt to raise to international attention Puerto Rico's colonial situation. Doña Isabelita was the secretary of the Partido Nacionalista and because of her political involvement she was imprisoned for more than 16 years. As the gesture of the flag and later events showed me, her time as a political prisoner did not change her political ideas.

Little did I know of the surprises awaiting for me that day as a consequence of approaching these fascinating characters. After two long hours of regretting my quietness, the ferry finally arrived to Vieques and while seeing everybody getting ready to leave I realized that that was probably my last chance to get to know them, so I gathered some courage and I approached them. They were very kind and seemed to enjoy my hard to hide admiration for Doña Isabelita. Our conversation continued while disembarking and as a result I got to meet the person picking them up in the harbor: Roberto Robin, one of the activists with whom I talked to by phone and that I was hoping to interview once on the island.

I learned from the quick introduction the reason of their presence in Vieques. The day of our arrival was the day of the commemoration of Simon Bolivar's birthday. Doña Isabelita was the guest speaker at this event. I was immediately invited to the activity and since I did not have

prior plans I happily accepted their invitation. Later I learned that Simon Bolivar visited Vieques on one of his trips. The activity took place in *la plaza* central in front of Bolivar's statue— donated by the Venezuelan government some years ago.

In retrospect, being able to meet key actors of the activist network, which would have probably taken me months to do, literally took me only a few hours, not because of my “incredible anthropological” talents, but because of simple chance. I met the right people at the right time.

At the commemoration I was introduced yet to more people which were deeply involved in the civil disobedience movement in Vieques. The gathering of people, no more than 30, started the activity by singing the revolutionary version of *La Borinqueña*.<sup>2</sup> In the years of *La mordaza* (the gag

---

<sup>2</sup>Arise, Puerto Rican! \ the call to arms has sounded! \ Awake from this dream, \ it is time to fight!

Doesn't this patriotic call \ set your heart alight? \ Come! We are in tune \ with the roar of the cannon.

Come, the Cuban \ will soon be free; \ the machete will give \ him his liberty... \ the machete will give \ him his liberty.

Now the war drum \ says with its sound, \ that the jungle is the place \ of the meeting, \ of the meeting... \ of the meeting.

The Cry of Lares \ must be repeated, \ and then we will know: \ victory or death.

Beautiful Puerto Rico \ must follow Cuba; \ you have brave sons \ who wish to fight.

Now, no longer can we be unmoved; \ now we do not want timidly \ to let them subjugate us.

We want \ to be free now, \ and our machete \ has been sharpened... \ and our machete \ has been sharpened. \ Why then have we been \ so sleepy and deaf \ and deaf to the call?

There is no need to fear, Puerto Ricans, \ the roar of the cannon; \ saving the nation \ is the duty of the heart.

We no longer want despots, \ tyranny shall fall now; \ the unconquerable women \ also will know how to fight.

We want \ liberty, \ and our machetes \ will give it to us... \ and our machete \ will give it to us.

Come, Puerto Ricans, \ come now, \ since freedom awaits us anxiously, \ anxiously freedom. \ freedom! freedom!

law) during the fifties, the lyrics of the song calling for armed struggle were censored and a non/political version took its place<sup>3</sup>, yet the subversive words were never forgotten and when pronounced their symbolic power emerged interpellating a nationalist Puerto Rican subject. I felt hailed by the power of such words and shortly after they started singing I did too. I have to say that I was somehow troubled because while I am a Puerto Rican more than sympathetic towards *independentista* ideals my presence there was primarily as a researcher.

At the commemoration, totally unexpected to me as were the rest of things that took place that day, I met my most keen collaborator, activist and friend: Miguel. In his sixties, Villa –which is how people call him –has a long history of activism on his shoulders. As an example, his nickname came from a squatter settlement called *Villa Sin Miedo* (or The Fearless Village) that during the seventies kept the police in “check mate” the police for a couple of years. Puerto Rico, as many other Latin American countries has a long history of disposed people struggling to obtain a place to live. Villa was the spokesperson of *Villa Sin Miedo* and in the numerous occasions that police tried to evict them he led with others confrontations which at times included bullet exchanges. Popular movements in Puerto Rico, during the seventies where brutally suppressed, especially during the reactionary Romero Barcelo’s administration under which open violence

---

Lyrics: Lola Rodríguez de Tió (1868); Translation: Samuel Quiros; Source: <http://welcome.topuertorico.org/bori.shtml>

<sup>3</sup>The land of Borinquen \ where I have been born.\ It is a florid garden \ of magical brilliance.

A sky always clean \ serves as a canopy. \ And placid lullabies are given \ by the waves at her feet.

When at her beaches Columbus arrived, \ he exclaimed full of admiration: \ Oh! Oh! Oh! \ This is the beautiful land, that I seek.

It is Borinquen the daughter, \ the daughter of the sea and the sun. \ of the sea and the sun, \ of the sea and the sun, \ of the sea and the sun, \ of the sea and the sun!

Lyrics: Manuel Fernández Juncos (1846–1928); Translation: Samuel Quiros; Source: <http://welcome.topuertorico.org/>

against students and *independentistas* was the order of the day.<sup>4</sup>

Villas' involvement in the civil disobedience movement in Vieques started two years ago when he decide to move to Vieques in order to participate in the movement. Villa expended, with other hundreds of people, a whole year living in what until that moment were the areas of military practice. The camps established in these terrains were the ones that made the U.S. Navy stop their military practices for that year.

From approaching the group in the ferry, going to the commemoration, and being introduced to key people of the movement I was also invited to go with them (Doña Isabelita and the other two persons accompanying her) for lunch. At first I politely tried to refuse, because I felt that it was too much an abuse of their kindness, but their insistence made me abandon my futile attempts. I also figured that it would have been disrespectful to decline their invitation and well, yes, I was also starving. After Doña Isabelita's sharp speech full of historical details we ended up going to a small local restaurant.

After our lunch we went to the Alianza de Mujeres, a group formed by women who have been organizing around issues of health in Vieques. Their office, a block away from the la plaza central, is a large room with plenty of space including a couple of work-tables full of educational literature ready to be distributed. From what I picked up over lunch, the Alianza de Mujeres is also responsible for orchestrating rallies, protests, marches and even press conferences. Miguel introduced me to the director of the Alianza de Mujeres, Judith Conde, of whom I had heard so much and who I was hoping to interview as well.

Next to this office, from which the current referendum campaign has been taking place, there is the printing office from which all the educational

---

<sup>4</sup>The infamous *Caso Maruilla* added another bloody chapter to the history of Puerto Rico, when under Barcelo's administration three *indendentista* students were ambushed and executed by the policed. Years after the events the Government of Puerto Rico lunched and investigation in which the police offers were convicted of murder. Hight-ranking government officials were also accused of planning and covering up the incident.



literature circulating in Vieques is designed and distributed. The only newsletter in Vieques, *The Vieques Times*, widely read by the community, and of capital importance for the movement, is also produced and printed here.

I am still in shock by the way things are unfolding. In less than three hours I have not only met key activists from the different groups but also have visited one of the most important places in which the articulatory process takes place, *Alianza de Mujeres* and the printing office.

As usually happens while doing fieldwork, the anthropologist is not the only one asking questions, so I had to respond to Miguel's inquiries. Either because Miguel himself was more than aware of the dangers of historical amnesia and understood as essential the documentation of current events, or because previous contact with anthropologists makes him sympathetic towards me, or simply out of a vague paternal sympathy (one of Miguel's sons is close to my age) I think that he saw in me something like an apprentice. As such, and after taking Doña Isabelita and her companion to catch the 3 o'clock ferry back to Fajardo, Miguel decided to show me the rest to be seen of the complex network of people and groups infusing life to the mobilization against the U.S. Navy.

Our first, but quick stop, was in *Campamento Justicia y Paz*, which was right in front of *Camp Garcia* as a constant reminder to the U.S. Navy of the challenge to their military power. Between *Camp Garcia* and *Campamento Justicia y Paz*, on the other hand, a barricade of eight or nine Puerto Rican policemen were guarding the gate of the military base—serving as a counter-reminder as well—refer to Figures 2.4 and 2.5.

As Miguel explained to me, one of the first strategies of the civil disobedience movement was to take the entrance of the military base and establish a civil disobedience camp: which they did. But after the massive operation of May fifth, in which the protestors were arrested by the FBI, the Navy retook the entrance and placed a police camp exactly where



Figure 2.4: Campamento Justicia y Paz. Source: Taken by the author.



Figure 2.5: Camp Garcia's Gates Guarded by the Police. Source: Taken by the author.

the protestor's camp used to be. Even when the presence of the police was meant to intimidate protestors, the material remains of the previous camp and the paintings denouncing the military injustices –placed on the fence of the police camp– were simultaneously defying such attempts. The physicality of this geography, therefore, was inscribed with signs which were not only the result of current struggles but which were fighting signs themselves attesting a fierce struggle over meaning and who defines reality– refer to Figures 2.6, 2.7 and 2.8.



Figure 2.6: Shooting Range: Painting on Military Base's Fence. Source: Taken by the author.

Just like in Alianza de Mujeres, people in Campamento Justicia y Paz were getting ready for a march rallying option two in the *Referendum Criollo*: the immediate retreat of the U.S. Navy from Vieques.<sup>5</sup> So, after distributing among those present all the paraphernalia for the march

<sup>5</sup> El *Referendum Criollo* seek to clarify whether or not *Viequesenses* were in favor or against the U.S. Navy's presence in the island. After months of campaigns, the referendum took place on June 29, 2001, drawing a staggering 80.6 percent of the 5,893 registered voters. The outcome was that 68 percent of the *Viequesenses* voted against the Navy's presence in the island. While I was conducting my research, there were many rumors that the U.S. Navy was bribing possible voters to swing their vote in favor of the Navy. These rumors were confirmed when 4 years later, February 25, 2005, the Defense Department was forced to release the U.S. Navy contract documents showing the payment of \$1,699,830.00 to a public relations firm known as The Rendon Group with the purpose of influencing the outcome of the election. Source: <http://www.cadu.org.uk/info/countries/21.1.htm>.



Figure 2.7: Statue of Liberty: Painting on Military Base's Fence. Source: Taken by the author.



Figure 2.8: Pitirre: Painting on Military Base's Fence. Source: Taken by the author.

—Puerto Rican flags, bumper stickers, educational literature, etc. —we headed towards the first of the at least two barrios which we ended up covering in a tiring but exciting four hour walk— refer to Figures 2.9, 2.10, 2.11 and 2.12 on pages 56, 81, 82 and 83 respectively.



Figure 2.9: Part of the four hours march through Vieques' neighborhoods. Taken by the author.

My picture of Vieques, up to that moment, was based on my childhood and adolescent recollections of camping on beautiful beaches. So it was surprising to see both, how similar these barrios were to my own —a potpourri of wooden and cement houses intimately related by their proximity and their lack of economic resources —and how much they differ from the tourist side of the island.

Flowing like a leaf in the rush of the events I suddenly realized that perhaps it was not a good idea for my research to be seen my first day on the island in a rally that would situate me in one side of a polarized content, without even having the chance to talk to the other side, the pro-Navy people. But like a leaf being carried away by the wind, there was very little I could do. Besides, I also wanted the U.S. Navy to leave the island. Hundreds of people singing, a sea of Puerto Rican flags waving, people

handing pamphlets, was nothing new in Puerto Rico —one of the countries with the highest electoral participation in Latin America —and yet something in the ambience was very different. I think that it was the intensity of how people were experiencing the rally: it felt truly as a matter of life or death. I felt the march (and all the following activities that I attended) was charged with a strong solidarity, with consensus and when confronting with pro-Navy people it became charged with tension although not aggression. At most, some colorful verbal exchanges were made but rapidly stopped by the “peace staff,” a group of people in charge of making sure that things did not get out of control.

From the observation point of the civil disobedience movement, on the highest hill of the island (Monte Carmelo) I’m being observed from the other side of the fence by U.S. Marines while writing these lines.

Monday, June 29, 2001

The day of *el referendum criollo* arrived after weeks of campaigns, marches and protests. The tensions that saturated the ambience until that moment got disperse in front of the results — 80 % of the Viequeses voted for the immediate retreat of the U.S. Navy from Vieques — and festivity and joy overtook the masses that Monday— refer to Figure 2.13, on page 84. Or at least that was my first impression until a woman with tears in her eyes confessed me that she was not crying of happiness as everybody else was, but on the contrary she was crying out of angry because she just learned that that very day of referendum the battle ships for the next military practices where send it to Vieques— refer to Figure 2.14, on page 84.

The following day of *el referendum criollo* a march was organized to symbolically represent the death of option three and to give to the U.S. Navy and order of eviction from Vieques signed by the Alcalde of Vieques Damaso Rivera. A black casket was build for the purpose of putting inside of it all the propaganda of option three found on the way to Camp Garcia— refer to Figures 2.15, 2.16, 2.17 and 2.18, on pages 85, 85, 86,

86 respectively. Doña Carolina, the woman that talked to me the night before, was also in the march.

In her late forties, Doña Carolina responded to my questions of how did she got involved into the protests by telling me that she lived all her life in Vieques but the situation in the nineties got a bit difficult so she emigrated to California, where she had some family and where she got married. When two years ago the people of Vieques started to protesting and getting into the restrained military areas she flew back to Vieques to participate in the protests. Once in Vieques she got romantically involved with one of the fisherman who was actively involve in the protest so she divorced and stayed for good in Vieques. She was one of the many *Viequenses* who stayed in camps in the shooting areas for more than a year. When I asked her why was she doing civil disobedience she responded that,

“The U.S. Navy is killing us. There are people in my family with cancer. I myself have the vibroacustica disease. Sometimes I want to take up arms and fight them out— ‘sacarlos de Vieques a balazos’ (get them out at gunpoint) —so that they can try a cup of their own soup.”

My interest in Vieques started with a previous research experience (Summers of 1999 and 2000) in Central Mexico (Querétaro). I conducted research in María Magdalena, an economically marginalized community crossed by the Querétaro river which is highly contaminated by industrial waste. In this project it became clear that there was a correlation between disease associated to water contamination and a recently established transnational industrial complex. Although the health of the members of my study site was affected by industrial water pollution, they were not able to establish the connections between their health and the environment, minimizing the possibility for collective mobilization. I explored, in that pilot research, one of the processes by which a collective myopia was produced by the medical regime concealing devastating new environmental/health relationships.

In contrast to Querétaro, the people of Vieques, Puerto Rico, have successfully been able to organize and mobilize their different subject positions. This has enabled them to mobilize around issues of health and environment. To understand the success of Vieques' collectives mobilizations we need to look at the historical conditions that made it viable.

## 2.0.2 A Genealogy of Collective Actions

The struggle against the U.S. Navy has a long history. The Puerto Rican inhabitants of Vieques have been protesting the US occupation of their territory since 1941 when the U.S. Navy established their military base on the island. Through the following decades (sixties, seventies and eighties) there were numerous protests—not only about Vieques, but also about the colonial situation. However, the political ambience in Puerto Rico was not a fertile soil for such voices to be heard. During those years, the ambience was dominated primarily by the right wing party *Partido Nuevo Progresista* (PNP) or the conservative center party *Partido Popular Democratico* (PPD). These parties' political agendas did not include entering into anything that could appear antagonistic to U.S. colonial power. On the contrary, they strived to strengthen the U.S.-Puerto Rican relationship. Although Puerto Rico was not immune to the revolutionary effervescence stemming from the national liberation struggles of many former colonies (during and after the sixties), meaning that Nacionalistas waged armed struggle against U.S. colonialism, they were brutally oppressed by the Puerto Rican repressive state apparatus with the help of U.S. intelligence services. In addition, the ideological state apparatus assured that these ideas did not spread to the rest of the population through an educational system re/producing a non-conflictive US/Puerto Rican history. As Gramsci argued, a lasting articulation of a hegemonic bloc cannot rely on repressive power alone— for people learn soon to resist it—but must rely on discursive consent. In the particular case of Vieques, even though there were many protests in Puerto Rico regarding the Vieques/ U.S. Navy situation before, it was not until recently that the issue attracted not only national but international attention as well. Why now?



I argue that in order to understand this question we have to understand, among other things, the role that globalization has currently played in Puerto Rico, not only in relation with transnational flows of commodities but in relation with “transnational flows of moral values.” ideas and images (Wilson, 1997b; Hardt and Negri, 2000; Medina, 2001). I argue that transnational discourses, such as human rights, although historically serving as justifications for imperial expansion and colonization, are currently being used by countries of the South and oppressed minorities as a means of liberation. Vieques’ social movement, like the Hawaiian indigenous movement or the Zapatista movement in Chiapas, is an example of mobilization that was capable of successfully appropriating and deploying Western discourses of liberal-democracy and human rights, among others, to fight for their own causes.

While globalization seems to create cultural homogenization, as is with the case of human rights, development, biomedicine or environmentalism rhetoric, people do not relate to these ideas in the same way nor do they give the same meaning to them (Wilson, 1997b, 12). The interlinkages between webs of significance in multiple contexts enable transcultural appropriations, which “are fundamentally creative and represent forms of resistance to global homogenization” (Wilson, 1997b, 18). These transcultural discursive appropriations bridge huge distances through communications technologies, also enabling processes of long-distance identity constitutions and intersubjectivities. For instance, people in Okinawa also confronting socio/environmental problems caused by U.S. military bases are keenly aware of the Vieques’ strategies and mobilization to confront their common problem. They are not the only ones, however, as there is in fact an emerging and active network established which interconnects other movements as well. The subjectivity of people in the Vieques movement, on the other hand, has been reshaped by their awareness of their being subjects of international attention, as both agents of social change and models for other people experiencing similar circumstances in different places. Paradoxically, the establishment of these kinds of long-distance solidarity networks was possible because of the same historical processes that created globalization.

Globalization is characterized by the flexible and mobile organization across national

boundaries of capitalists' productive activities to reduce costs and maximize profit. While capital has always been mobile it is not until the seventies that mobility became the defining factor of capitalist production. As Harvey (1990) explains, in the U.S. economy there was a transition from Fordism based upon mass production and fixed capital to flexible capitalism based on subcontracting among other things (1990). During the seventies, international competition and OPEC's raising prices created a spiral of economic crises. The subsequent stagflation (or stagnation and inflation) forced corporations into a process of restructuring which required the abandonment of the rigidity of production processes that characterized the postwar economic boom. The set of strategies developed to cope with the economic and fiscal crises of those years (1966-1973) was mainly concerned not only with the acceleration of turnover time of production—as the dramatic deployment of new technologies in production (automation) and organizational forms (intensive subcontracting) testified—but also of the turnover time of consumption. As Harvey explains, “The relatively stable aesthetic of Fordist modernism has given way to all the ferment, instability and fleeting qualities of a postmodernist aesthetic that celebrates difference, ephemerality, spectacle, fashion, and commodification of cultural forms” (Harvey, 1990, 156).

This acceleration of turnover time in production and consumption has led to a shift from the production of durable goods to the production of ephemeral goods such as events and spectacles. I would argue that this very shift is what has made possible, in the case of Vieques' social movements, the manipulation of mass media to their advantage. However, mass media has not only been useful to Vieques' collective mobilization in rhetorical terms—with charismatic narratives of David vs. Goliath battles—but also in very instrumental ways—to document ongoing abuses, to exercise public pressure on the government or the Navy, and to protect people doing civil disobedience in the bombing areas. Yet this is not an innocent relationship because if it is true that the current context in which “live-spectacle” has made possible the visibility of Vieques' social movements, it has done so by way of its commodification (particularly by TV news and newspapers).<sup>6</sup> While the shift to the production of

---

<sup>6</sup>Live-spectacle of the kind found on the internet (with people broadcasting their lives online), on TV shows (like *Real Police*), and TV news (all with a “realist” emphasis on live experience” ).

ephemeral goods has opened up spaces of resistance in Vieques, it has also framed the limits of such resistance to the “logic” of accelerated turnover time. This is exemplified by Vieques’ activist awareness of how important keeping the “drama” going is to keep the public’s attention, which is what made the movement possible and successful in the first place. The public’s short attention span, on the other hand,—again structured by the logic of highly rapid turnover time—has proven to be one of the most difficult challenges facing the Vieques movement, which has nonetheless been able to sustain itself within this context by creating symbolically powerful cultural productions. For instance, in one of the marches organized by *Comite Justicia y Paz* (an activist organization in Vieques) people carried to the Camp Garcias’ gate coffins representing cancer deaths in Vieques. Another, and probably the best example of this cultural resistance (by means of using the “logic” of the acceleration of turnover time) is the participation of very important figures in the entertainment industry—both in the U.S. and Puerto Rico—in civil disobedience, which is transmitted live through TV from the moment they enter the restricted areas to the moment they are arrested. Other instances include those of famous local and international singers (such as Cuban composer and singer Sylvio Rodrigues, Argentinean singer Mercedes Sosa, among others), who compose music and lyrics, and record videos benefiting the people of Vieques.

From these examples it becomes clear that the shifts in the economy that enabled the movement of commodities globally, has also enabled the circulation of important discourses such as the human rights and liberal democracy. As Laclau explains,

... the democratic principle of liberty and equality ... as the new matrix of the social imaginary. ... constitutes a fundamental nodal point in the construction of the political. ... [This nodal point] would provide the discursive conditions which made it possible to propose the different forms of inequality as illegitimate and anti-natural, and thus make them equivalent as forms of oppression. Here lay the profound subversive power of the democratic discourse, which would allow the spread of equality and liberty into increasingly wider domains and therefore act as a fermenting

agent upon the different forms of struggle against subordination (Laclau and Mouffe, 1985, 155).

The success of Vieques' social movements has depended upon the appropriation of these discourses. These discourses, or as Appadurai has called them, "ideoscapes," have made it possible in Vieques for an ensemble of ideas and values (those of human rights, environmentalism, and particularly peace) to be shared by groups that were otherwise antagonistic, thus making collective action possible.<sup>7</sup>

What is new and theoretically relevant about these social mobilizations is their rhetorical shift from previous collective mobilizations. After the military expropriation of land back in 1940, the struggle in Vieques was framed in terms of an anti-colonial struggle (1950-1980). As I previously mentioned, during the Cold War, Leftists' movements were repressed and kept at bay from public debates. During the 80's, collective mobilization tried to bring to the forefront issues of economic development, such as the case of fishermen in Vieques. While moderately successful in attracting media attention, they were incapable of fostering popular support. It was not until late in the 90's that collective mobilization not only won popular support but international recognition. Collective mobilization in Vieques deployed discourses framed in terms of health, environment and human rights. These discourses were less obviously threatening to the status quo, hence they gained widespread support in the public arena. By shifting their discursive strategy from the realm of "politics" to the realm of the "body," *Viequenses*, for the first time, successfully hailed, enrolled and built significantly strong and numerous coalitions with historically opposed religious, political and social groups.

It is only in this light that we can understand how for the first time in Puerto Rican history a right-wing governor and president of the PNP, P. Rossello, demanded, in a U.S. congressional hearing about Vieques in 1999, the immediate withdrawal of the U.S. Navy from Vieques (even if later he had to retract his position).

---

<sup>7</sup>Ideoscapas are fluid configurations of "ideas, terms, and images" that circulate globally (Appadurai, 1996, 33,36)

The formation of a collective will around the issue of Vieques was possible because the contradictions of the discursive formation in place—that of the colonial regime and its normative institutions justifying military occupation—became evident. As Laclau (1985) argued, discursive formations are never totally sutured, for they can never encompass all possible meanings. Environmental and health crises such as the ones found in Vieques overflow biomedicine's atomistic discourses with a plurality of meanings. This overflow of meaning is the result of very material (if always semi-otic) socio/environmental relations. If we agree with the idea that people's identities are in part shaped by dominant discursive formations, then any instability of these formations must affect people's self perceptions. As Laclau explains,

the subject is constructed through language, as a partial and metaphorical incorporation into a symbolic order, [and that] any putting into question of that order must necessarily constitute an identity crisis" (Laclau and Mouffe, 1985, 126).

In the case of Vieques, this identity crisis goes beyond the discursive realm in that it becomes evident when through the proliferation of sick bodies. The junctural space where "environments," "bodies" and "military practices" meet allows *Viequenses* to see the colonial contradictions in a different light.

Because the established medical regime was not able to satisfy people's quest for an explanation of the high incidences of disease, people started to organize around that issue. This organizing put pressure on the medical institutions in place to investigate people's "suspicions" about the negative impact of the military practices on people's health.

The movement's success has to also be understood in terms of the particular political situation of Puerto Rico in relation to the status quo. The organizing was successful in applying pressure because, among other things, at that particular moment the movement (1998-2003), the ambience was such that the government could not easily dismiss public concern. The reason: elections were close to taking place. Vieques' social movement was effective in capturing attention by employing a rhetoric with

the capacity of enrolling people on the basis of morality: it would have been immoral to overlook the fact that children were dying in Vieques.

Because the Vieques situation involved children's health in a context in which childhood is regarded as pure, innocent, and therefore removed from "politics," it was safe for mainstream politicians to include the issue in their political platforms. Each one of the three parties PNP, PPD and *Partido Independentista Puertorriqueño* (PIP) had to make the necessary adjustments in relation to how they framed the issue without contradicting their philosophical stance in relation to the colonial status.

The Partido Nuevo Progresista (PNP), the right wing party, was the most hesitant in getting involved in the Vieques issue. The reason is that they see any relation with the U.S., even the military one, as a means to secure good political relations that, they hope, will pave the way for the annexation of Puerto Rico as the 51st state. Anything that might be interpreted by them as sounding "anti-American" is immediately cast as heresy because of its potential to jeopardize annexation. Very recently (Summer 2001), because of their conservatism, great internal conflicts developed when some members of the party supported the Vieques' movement—in opposition to the senior patriarchs like Ferre and Romero. The most publicized example is that of Norma Burgos, who held an important position within the party, and who, because of her participation in civil disobedience, was recently incarcerated for a month. From the strategic point of view of party politics it makes total sense to get involved in the Vieques movement in order to regain some of the support lost because of their conservative political stance.

On the other hand, the left wing party, *Partido Independentista Puertorriqueño* (PIP), was the most invested of all parties in the Vieques' movement. For instance, the president of the PIP, Ruben Berriós, spent a whole year of civil disobedience in the restricted area of the military base for which he was later incarcerated for more than six months. The reason for this commitment has been that their understanding of the situation is framed in terms of the colonial condition. Thus, Vieques is but a microcosm of Puerto Rico. Their political stance with regard to the status quo of

Puerto Rico is that the only possible solution for colonialism is independence.

The center party, *Partido Popular Democratico* (PPD), was also vocal about Vieques' case. Their status quo rhetoric, based on the idea of "enjoying the best of two worlds," enabled them (at that moment) to swing their discursive pendulum to the nationalist side, appropriating *Independentista's* rhetoric and symbols to ally themselves with the Vieques movement. By framing the Vieques situation in nationalistic terms but without bringing the colonial status to the foreground, the PPD was the most effective in monopolizing the situation. The difficulty with their maneuver has been that after two years in power they are incapable of delivering that which the masses demand, the immediate withdrawal of the U.S. Navy from Vieques, clearly exposing the limits of the "Commonwealth" and adding yet another layer to the meaning of colonialism in Puerto Rico. The implications of these processes are the availability of new repertoires of subject positions (even if still using the same old symbols). For instance, a new iteration of the reaffirmation of a "Puerto Rican Self" in the context of an imagined nation which finds itself in a non/imaginary colonial order.

What is important, for now, is that even with different degrees and at different moments the three parties were able to attract public opinion to their side by deploying Vieques' situation. The converse is also true, and even more important; Vieques' movement was able to articulate a collection of discursive repertoires with the capacity to interpellate people in subject positions quite opposite to their previous ones, establishing alliances across political axes.

The legitimation of the status quo, therefore, becomes challenged and layers of meaning that were not broadly circulating or were not even available to the masses, suddenly nurture public opinion, giving people ammunition to pressure into action certain institutions (political parties, government, the Health Department, etc). As a corollary to this, the legitimation of practices and world-views within key institutions are also challenged.

### 2.0.3 Health: The Missing Link

Since the U.S. Navy expropriated 2/3 of the land during the 40's, Vieques has been used for military exercises. These exercises include: air, land and sea bombings, the shooting of live ammunition (napalm and shaft), and mining areas for training, among other exercises. However, it was not until the early 1980s that residents started to notice that more and more people were becoming sick in their community. Seeing cancer diagnoses increase within the community, a group of people demanded that the Puerto Rican Department of Health study the ongoing increase of health risks. The findings published in 1997, were clear; the people of Vieques had a 27% higher risk of getting cancer than inhabitants of other municipalities in Puerto Rico. Medical authorities therefore recognized that people's perceptions about increases in health risks were more than "hysteria."

Although island residents and the Department of Health agreed about the existence of high health risks, contestation continues as to the origins and causes of the problem. Community members argued that there was a correlation between rising cancer rates and changes in U.S. Navy military practices. By contrast, the Department of Health maintained that the cause of higher cancer rates is grounded in the community's "life styles and individual behavior." The community members vociferously offended by this conclusion, turned to the School of Public Health at the University of Puerto Rico for a re-evaluation of the data. The School of Public Health corroborated the Department's epidemiological conclusions, but disagreed with the Department's emphasis on life styles and behavior. As explained by epidemiologist Cruz Mara Nazario, "You cannot say that [John Doe]'s cancer is because of his smoking habits if you never tried to ask him if he was a smoker!"<sup>8</sup>

A central question puzzling epidemiologists remained. If, in fact, the decline in public health was derived from naval activities near the Puerto Rican communities on Vieques, neither the mechanism nor proximate cause(s) of the problem was clear in

---

<sup>8</sup>Translation mine. Cruz Rivera is the head epidemiologist of the School of Public Health. Interview recorded on August 17, 01.



the early 1980s. In 2000 activists discovered that the Navy had secretly used depleted uranium bombs during their military practices prior to the 1980s. Depleted uranium is carcinogenic. This, combined with other evidence of historical chemical weapons testing on the island,<sup>9</sup> heightened the controversy.

## 2.0.4 Methodology

I aim to develop an understanding of how drastic environmental changes affect people's perceptions of health, disease and self within their everyday lives. In other words, how people constitute their selves out of their "local" environment— even more so when both are entangled in relations stretching beyond local and personal boundary projects. In this sense, people's identity and perceptions are actively forged by a historically situated embodied-self engaged with complex socio/environmental relations.

By looking at the agency of people's articulations of their subject positions— through the standpoint of their engagements with a changing environment— I maintain we can gain insights into new processes of identity formation. This is true in contexts plagued with contestation over health and environment. As we will see in chapters to come I compare how lay people, scientists and government articulate competing discourses on disease etiology, as these feed into forming new identities leading to collective action.

For my dissertation I relied on: (1) archival information (2) peoples narratives and (3) ethnographic data.

1st Phase: During the first part of my dissertation I reestablished rapport with both Vieques' community members and local scholars. Particularly useful were my conversations on epidemiological aspects of my research with Dr. Cruz María Nazario, head of the School of Public Health at the University of Puerto Rico. Her collabo-

---

<sup>9</sup>As recently as October 7, 2002, high officials of the Department of Defense admitted the utilization of Vieques in 1969 to carry experiments with chemical weapons, particularly "trioctyl phosphate." This is another known carcinogenic.

ration provided me with advice and vital archival health information regarding the ongoing studies done by different institutions in Puerto Rico. This opportunity gave me unique access to documents produced by institutions such as: the Department of Health and the School of Public Health. Originally I planned to also look at the *Archivo Histórico de Puerto Rico* and the *Museo de Historia de Vieques*, but time restraints prevented this. I researched newspapers to reconstruct the different debates and public perceptions over health and environment across time. This information coupled with in-depth interviews enabled me to compare different actors' articulations of competing discourses. During this phase I also pre-tested my survey instrument.

2nd Phase: I gathered localized public narratives on health, illness, and environment. Recollecting these narratives allowed me to identify what particular discourses, stories, and conceptions people use to produce collective meanings of their oppressing circumstances. Since I am interested in documenting changes in health, disease, and environmental perceptions across time, I asked questions in which participants retrospectively recounted such changes in relation to their biographies.

Examples of some questions I used are: What does it mean for you to be healthy? What does it mean for you to be ill with a debilitating illness, not just a cold? What things do people get sick with around here? What is the most important health problem that you have confronted within the last twenty years? When did you realize that something went wrong? Did a doctor diagnose it? In what ways has that affected your life? How have you confronted it? What do you think is the cause (or causes) of your health problems?

I gathered this information with an ethnographic survey. The ethnographic survey differs from the traditional survey in that it emerges from a previous fieldwork experience. “[Its] strength lies in the fact that the survey variables and items emerge from the local context. The local foundations of the survey enhance its validity” (Schen-sul et al., 1999). During my first visit (summer 2001), I conducted pre-dissertation fieldwork in Vieques. It is out of this experience that I prepared the ethnographic questionnaire I used in my dissertation research. I used a nonprobability sample

getting a cross-section of the population. This method yields information on similarities and differences in health perceptions along generational, class and, gender lines (Schensul et al., 1999). Because I used a nonprobability sample, I aimed my ethnographic survey to different actors (such as activists and nonactivists) making it possible to explore various views (Bernard, 2002). The definition of these different actors stemmed, as much as possible, from peoples' own terms— the ethnographic survey served this purpose. During my three summers (2001, 2002, 2003) doing research in Vieques I formally did in-depth interviews with over 50 people. In my daily interactions, however, I talked to hundreds. I interviewed both residents who were not involved in the movement as well as activists from both rural and urban areas. Nonetheless, because I was interested in the emergence of social movements I focused more on *Viequenses'* activists. Since I am looking at changes in health perceptions in a span of twenty years, I mostly interviewed people who were older than 30, and therefore, who could retrospectively talk about such changes. Given that women's participation in organizing and participating in different activists' mobilization I spent a great deal of time speaking with them.

3rd Phase: The ethnographic survey provided me with exceptional cases in Vieques that later I followed up with in-depth interviews and oral histories. It was through these oral histories that the relationship between health, health risks and individual biographies in their linkages with collective mobilization later became evident. As both a method to conduct and analyze interviews I paid attention to: 1) Moral language, 2) Meta statements and, 3) Logic of the narrative (Anderson and Jack, 1991). Listening to people's moral language enables us to understand how people evaluate and construct their notions of self by whether they comply with the socially assigned roles as they are revealed by their own explanations. "Meta-statements," on the other hand,

alert us to the individual's awareness of a discrepancy within the self— or between what is expected and what is being said. They inform the interviewer about what categories the individual is using to monitor her thoughts, and allow observation of how the person socializes the feeling

or thoughts according to certain norms (Anderson and Jack, 1991, 22).

By looking at the logic of the narrative we can start “noticing the internal consistency or contradictions in the person’s statements about recurring themes and the way these themes relate to each other” (Anderson and Jack, 1991, 22).

4th Phase: In my research, consciousness cannot be separated from the experiential body because it is in the body that environmental contradictions get expressed and from the body that any awareness of, and action against, such contradictions might emerge. Because of this, I was particularly observant of narratives that illustrated embodied understandings of the rapidly changing health and environment landscape. I sought “to take the body as a methodological starting point rather than consider the body as an object of study” (Csordas, 1993, 136). As the case of Vieques illustrates, it was through the body – as the eventual register of epidemiological changes— that people’s political awareness awakened. Thus, redefinitions of the self while discursively informed were mostly experientially rooted. This observed epistemology of the body – that is, how people came to generate new knowledge and understandings of their surroundings and of them selves through their bodies— informed my own emphasis on recognizing “embodiment as the existential condition in which culture and self are grounded” (Csordas, 1993, 136).

Participant observation enabled me to follow how Vieques’ inhabitants generated etiological explanations out of their living experiences and their engagements with and movements across a shifting militarized landscape (Ingold, 2000). In order to get at how people perceived their militarized landscapes, I attended to the ways in which their sensory descriptions— particular ways of hearing, seeing, smelling and moving their bodies – articulated processes of orientations and of attending the world that informed and as informed by (and perhaps created) social practices of resistance. As Geurts (2002) explains,

We routinely engage in (culturally constituted) interaction or practices that are governed by the meanings assigned to (or ways of interpreting)

certain smells, sounds, touches, tastes, and so forth. In turn, the orientations one develops toward smell, sight, sound, and such, are part of what shapes certain cultural practices (Geurts, 2002, 235).

Moreover, as she reminds us,

the senses are ways of embodying social categories. [hence] how one becomes socialized toward the meaning of sights, sounds, smells, tastes, and so forth, represents a critical aspect of how one acquires a mode of being-in-the-world, or an “individual system of experiencing and organizing the world” (Geurts, 2002, 232-33).

By attending to people’s narratives of how they experienced smells, sounds, tastes, in relation to the militarized landscape, allowed me to take part in people’s everyday life activities “as one of the means of learning the explicit and tacit aspects of their life routines” (DeWalt and DeWalt, 2002). This approach radically differs from others in that it is not based on a disembodied gaze. This method gave me a glimpse into the ways in which the people of Vieques intersubjectively generate meta-narratives and social practices to reframe their identities (Laclau and Mouffe, 1985; Medina, 2001).

### **2.0.5 Participant Observation, Personal Experience and Activism**

Very much in line with feminist scholars, my methodologies and theories are grounded on who I am and where I come from. From the academic point of view, my initial interest in environmental issues is based on a previous research experience (Summers of 1999 and 2000) in Querétaro, Central Mexico. In this project it became clear that there was a correlation between disease associated with water contamination and a recently established transnational industrial complex. Although the health of the members of my study site was affected by industrial water pollution, they were not able to establish the connections between their health and the environment, minimizing the possibility for collective mobilization. I explored, in that pilot research, one

of the processes by which a collective myopia was produced by the medical regime concealing devastating new environmental/health relationships (Taussig, 1980).

At the same time I was doing research in Mexico, Vieques' social movement exploded around the very same issues in which I was interested. In contrast to Querétaro, however, the people of Vieques were successful in organizing and mobilizing their different subject positions around health and environmental problems. As a Puerto Rican I decided to change my research site to Vieques. My interests in Vieques, however, go beyond the academy. They are tied to my personal experiences with social inequality and with illness.

I come from a working class neighborhood in San Juan in what used to be a squatter settlement back in the 1930's. Coming from such a context of socioeconomic deprivation made me wonder from an early age about the causes of my family's marginal condition. I vividly remember how difficult it was for my mother trying to answer my early inquiries about our situation. It was not until I grew older that I could name what until then were for me the hidden forces that once subjected many to an unprivileged condition. In the university I learned to name the historical, economic and political reasons that explain my personal experience growing up in Barrio Obrero.<sup>10</sup> Education served me as a way of escaping those alien forces. My escape has indeed taken me a long distance and away from my place of origin. And yet no matter how far or how educated I am the forces that before subjected me, and many others, to a marginal condition can still exercise over me their invisible powers. I experienced their full blow a few years ago, while working on my Ph.D., when my mother was diagnosed with colon cancer. I could not but wonder if the places in which we lived, public housing projects, which until recently were constructed with

---

<sup>10</sup>Barrio Obrero is located in the periphery of the Central Business District (CBD) in San Juan, the capital of Puerto Rico. The squatter origins of Barrio Obrero began in the 1960's when the industrialization process in Puerto Rico prompted large influxes of migration from the rural areas and the subsequent inhabitation of wet lands. Coming from that particular urban environment means that one belongs to a group that, by definition, is marginalized. This marginalization is not only reflected in the obvious economic and material factors but also in the negative representation of this social group by the mass media, the ruling classes and the government. As a result, the place and its inhabitants are discriminated against as a whole, with an exogenous, undesirable, and a flattened identity imposed on them that is both unfair and inaccurate.

asbestos (a known carcinogenic), were responsible for her disease. The concept of environmental inequality, since then has acquired a new and painful meaning that is constantly feeding and guiding my personal and professional interests. I have to briefly include my tribulations as a son of a cancer patient for they point to important continuities with the Vieques situation.

After a whole year of going to the public hospital to treat what we thought was a bad case of hemorrhoids, the doctor ordered a biopsy that yielded positive for cancer. Here is where the odyssey started. Since the mid nineties Puerto Rico, just like many other Latin American countries, began implementing a draconian regime of neoliberal policies with the result that health care, formerly provided by the state, was now privatized. The basic assumption of privatization is that health care services will improve because people will be paying for better care. This logic might hold true for the social classes with resources but not for the majority of the people in Puerto Rico. HMOs are popping up now like fast-food restaurants, and like fast-food chains they are competing not only for clients/patients but also to capture governmental monies that subsidize the unprivileged. But if fast-food is not good for your health, neither are these HMOs. The level of absurd bureaucratization would astonish even Franz Kafka –the German-Jewish writer who succinctly depicted the alienating and disempowering effects of confronting a bureaucracy in novels such as *The Castle* and *The Trial* (Kafka, 1957).

Although my mother received the radio and chemotherapy in Centro Medico, the main state hospital on the island, the follow-up visits after the treatment were to take place in the HMO of Barrio Obrero, which is where we lived. Not only was the number of patients seen in that clinic colossal, but so was the waiting time to get an appointment let alone to see a doctor. In the case of my mother, she needed to see a colon chirurgical specialist. We went to at least six different offices, in different locations, and argued with many uninformed and plainly ignorant health care representatives to get the required signatures to approve the treatment. Needless to say, all the offices that we went to were in the same situation as the HMO of Barrio Obrero. It took us more than a month to get the appointment with the surgeon. I am a young, well-educated

and energetic person and for me going through all the bureaucratic channels was a frightening, dreadful and exhausting experience. I could not but think what would be of my mother had I not been there. What is more heart breaking is to know that many older people like my mother, do not have the energy nor the help from other people to go through those trials to get health care attention. Not only do they have to confront the scary situation of being sick, but they also have to fight the monster of bureaucracy all on their own.

This personal account offers a glimpse into the implications of neoliberal policies and the subsequent privatization of health care services in Puerto Rico that a Political Ecology of Disease approach can elucidate. My class-situated account also illustrates that not only are chronic diseases unevenly distributed but so is access to health care. Moreover, the production of unhealthy toxic environments— such as the public housing projects built with asbestos in which I lived with my mom – are disproportionately absorbed by the most unprivileged sectors of the population.

These personal experiences did more than just inform my interests and theories, for they deeply informed my methodology. While participant observation is usually defined as the active engagement in people's daily activities to gain understanding, this literature very randomly discusses the meaning of this method in a highly politicized context such as Vieques. Civil disobedience was in Vieques part of people's daily life experience. My decision of getting involved in civil disobedience, however, did not stem from methodological concerns but rather it emerged out of the anger in learning about the health situation in Vieques. I went into the firing range with a brigade of eight people. We hid during four days and we walked at night until finally reaching our target: to stop military practices by serving as human shields against the bombs fired from different Navy ships. We did disrupt military practices for that day, but we were also arrested. I spent two days in jail and I was sentenced to a year of probation time that forbade me from traveling. In what follows I include my self-defense statement in the U.S. District Court legal case against me. I do so to illustrate the ways in which embodied experience has the power to change people's subject positions in the context of health and environmental crises.



TO: U.S. District Attorney Vega  
FROM: Víctor M. Torres Vélez  
DATE: September 7, 2001  
RE: Civil Disobedience

On August 5th 2001 I was arrested in Camp Garcia's firing range for civil disobedience. That is, serving as a human shield against the U.S. Navy's bombing in Vieques. Mr. Vega, I accepted the evidence presented against me, Víctor M. Torres Vélez -- born and raised in Barrio Obrero, Santurce. I authorize my lawyer, Mr. Lora, to represent me in my absence in this legal proceeding. Nonetheless, I cannot finish this letter without clarifying the reasons for my involvement in the civil disobedience movement against the presence of the U.S. Navy in Vieques and their genocidal military practices...

Currently I am finishing my Ph.D. in Socio/cultural and Medical Anthropology. I was in Vieques conducting research for my dissertation. I was interested in understanding people's notions of disease and the level of their articulation in terms of their relationship with the environment and the U.S. military practices. Even when I was familiar with the statistics about cancer and respiratory disease in Vieques, I was not prepared for what I witnessed on the island. How could I just observe and document without getting "that involved" when the people I was interviewing are forced to live their lives in a war zone? How could I just observe without getting "that involved" when there are children and elders dying of cancer and other diseases because of the U.S. Navy's military practices? When I arrived at Vieques, even though I totally supported the struggle to evict the U.S. Navy from the island, I was not planning to get in the shooting area. Nonetheless, after I have seen with my eyes the disastrous impact of the U.S. Navy on people's lives, serving as a human shield was but the least thing I could do to be in peace with my conscience.

Víctor M. Torres Vélez

Ph.D. Candidate Michigan State University

I am not the first anthropologist – nor will I be the last – to get “that involved” with the research site. In fact my experience is similar to that of other anthropologists. For instance, Amadiume’s (1993) experiences resonate deeply with my own situation in multiple ways. The colonial situation motivated Amadiume to conduct her fieldwork “back home,” just as it has motivated my decision to do research in Puerto Rico.<sup>11</sup> Because “the Social Science Research Council of Great Britain viewed fieldwork as something done by strangers and not by those returning to their own society” Amadiume did not receive funding, having to raise it herself (Amadiume, 1993, 183). The situation with U.S. granting agencies is not different from Britain, meaning that if I did not do fieldwork “abroad” I could not apply to important sources of funding. Moreover, because granting agencies make their decisions based upon the “feasibility” and “validity” that “objective” researchers provide, I had the challenging task of framing my research proposal in their terms. This proved to be difficult not only because I am from Puerto Rico and I was personally engaged in the Vieques situation, but also because of the politicized nature of my research site.

In her field experience Amadiume (1993) had to come to terms with what she observed to be an unjust situation – the whitening in power of matriarchal institutions in front of British imposed political ones--by negotiating what was her positioning from the outset. Just as for me it was not an option to remain as an objective observer while the U.S. Navy was bombing Vieques yet another time--despite the proofs of the devastating consequences for the health and well-being of the inhabitants of the island – for Amadiume (1993) it was not an option either. Nonetheless, my in-

---

<sup>11</sup>The history of anthropology is inextricably tied to colonial and neo/colonial projects and in fact I always hoped that my work was going to be part of the critique of such projects as a “native anthropologist”: as a subaltern voice screaming that which has always been silenced. Even when I still think this way, I have come to realize that my positioning is not as clear-cut as a thought. It is not enough to think that your work is not going to be part of such a colonial project; when the very existence of the discipline in which I am trained came about as a result of that, when the very methods I am using situate me as an observer even if they propose participation, when even this exercise of writing my thoughts becomes highly questionable if I consider for whom I am writing them.

volvement did not put at stake my position as a “wealthy and powerful ancestress” (Amadiume, 1993, 197) similar to the case of Amadiume. Where she decided to draw the line—by “not taking up their [women’s council] request to speak to the men in the ruling council on their behalf and by not challenging those writing the constitution of Nuobi to make sure that they included women in it” (Amadiume, 1993, 195)—I decided to go ahead and join the civil disobedience taking place in Vieques. Thus, while hoping to continue “the political struggle with the pen” I also decided to position myself with respect to what I was witnessing, not just as an observer but also as an actor. My positioning as an “activist,” nonetheless, should not be understood as altruistic or heroic but as one that evolved out of the contingencies, pressures and negotiations of how people perceived me and placed me and how I perceived myself in a context of political tensions and suspicions.

Allen Abramson (1993) is another anthropologist with similar experiences. In his article, *Between Autobiography and Method: Being Male, Seeing Myth and the Analysis of Structures of Gender and Sexuality in the Eastern Interior of Fiji*, he is concerned with exploring the way in which both people involved in our anthropological studies and the anthropologist him/her self are mutually transformed by their interaction.

Although, Abramson’s (1993) treatment of the “village” as isolated and culturally bounded is highly problematical — as it overlooks transcultural exchanges taking place even before the colonial period — his point that the anthropologist can become subjected to “the logic of categories” of the group under study is important. Just as Abramson’s (1993) “strangeness” was accommodated and incorporated within the “mythical” structures of the Fijians — meaning that he was given a place and was expected to act accordingly — my involvement in civil disobedience was partially shaped by a similar semiotic incorporation of my presence in Vieques. The reinforcement and constant circulation of discourses of involvement and action as the most valid way of demonstrating belongingness, therefore was fundamental to my positioning as an activist. Retrospectively, the way in which some people perceived me as an FBI agent — because of the history of colonial oppression and surveillance — definitely limited

my participation and the types of activities that I was entitled to attend. The following excerpt is from my field-notes and illustrates this community's placing of the anthropologist within the community's narrative structures and the anthropologist's attempt of re-situating himself.

After several days of playing the anthropologist with that obsessive habit of taking notes all the time in different marches, protests and disobedience's camps some faces started to become not only more familiar but more curious about who I was. This was the case with Eric who after approaching me in Monte Carmelo—identifying himself as a *Viequense* - inquired without hesitation who the heck I was and what I was doing there. I knew that many people were a bit nervous because of my presence and many joked about me being an FBI agent, but I also knew that those jokes meant more than that. I understood why he was questioning me, but this did not make me feel any better because I felt that not only was my identity as a Puerto Rican being questioned but also this questioning somehow aligned me with the U.S. colonial regime. My immediate reaction - unconscious and at times conscious was to establish right away my "Puerto Ricanness" by making clear my working class origins growing up in Barrio Obrero: "Mano yo soy de'l Barrio y como dice la canción: de Barrio Obrero a la Quince un paso es." It is clear now that not only for the purpose of dispelling peoples' fears about me being an agent but also for my emotional well-being I was prompt to establish rapport through my ethnicity and my empathy for their situation— even when my other positioning as a graduate student in anthropology trained in a US university made me feel I was inhabiting a paradoxical space (Field notes, summer 2001).

Abramson (1993) in this respect is right, "what the ethnographer sees is a function of where he is placed, what is presented to him, and what he is prevented from easily seeing" (Abramson, 1993, 70). The circulation of discourses of active involvement

in civil disobedience, on the other hand, while in tune with my own political ideas, also provided me with the means from which to be relocated in a different subject position: from an FBI agent to another Puerto Rican in solidarity with the cause if able to pass the ultimate rite of passage (serving as a human shield in the bombing areas).

Abramson (1993) describes a process by which ethnographers stop being him/her self because of the fact that within the research context the ethnographer is devoid of a personal history. As he explains, “self-image has no introspective reality of its own” (Abramson, 1993, 74) and your identity has to be constituted through the constant performance of symbolic actions that inscribe you in a particular way. Although my semiotic competence in terms of the history of colonialism in Puerto Rico and my working class origins enabled me to draw upon key discursive repertoires to negotiate my positioning within Vieques civil disobedience groups, my subjective repositioning—and I suspect the subjective positioning of many others—includes coercive aspects such as social pressures, jokes, gossip, shame, embarrassment, etc. which are present in all community building projects and yet are little discussed in the literature. That is why my positioning as an “activist” should not be understood as altruistic or heroic but as one that evolved out of contingencies, pressures and negotiations as well as out of my political views against the colonial situation and the U.S. military presence in Puerto Rico.



Figure 2.10: Campaigning for Option Two: Posting Signs. Source: Taken by the author.

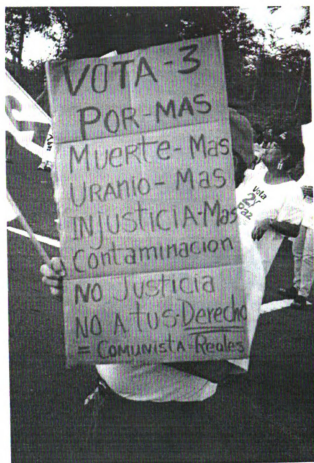


Figure 2.11: Campaigning for Option Two: Handmade Poster. Notice that in this poster the pro-Vieques respond to being accused of communist by saying that the “real communist” is the Navy. Source: Taken by the author.



Figure 2.12: Option Three Poster: Marx the Specter of Communism. In this poster, the pro-Navy campaign depicts option two as in favor of communism. Source: Taken by the author.





Figure 2.13: *El Referendum Criollo's*: Option Two Victory. Source: Taken by the author.



Figure 2.14: *Referendum Criollo's*: Victory Option Two. Source: Taken by the author.



Figure 2.15: *Referendum Criollo's*: The Death of Option Three. Source: Taken by the author.



Figure 2.16: *Referendum Criollo's*: The Death of Option Three, Arriving to Camp Garcías' Gate. Source: Taken by the author.



Figure 2.17: *Referendum Criollo's*: The Death of Option Three: Digging Up the Hole. Source: Taken by the author.



Figure 2.18: *Referendum Criollo's*: The Death of Option Three: Buried in the Grave. Source: Taken by the author.

## Chapter 3

# The Making of a Militarized Landscape

Sixty years ago Vieques, Puerto Rico, was a tranquil island in the Caribbean where inhabitants had a life expectancy of 75 years. By 2000, the life expectancy on the island had dropped significantly and the island was the site of demonstrations by people from all over the world. What are the links between the changes of life expectancy, the social movement centered on Vieques, and how people understand the changes in the environment?

I will answer these questions by exploring the intersection of health, environment and the military/industrial complex in Vieques, as it relates to questions of structural change, human agency and socio-cultural reproduction. Rather than assuming the negative “impact” of globalization, I will show the ways in which local actors shape structures imposed upon them.

I argue that despite the extensive geographical expansion of flexible capitalism, the site of accumulation is more than ever situated in subaltern bodies racially, ethnically and culturally marked as different (Hall, 1991; Harvey, 2000). Moreover, I argue that this intensified bodily exploitation has also made them intimate “sites” in which socio/environmental contradictions are more blatantly expressed (mainly through disease) and as such they are the ultimate “sites” of material-semiotic struggles (Harvey, 1999; Lowe, 1995; Morgan, 1987; Taussig, 1980). The body becomes a site of mate-

rial struggle in the sense that people are physically affected by chronic diseases and their everyday activities. It becomes a site of semiotic struggle in the sense that the diseased body becomes a symbol of people's suffering and a reason to participate in the social movement. Hence the importance of understanding *Viequenses*' subaltern bodies, not only as sites of subjection and accumulation, but also as sites of resistance. While people resist this "at a distance" process of exploitation, from the specificity of Vieques' locale, their resistance also draws from far away resources. It is this combination of a locally rooted and yet transnationally connected resistance that in part explains *Viequenses*' rearticulation of their identities in political terms (Schein, 1999; Wilson, 1997b). However, my analysis of this rearticulation is not to be mistaken with theories that conceptualize identity in nihilistic and ahistorical terms (Hall, 1990; Harvey, 1990; Rouse, 1995; Tsing, 2001). As some authors have pointed out, nihilistic characterizations of unconstrained "flexible identities" are more revealing of the influence of capitalists' restructuring on theory than of that which they attempt to represent (Hall, 1991; Hardt and Negri, 2000; Harvey, 1990). It is no coincidence that the new identity of capitalism is described in the same way as postmodern theories of identity: that is, flexible, mobile and volatile.

While accounts of identity formation have been "problematized and rendered increasingly complex by recent debates, the notion of place has remained relatively unexamined" (Massey, 1994, 167). Space has been overwhelmingly treated, theoretically and therefore empirically, as an empty recipient divorced from time and place. Some authors have argued that this transhistorical notion of space as abstract, which has systematically concealed space as a social product, constitutes the very regime of power in which "we" live: that of "modernity" (Lefebvre, 1974). Spatial domination, therefore, is achieved by this concealing of the production of space and its internalization as something external – through the particular configurations of spaces and legitimating discourses. This violence of abstraction is only possible by devoiding space of the historically contingent bodily-lived practices and experiences of everyday life that produced it (Lefebvre, 1974). The concept of place, by the same token, is always associated with the "local" as it is considered an "indigenous source of cultural

identity, which remains “authentic” only in so far as it is unsullied by contact with the global” (Massey, 1994, 15) . This notion of place not only implies that the identity of places is constituted through inside/outside boundary distinctions but also implies a notion of cultures as discrete entities inherently territorialized (Gupta and Ferguson, 1997).

Instead then, of thinking of places as areas with boundaries around, they can be imagined as articulated moments in networks of social relations and understandings, but where a large proportion of those relations, experiences and understandings are constructed on a far larger scale than what we happen to define for that moment as the place itself, whether that be a street, or a region or even a continent. This in turn allows a sense of place which is extroverted, which includes a consciousness of its links with the wider world, and which integrates in a possible way the global and the local (Massey, 1994, 155).

Drawing from this idea, that places are formed by social relations contained within them and stretched beyond them, I want to reveal the processes by which Vieques has been produced as both a space of domination and a space of resistance and hope.

### **3.1 Spaces of Domination: the “Local” as Produced by the “Global”**

The production of Vieques as a space of domination is tied to the U.S. Navy as a particular expression of capitalist production, within the Western hemisphere, that took advantage of the geographical specificities of Puerto Rico and Vieques as U.S. colonial possessions. As we will see, this militarization of Vieques’ landscape has created a particular type of locality that is suited for the neoliberal regime of capital accumulation. This militarization has also created the conditions under which another type of space, in this case oppositional, could emerge. This new space of resistance and hope is often reenacted through transnational social articulations for collective

action and solidarity.

The production of Vieques' landscapes has to be understood as both: 1) an instance of capital "taking advantage of the specificities of conditions of productions" (Massey, 1994, 158) – particularly because Vieques' location within the Cold War geopolitical regime was a bastion against communism in the Western hemisphere – and, 2) as a space of colonial control, imposed on "the reality of the senses, of bodies, of wishes and desires" of people (Lefebvre, 1974, 139) "constantly enforced through the power of convention, . . . symbolism, [and] through . . . straightforward violence" (Massey, 1994, 180). This dual spatial production contributes greatly not only to the constitution of particular place-based identities but also of the very identity of Vieques as a place.

The aftermath of World War II not only brought many changes to world geopolitics but also witnessed the fight of several former colonies for their independence, this is particularly true of many colonies in Africa. The main politico-economic alternatives were capitalism and communism. Development was presented as an option for these new nation states and through economic growth they were invited to share the benefits of the international system as sovereign countries. This option was built as an alternative in opposition to communism (Escobar, 1995). With communist Cuba as a "dangerous" example for the Caribbean and Latin America, and with Nacionalista movements openly attacking U.S. colonialism, Puerto Rico became the perfect laboratory for the development alternative and indeed, the island became "The cast of the Americas" through "Operation Bootstrap." The negative social and economic consequences of such a project are well documented in Puerto Rico (Rivera et al., 1983; Rivera, 1986; Pantojas-García, 1990) but not so much the connections between the development project and the military presence that some authors (O'Connor, 1973; Ross, 1996; Bandarage, 1997) refer to as the military industrial complex. How is it that the literature that has been critically looking at development in Latin America has overlooked the U.S. military's involvement in these modernist projects, especially when its presence has been so overwhelming? The case of Vieques should contribute to this gap in the literature.

The occupation of Vieques, among other military possessions, has played a pivotal role in maintaining military and economic control over the Western Hemisphere. The U.S. interest in controlling the Western Hemisphere has a long history dating back to the end of the nineteenth century. However the historical conditions were never as favorable as they were during the Second World War. With the European powers at war, the U.S. was not only able to monopolize world markets with their commodities, but also strengthen and secure their presence in Latin America. This was not difficult given the fact that the British, the French and the Germans were too busy to attend to their economic interests and territorial possessions. With the destruction of most of Europe, the aftermath of the war provided the U.S. with the opportunity to establish itself as the dominant power in the region. The aftermath also placed the Soviet Union as a world power. It is this cold war context and the historical interest of securing easy access to new markets and raw materials in the Western Hemisphere that explains the U.S. military policy towards Latin America. Among the first policies to secure this region was the Truman Doctrine, which marked the beginning of the cold war.

The Truman Doctrine for Latin America resulted in the *Inter-American Treaty of Reciprocal Assistance* (1947). This treaty forced the signatories to align with the U.S. in the military defense of the Western Hemisphere (Rodriguez Beruff, 1988, 48). The *Mutual Security Act* (1951) further forced Latin American countries to establish incipient military forces in order to “contain” communism (Rodriguez Beruff, 1988, 47). It was not, however, until the arrival of the revolutionary and national liberation struggles, during the sixties that this military infrastructure not only increased, but also was openly aligned with a modernization project for Latin America.

Following the recommendations of economic advisors such as Walt Rostow, the *Kennedy-Johnson administrations* (1959-1968) created the Latin America foreign policy of preventing the emergence of competing politico-economic models to that of the United States. Between 1950 and 1968, the United States through the *Military Assistance Program* (1951), transferred a total of 687 million dollars in military assistance to Latin America (Rodriguez Beruff 1988, p. 52). As part of this “assistance” the U.S.



School of Americas trained more than 50, 000 Latin American military officials in counter-insurgency intelligence (Rodriguez Beruff, 1988, 54). The path to development was the brutal repression and eradication of popular movements by intervening militarily and supporting dictatorial regimes that championed U.S. interests in the region. Hence, “development” became the alternative to revolution. This meant that U.S. military forces became the most effective instrument tailoring the modernist project in the region.

### **3.1.1 Puerto Rico: The Gibraltar of the Caribbean**

The militarization of the Caribbean landscape played a pivotal role within this modernization project. Through most of the twentieth century, the Panama Canal was an important military and economic stronghold for the United States. Naval control over the Caribbean was necessary to protect this vital commercial and military route. Puerto Rico not only served this purpose, having the biggest U.S. military complex outside of the continental U.S., but also served as the springboard from which most of the military policies and interventions in Latin America were carried out. Some of the U.S. Military interventions carried out from Puerto Rico included: 1954 Guatemala, 1959 Venezuela (military back up against Venezuelan demonstrators), 1962 Cuba (the naval quarantine), 1965 Dominican Republic, 1970 Trinidad, and 1983 Granada. Moreover, the “Gibraltar of the Caribbean,” as the U.S. Navy used to consider Puerto Rico, became the showcase of development for Latin America (Rodriguez Beruff, 1988, 216).

The Second World War not only placed Puerto Rico as the U.S. Naval center of command in the Caribbean but indeed it made it part of the larger military plan of securing the Western Hemisphere for capitalist investments. We can see this in the establishment of military regimes in most of Central America serving the purpose of protecting U.S. capital in the region. In the context of the Cold War the battle was not only military but also ideological. The U.S. need an antithesis to Cuba, thus the launching of the “Puerto Rican development model” as the alternative to the

Cuban socialist economic one (Rodriguez Beruff, 1988, 216-17). The Puerto Rican development model was based on an abrupt change from agro-export economy to one of industrial manufacturing. The apparent rapid success of this model is explained by the great degree of economic dependency that made it possible (Rodriguez Beruff, 1988, 194-95). Since it was built on U.S. war economy, on large monetary influxes from the military, on large forced Puerto Rican migration to the U.S. and, on the obligatory draft of thousands of Puerto Ricans in the armed forces, it was a model that could not be exported abroad as politicians claimed. In less than a decade, the ineffectiveness of the model became evident, although discursively it served its purpose: to lure and often coerce Latin American countries into the U.S. modernist project. For Vieques, modernity meant undergoing dramatic social, environmental and epidemiological transformations.

In 1941, the U.S. Navy expropriated two thirds of the lands on the island for military purposes. Prior the expropriation, Vieques' sugar cane economy attracted thousands of workers not only from the main island of Puerto Rico but from other Caribbean islands as well. Not only did Vieques economy decline due to this dramatic change in land use, but it also forced more than thirty thousand people to emigrate. The U.S. Navy constricted those who stayed to the remaining one third of the island. After more than sixty years of military presence, Vieques' population has neither grown – currently there is about 9, 000 people inhabiting the island – nor has its economy recuperated – Vieques has the highest unemployment rate in Puerto Rico.

In addition to serving as the spearhead of the U.S. modernist project in Latin America and as the watchdog for U.S. capitalist interests in the region, the U.S. Navy in Vieques also became a corporate capital entity in and of itself with global reach.<sup>1</sup> Understanding the U.S. Navy as part of the military industrial complex allows us to see the way in which the landscapes of Vieques and the bodies of Puerto Ricans have been the sites of capital accumulation. The U.S. Navy in Vieques was part of the military industrial complex in at least two interrelated ways: as part of the feed-

---

<sup>1</sup>President Eisenhower defined this amplified participation of the military forces into political and economical matters as the military industrial complex.

back-loop process of state/capital co-development and as a corporative capital entity in and of itself.

The (co)development of the state and capitalism in the United States is inextricably interwoven (O'Connor, 1973). As the work of O'Connor (1973) illustrates, capitalism desperately needs goods and services provided by the state (which are treated as if they were commodities) in order to have capital accumulation. Social capital expenditures are not only welfare related (health, food, etc.) but also and most importantly warfare related. As O'Connor explains,

the growth of the surplus population and surplus productive capacity is a single process. . . Thus the growth of state expenditures in the form of welfare expenses and warfare expenses is also a single process. . . Monopoly capital must create expanding markets (which it can control) in order to utilize productive capacity that otherwise would be idle. The historical solution has been the rapid expansion of overseas investment and trade. . . thus help prevent the wakening of monopolistic market structures at home. In turn, the growth of U.S. controlled world markets and investment networks has required a worldwide military establishment, foreign aid and loan programs, and other imperial expenditures. Military and related spending also constitute social expenses of production to the degree that they are the effect of the process of capital accumulation in the monopoly industries (O'Connor, 1973, 28) .

This analysis still holds today in the face of structural adjustment and neoliberalism. As O'Connor recently pointed out, the problem of the legitimation crisis of the state nowadays no longer requires the making of "pay offs" to "economic losers" but rather directs attention toward enabling "competitiveness in the global marketplace" (O'Connor, 2002, 3). This analysis becomes even more relevant because the dismantling of the "welfare state" in the U.S. implies, contrary to the neoliberal discourse, even more involvement of the state in the global market — through social capital expenditures in the military to absorb surplus population. This is the reason why

the U.S. army is the major welfare system in place in the world. Paradoxically those in the army are serving the corporate interests, which in the first place created the conditions of more impoverishment (through a reduction in state social expenditures) that forced many economically marginalized people to join the armed forces.

If it is not surprising enough that 1/4 of the US fiscal budget is used on the military sector, it is even more surprising that after the pharmaceutical sector, the arms industry is the most profitable of all US capitalist enterprises with billions on weapons sold annually (Bandarage, 1997). It is clear then that the U.S. military apparatus is inseparably linked to private corporations and research oriented universities through techno/scientific innovations. Vieques has been an extremely important site for the military industrial complex as a corporate capital entity in and of itself in at least four ways:

1. development and testing weapons,
2. exhibition and selling of weapons internationally,
3. renting of the land for other countries' trainings and
4. training of commandos.

Development/testing: the U.S. Navy has been using Vieques since they invaded it for the development and testing of arms prototypes. Because of the "national security character" of these experimentations, the information on the specific types of weapons tested on the island is not public. Only recently, in the face of evidence that some researchers were able to gather during an opportunity of having access to restricted terrains (because protesters took over these terrains for a whole year) the U.S. Navy was forced to admit that they were firing armor-piercing depleted uranium bombs (DU) in their air-to-ground and ship-to-shore bombing practices. Studies done by the World Health Organization (WHO) have linked the use of depleted uranium (U-238) bombs with radical birth defects (i.e., babies born without heads or hearts, and with third limbs), as well as various forms of cancer. Moreover, environmental

studies in Vieques have revealed the existence of a great deal of other contaminants also associated with cancer, such as metals, napalm, arsenic, lead, mercury, etc. For instance, Massol Deyá and Díaz' (2003) study showed that crabs in the shooting area had 1000 times more cadmium than what the US-Food and Drug Administration considers safe for human consumption.

Exhibition and selling of weapons: The island of Vieques has been used not only for military practices, which are a "matter of national security," as the US Navy argues, but also as the site in which they show to potential buyers the latest technology in weapons. Vieques becomes in this way a kind of show room, which is consumed by the voyeuristic eyes of international buyers of weapons watching the U.S. Navy's circus of destruction.

Renting of the land: "whether a foreign buyer actually purchases weapons from the defense contractors after testing their weapons, the U.S. Navy still gets paid for the testing procedures to the tune of \$85,000 – \$250,000 per use of the island." As Murillo (2001) has pointed out, "prior to 1999, the U.S. Navy described Vieques as "One-Stop Shopping" and "High on Return on Investment" on their website advertising the business benefits of testing military weaponry and procedures on the island" (Murillo, 2001). Moreover, until recently, the U.S. Navy advertised that one of Vieques' advantages over other possible training facilities was its freedom from civilians living in close proximity. Thus, by divorcing Vieques' space from its people, the U.S. Navy transformed Vieques not only into a militarized landscape but also into a capitalized space. The consequence of these two different, but intimately related scale-building practices (police and capital), however, was the same: to production of unhealthy spaces saturated with pollutants, disease and danger.

Training of commandos: Within the Cold War scheme, striving to "liberate" the world from the "evil" of communism, the history of US intervention in Latin America is long and painful. Vieques has been used as a training area par excellence to prepare the military elites, which made possible many of the dictatorships in Latin American countries in the name of democracy and capitalist penetration.

The duration of military practices during a year in Vieques was two hundred and eighty days. This meant that on an everyday basis, *Viequenses* had to withstand not only having thousands of soldiers shooting live ammunition but also having air, land and sea bombs literally dropped in their backyards. For them to live in Vieques was to live in a war zone: feeling the floors shaking under their feet, watching dark clouds covering the houses, feeling their heart beating faster after every new explosion, fearing that the next bomb could be the last one for them. Under these circumstances, it did not take long for the people of Vieques to understand that the visible environmental wounds left in the landscape might have had something to do with their own painfully hidden wounds.

Understanding the U.S. Navy's presence in Vieques as part of the industrial military complex enables me to demonstrate the connection between capital accumulation and the body understood as the site of such accumulation. Ecological Marxism (O'Connor, 1998) postulates that the capitalist system depends upon the accumulation process not only from social capital expenditures (O'Connor, 1973) but also from the externalization of costs to the environment and the most vulnerable groups (usually ethnic minorities, economically disadvantaged people, or/and racial groups). Because of the unrestrained production of toxic wastes, military and industrial "productive" activities affect the very conditions of production (particularly the environment) on which these activities depend. My approach adds to these neo-Marxist insights an attention to the negative health implications of these accumulation processes, and how they mostly affect the colonial "other."

The land of Vieques and the body of its inhabitants have been carved out under these colonial imperatives of capitalist expansion. If the U.S. Navy's forced expropriation of Vieques' lands in 1941 radically changed the human/environment relations which until then were in place, by forcing into migration many of the inhabitants and leaving the rest of them with only 1/3 of the less valuable land upon which to live, the beginning of the military practices changed such relationships beyond recognition. The economic activities of the inhabitants of Vieques were drastically affected not only in terms of the reduction of land for subsistence agriculture but also because fishing

was prohibited in the areas occupied by the U.S. Navy, thereby seriously jeopardizing their basic means of subsistence. The production of spaces of domination in Vieques is expressed concretely by material-semiotic structures such as military buildings and fences excluding people from having access to previously available resources, not to mention the constant presence of military personnel on the island <sup>2</sup>.

Military practices included the shooting of live ammunition (napalm, shaft and uranium), air, land and sea bombings, and mining areas for training, among other exercises. As a result of these military practices, excessive levels (above FDA safety standards) of lead, cadmium, and other heavy metals have been found in vegetables and other plants grown in the civilian area of Vieques. No other potential source exists for these environmental carcinogens. Studies carried out by the Puerto Rico Department of Health have shown that the people of Vieques have; a mortality rate 40% higher than that of the rest of Puerto Rico, a 27% higher risk of dying from cancer, and a 70% higher risk of dying from diabetes. Moreover, Vieques' children have four times more probability of getting cancer than children in the most polluted areas of the main island of Puerto Rico (Nazario, Surez et al. 2001). The identity of Viequenses and of Vieques itself cannot be understood without taking into consideration the ways in which these dual forces of U.S. capitalism and colonialism have carved out and produced a "local" space of domination that also is desperately "global."

### **3.2 Geographies of Resistance: the "Local" as Produced by Transnationalism**

In the previous section I tried to reveal the workings of a particular scale-building practice <sup>3</sup> (that of the U.S. Navy), which produced Vieques as a "local" saturated

---

<sup>2</sup>Practices of place production as material-symbolic ways of resistance have been a fundamental strategy of people's mobilization. An example of these material-symbolic struggles is when the people of Vieques re-appropriated the fences, that divide the military zone from civil areas

<sup>3</sup>Tsing (2001) suggests that a way to find the specificity and contingency of the global is by paying "attention to the making of scale. Scale is the spatial dimensionality necessary for a particular kind of view, whether up close or from a distance, microscopic or planetary" . Tsing argues, "that scale is

with spaces of domination and danger through larger macro political and economic structures. In this section, I want to explore a different kind of scale-building practice; that of collective actors currently engaged in producing an oppositional locality (a Vieques of resistance and hope) through transnational articulations of social relations for collective mobilization and solidarity.<sup>4</sup> The concept of place is understood, as in the previous section, not as bounded, isolated and static, but on the contrary as constantly being produced by people through different webs of social relations which stretch beyond it – “into wider relations and processes in which other places are implicated too” (Massey, 1994, 120).

Different place-building practices through history have produce different Vieques, each of which have been experience differentially by people. For instance, the Vieques of the nineteenth century colonial era characterized as a small Spaniard military fort, was radically different from the beginning of twentieth century sugarcane Vieques. One thing that remains constant, though, is the fact of Vieques as a meeting place of incessant arrival and departures. While the end of the nineteenth century witnessed sugar plantations attracting thousands of workers (44,000 people lived in Vieques before the 1940's), the following decades after the U.S. Navy's forced expropriations also witnessed movements of thousands of people, but in this case in terms of a massive exodus (about 9,000 people currently inhabit Vieques). On the main island of Puerto Rico, and as part of “Operation Bootstrap,” hundreds of thousands of Puerto Ricans were put in airplanes by the government and forced to emigrate as cheap labor in different parts of the United States. The oppositional identity of Vieques’

---

not just a neutral frame for viewing the world; scale must be brought into being; proposed, practiced, and evaded, as well as taken for granted. Scales are claimed and contested in cultural and political projects ... Not all claims and commitments about scale are particularly effective. Links among varied scale-making projects can bring each project vitality and power. The specificity of these articulations and collaborations also limits the spread and play of scale-making projects, promising them only a tentative moment in a particular history” (161)

<sup>4</sup>“Social relations always have a spatial form and spatial content. They exist, necessarily, both in space (i.e., in a location relation to other social phenomena) and across space. And it is the vast complexity of the interlocking and articulating nets of social relations which is social space. Given that conception of space, a ‘place’ is formed out of the particular set of social relations which interact at a particular location. And the singularity of any individual place is formed in part out of the specificity of the interactions which occur at that location (nowhere else does this precise mixture occur) and in part out of the fact that the meeting of those social relations at that location (their partly happenstance juxtapositions) will in turn produce new social effects” (Massey, 1994, 168)



collective mobilization, therefore, has to be understood against this backdrop, not as an essentialized identity (“the people of Vieques”) with a primordial tie to territory, but as one formed upon practices of displacement as constitutive of cultural meanings (Clifford, 1997, 3).

Experiences of unsettlement, loss, and recurring terror produce discrepant temporalities—broken histories that trouble the linear progressivist narratives of nation-states and global modernization. . . . [T]he homogenous time of the nation’s imagined community can never efface discontinuities and equivocations springing from minority and diasporic temporalities (Clifford, 1997, 263).

Collective mobilization in Vieques has become possible because people have engaged in the imaginative rediscovery of the hidden histories suppressed by colonial regimes of representation. This “rediscovery,” nonetheless, is but the production of a new identity (Subaltern subjectivity) by way of “imposing an imaginary coherence on the experience of dispersal and fragmentation, which is the history of all enforced diasporas” (Hall, 1990, 224). As Hall (1990, 225) argues, “identities are the names we give to the different ways we are positioned by, and position ourselves within, the narratives of the past.” Histories are also unstable sites from which positioning is possible.

Cultural identities come from somewhere, have histories. But, like everything that is historical they undergo constant transformation. Far from being eternally fixed in some essentialized past, they are subject to the continuous “play” of history, culture and power. . . (Hall, 1990, 225).

Therefore, in order to properly understand the traumatic character of U.S. colonial presence, we not only have to understand the ways in which Puerto Rican people and experiences were and still are positioned and subject-ed in the dominant regimes of representation but also the ways in which people articulated these unsettling experiences (Hall, 1990, 225).

In diaspora experience, the co-presence of “here” and “there” is articulated with antiteleological . . . temporality. Linear history is broken, the present constantly shadowed by a past that is also desired, but obstructed, future: a renewed, painful yearning (Clifford, 1997, 264).

I suspect that the process of envisioning a Vieques liberated from the military presence and subsequent mobilizations arising from this, has been the result not only of Puerto Ricans “being in there,” and “elsewhere” but also of diasporic Puerto Ricans “dwelling-in-travel” (Anderson, 1993; Appadurai, 1996; Clifford, 1997). There are three ways in which Puerto Ricans engage in the movement:

1. those who live and remain in Vieques.
2. those who live elsewhere but stay engaged in the movement from where they live and.
3. the part of the Puerto Rican diaspora that frequently travels between Puerto Rico and the mainland.

While some Puerto Ricans have remained in the diaspora, traveling back and forth between Vieques, the U.S. and Saint Croix, others have returned to Vieques for good as a result of their involvement in collective mobilizations. This is the case of many of the people I interviewed who were part of the various exoduses. An excerpt from my fieldnotes illustrates this.

Erik is representative of a big majority of Viequenses because he was part of the exodus of people that were forced to migrate to other places in search of some economic security. To my surprise the migration of Viequenses was not reduced to the main island of Puerto Rico nor to the U.S. but more striking, it encompassed also the neighbor island of Saint Croix with more than 12, 000 inhabitants from Vieques. This finding is striking if we take into consideration that currently there are less than 9, 000 inhabitants in Vieques.

In his late twenties, Erik has four children ranging from one to eight years. Like many other Viequenses he found a job in Saint Croix and sends money to his family in Vieques. Erik explained that Viequenses have been economically successful in Saint Croix because they have been able to establish commercial enclaves. Unlike many of his exodus partners, Erik quit his job — a job as a diesel mechanic which as he expressed put him in a very good economic position in comparison with what was available in Vieques - in order to be part of the resistance against the US Navy. When I asked why he was involved in protests, he responded that, “I could not stay arms crossed while my children in Vieques are being bombarded with uranium, shaft, lead and all the crap that the Marines can think of. I will not stop until the Navy is out of Vieques.”

Needless to say, he was more than acquainted with all the statistics concerning cancer incidences in Vieques as opposed to the main island of Puerto Rico. His account of the situation was emotionally charged and it definitely interpellated my empathy in his indignation.

Erik was not the only one who constantly conjured not only statistics but rhetorically powerful narratives of the U.S. Navy’s expropriation, of rapes and violence by marines during times of leave, of disease and sickness and of the environmental degradation, among others. Not only were these stories retold by almost everybody I interviewed but they share similar narrative patterns (emphasis at certain moments, pauses, etc.). This constitutes an important example of the ways in which people give collective meaning to the colonial experience through the use of circulating discursive repertoires. These narratives and discourses about human rights, environment, peace and health are fundamental not only because when conjured<sup>5</sup> they serve to make sense of fragmentizing experiences, but also because when conjured they articulate oppositional subjectivities and Vieques as a locality produced by transnational social

---

<sup>5</sup>“To ‘conjure’ is both to call forth spirits and to perform magical tricks; in each case, the term highlights the intentionality of the performance, the studied charisma of the performer, and the hope of moving the audience beyond the limits of rational calculation. These features characterized [discursive] strategies ... in which everyday performance requirements ... are made into dramatic show of potential” (Tsing, 2001, 159).

relations. These transnational social relations, however, are not limited to the Puerto Rican diaspora, but stretch out beyond.

Collective mobilizations have not only taken place “there” (Vieques) but “elsewhere” (NY, Massachusetts, Michigan, Chicago, Ka Pae’aina (Hawai’i), Okinawa, Ireland, Holland, etc.). These transnational reciprocity, exchange and solidarity networks illustrate not only the articulation of nation-state building projects (such as *Nacionalista* in Puerto Rico) but of non-nation-state based ones as well (such as the human rights as it relates to health). This means that the transnational flows of people instead of corroding the nation-state as some authors have argued is actually fostering in important ways alternative as well as traditional nation-state building projects (Hall, 1991; Glick Schiller, 1999; Schein, 1999). On the other hand, the case of Vieques can shed light on the transnational literature – which primarily has focus on nation-state based identities – by showing how (in tune with some of the diaspora literature) multi-local articulations also speak of “potential subversions of nationality – ways of sustaining connections with more than one place while practicing nonabsolutist forms of citizenship” (Clifford, 1997). In other words, even when the articulation of discourses and subject positions in Vieques depends upon their framing in very local “territorial” terms, that does not mean that the identities produced are limited to territory (place-based identities). While that is an important aspect of the articulatory practices, it is not the only one, nor the most central. As I have been discussing, part of the success of transnational collective mobilization is explained in the movement’s capacity to frame subjects’ positions in non-absolutist or exclusivist ways (ethnic or territorial). This is expressed in the coalitions of people from many countries (Mexican, Venezuelans, North Americans) who have traveled to Vieques to protest the bombing of Vieques and upon leaving stay connected over the internet from multiple locations throughout the Americas, Europe and Asia.

In the case of Vieques, while people struggle against the oppressive aspects of the nation-state’s institutions – such as courts, hospitals and the military – they simultaneously use discourses from such institutions in their activist endeavors: by overcrowding the federal court system through civil disobedience, by appealing to

democratic ideals that the U.S. is supposed to represent through the celebration of a referendum in which 70% of the people in Vieques voted for the immediate withdrawal of the U.S. Navy, and by using the “logic” of flexible capitalism in which cultural productions for mass consumption were/are circulated through mass media in order to exercise public pressure in Puerto Rico and in the U.S. Instead of the corrosion of the nation-state, therefore, the case of Vieques contributes to the literature on transnationalism as an example of the way in which the transnational flow of people is actually fostering in important ways “new” and “old” nation-state building projects (Hall, 1991; Glick Schiller, 1999; Schein, 1999). “New” in the sense of producing non-absolutist forms of “citizenship” based upon the transnational articulation of discourses on human rights, health and peace, as opposed to exclusivist ones based mainly on ethnicity or territoriality. “Old” because there is an important part of the movement which is informed by the anti-colonial struggle of *nacionalistas* against the U.S. in which the articulation of subject positions is, indeed, framed in territorial terms but without this being done in parochial terms.

In terms of the globalization literature, my research illustrates the contingent character of the particular spatial, political and cultural expressions of globalization in Vieques. As Tsing has explained the majority of the literature on globalization has treated the subject with an “imaginary in which the global is homogeneous precisely because we oppose it to the heterogeneity we identify as locality” (Tsing, 2001, 160). By the same token, I have illustrated how the specific manifestations of globalization in Vieques not only produced an identity of place associated with socio/environmental inequality but also a dialectically generated opposition to the colonial regime. The relations disjunctures<sup>6</sup> produced by the scale-building project of the U.S. Navy, therefore, while deterritorializing large numbers of the population in Vieques, has simultaneously enabled— out of such fragmentizing experience— people in Vieques and the diaspora to imagine and act upon a transnational scale-making project of a Vieques

---

<sup>6</sup>In response to socio evolutionary and homogenizing depictions of globalization, authors such as Appadurai suggests an understanding of globalization through “relations of disjuncture” – which stress mobility, fluidity and contingency, rather than coherence and continuity. The way to get at this mobility is from “below” , instead of from “above” (from capital’s standpoint), as a type of research politically engaged in understanding the creative ways in which counter/hegemonic strategies develop (Appadurai, 1996; Appadurai, 2001).

*libre* (Hall, 1990; Appadurai, 1996; Appadurai, 2001; Clifford, 1997; Tsing, 2001).

## Chapter 4

# Reification, Biomedicine, and Bombs: Women's Experiences at the Heart of Vieques' Social Movement

In a landscape torn apart by U.S. military practices in Vieques, women suffer the negative consequences of chronic diseases disproportionately. This chapter explores how out of making sense of the experience of disease women re-articulate their identities in oppositional terms. It also explores how this re-articulation of their identities allows women to break with the institutional reifications subjecting them to passive roles. These two dialectical processes are fundamental in understanding the emergence of Vieques' and other social movements.

This chapter, thus, will address an important limitation of the environmental justice literature. That is, the literature's inattention to processes of identity formation as key in the development of social movements (Epstein, 1997; Moore and Head, 1993; Di Chiro, 1998). However, because identity formation does not take place in a socio/cultural vacuum, I will illustrate its connection with larger economic processes and institutions. I sustain that in order to understand the emergence of politicized identities we need to recognize the relationship between reification — as a process of hiding the negative aspects of capital accumulation — and subjectivation — as the process through which institutions constitutes disciplined subjects. The first

part of this essay will explain this theoretical relationship. I argue that a social movement emerges when people are able to uncover the hidden connections between that which is affecting them and the institutions responsible for the situation. Because the negative consequences of neoliberalism's environmental problems affect women disproportionately, often women are the most likely to identify and oppose these global forces.

In the second part of this essay I will try to address these shortcomings of the literature through an ethnography of the transformation of women's subjectivities in a context of health crises. I will do this by showing:

1. how women experience disease in their everyday life,
2. how out of the institutional failure to explain the causes of their problems women become skeptical of the establishment, and
3. how out of these frustrations and out of the process of searching for meaning women finally become politicized.

The narratives explored in this essay come from over 50 in depth interviews conducted over a period of three years<sup>1</sup>. For this essay I am using the narratives of key women leaders of two different groups mobilizing around Vieques' demilitarization. *La Alianza de Mujeres* is a women's organization dealing particularly with health issues affecting women. *El Comité Pro rescate y desarrollo de Vieques* organized most of the civil disobedience carried out in Vieques. I also interviewed women outside of these groups to find whether their health problems and experiences were similar, as indeed they were.

Vieques' island is a municipality on the east coast of Puerto Rico which has 9,000 inhabitants. The U.S. Navy conducted military practices in Vieques for over sixty years. In 2003, Vieques' social movement forced the U.S. Navy from the island. Women's participation in the struggle was fundamental. I will turn now to explain

---

<sup>1</sup>In order to protect the participants of this research their actual names are not being used.



how the understanding of reification and subjection can shed light into the emergence of the politicized identities responsible for this astonishing deed.

## 4.1 On Reification and Subjectivity

Capitalist society ... is ridden with reification, experience as a set of discrete, isolated entities whose connections have been hidden from view: but it is in the interest of a subject class ... to grasp that social order in its dynamic totality ... (Eagleton, 1994, 12).

The constitution of a hegemonic formation is as much about winning the hearths and the minds of people with promises of future gains, as it is about underplaying the potential losses of buying into such promises. A hegemonic formation takes place when a political faction is capable of convincing people into tacitly agreeing about the supremacy of a given socio/political arrangement over another, despite of it being potentially harmful for the majority. Reification is, then, the process by which the negative aspects of a given social formation are hidden from view to maintain the politico/economic system working. While I use the concept in its classical Marxist sense —that is as hiding the negative aspects of capital accumulation— I expand its meaning to include environmental and health factors. That is, reification as the process of hiding the connections between the production of unhealthy environments and bodies and the process of capital accumulation. Reification is, however, only one part of maintaining a hegemonic formation in place. Subjection is the other important part of maintaining it. What is the relationship between these two processes for Vieques' social movement?

Vieques is a classical example of a place ridden with reification. In fact, while reification is a fundamental part of capitalism at large, it is even more so of colonial contexts such as Vieques. In this sense we have to understand that specific instances of reification are fundamental in the constitution of a colonial subjectivity. This is, a hegemonic formation is maintained not only because it is “winning people’ s hearths

and minds.” but because through time it is (re)creating the kinds of subjects who support this social arrangement and not other. The colonial regime<sup>2</sup> at work in Vieques since 1938 with all its institutions (hospitals, schools, media, etc.) has systematically concealed the interconnections between industrial-military complex, the newly produce socio-environment and their health problems. I suggest that the particular connections of how a situation of inequality were produced have been hidden by an atomistic perception of reality – that of the medical regime, the government, and the U.S. navy with their simplistic etiological and cosmological<sup>3</sup> models. As Taussig explains,

symptoms of disease, as much as the technology of healing, are not things-in-themselves’, but are [ . . . ] signs of social relations disguised as natural things, concealing their roots . . . (Taussig, 1980).

In other words, the experience of disease in Vieques cannot only be understood in biomedical terms. It must be understood as a disruption of socio-environmental relations: that is, disease is the negative corporeal expression of an unsustainable political economic system that does not care for people’s well-being. That people for so many years accepted that cancer, skin and respiratory problems, among other chronic diseases, were the result of bad habits or that certain symptoms of unrest were all in “your head,” testifies to the reificatory power of biomedicine. This is because biomedicine and other systems of political legitimation subject people by “persuading [them] into internalizing an oppressive law” (Eagleton, 1994, 14). In this process of persuasion institutional discourse and practice disciplines its subjects into being good patients, good workers and into conforming to colonial authority and its

---

<sup>2</sup>I understand the U.S. colonial regime in Puerto Rico as twofold. On the one hand, it seeks to exploit the natural resources of the island, and its strategic position in the Caribbean. On the other hand, it seeks to create and maintain the conditions under which to control and exploit Puerto Ricans. In order to achieve these, however, it first had to create a mass of well-disciplined and dispossessed people. Destroying the semi-feudal agricultural system achieved this dispossession by uprooting peasants from their subsistence agriculture and forcing them into wage labor. Deploying a variety of institutions to discipline subjects into being good workers and conforming to colonial authority and its way of seeing the world achieved the docile colonial subject that do not question the status quo and work all the better.

<sup>3</sup>I use cosmological in the sense of order of the world; that is disciplining the senses to see and experience a particular order over other.

way of seeing the world. Through the minute disciplining of the body, institutional discourses and practices socialized people into accepting the social order and people's place on it as natural. In this process of becoming a colonial subject the people of Vieques internalized the structural order within their flesh, within their bones, in their daily life. In the particular case of Vieques, I argue the biomedical system has hidden important environmental and health connections by its atomistic way of dealing with illness. In this sense biomedicine is ridden with reification because it has systematically break with the body as a mediator (through the senses) with the non-human world.

The case of Vieques is important because it is an extreme instance where the contradictions of a political economic system ridden with reification become clear. Traditionally, biomedicine persuades people into distrusting their senses, into distrusting their bodies. This negation of the validity of people's senses precludes them from making the phenomenological connections present everywhere, yet that are concealed from their eyes. Not surprisingly, while biomedicine negates people's embodied knowledge, the colonial body becomes the target of a violent system of accumulation. By counting as zero military pollution and health problems, the U.S. navy makes the body and the environment sites of accumulation. By using discourses of "national security" and progress the U.S. navy is successful in obscuring the accumulation process. This accumulation process is characterized, among other things, by the development, testing and selling of conventional and unconventional weapons. Most importantly, it is characterized by the high price people have to pay for these "productive" activities: the high price of their lives.

In the particular case of Vieques, after more than sixty years of military practices, the recent explosion of health crises finally propelled people into questioning institutional legitimation. Neither persuasive institutional discourses nor institutional disciplining could deter people from understanding the roots of their environmental and health crises. The environmentally situated experience of disease coupled with the institutional failure of producing satisfactory explanations enabled people to unearth the hidden connections of their health crises. From this epistemological clash between

two different perceptions of reality – an atomistic vs. an embodied – it became evident that their health crises were not their fault but the result of an unjust political system.

In the collective process of making sense of a world seriously disrupted by disease, the people of Vieques unearthed the roots of their health problems. However clarifying these obscure health/environmental connections was not the only thing they achieved. The very process of searching proved to be emancipatory for it forced them into a process of self-reevaluation that prompted them into action. The contribution of this research to the anthropology literature is in its emphasis on how out of these collectively created understandings an oppositional subjectivity emerges. In other words, my research is picking up where Foucault left; that is, what happens to the subject (in this case colonial) when the institutional power of subjection is fading? I argue that in contexts of institutional legitimation crises, searching for meaning becomes primordial in front of institutional failure. People's skepticism towards the establishment, in this case the colonial regime, and the institutional inability to give answers, opens up spaces in which people more readily negotiate and rearticulate available discursive repertoires. In the collective process of searching for meaning, people recreate meaning and in doing so they also rearticulate their own positioning in relation to their oppressive reality.

## **4.2 Women's Experiences**

### **4.2.1 Everyday life, Illness and Bombs**

I'm going to tell you how it affected me. My daughter was a juvenile diabetic since she was eleven, but she never had to be hospitalized for this condition. One day, on April 16 1995, two days after my oldest son got married, my daughter woke up with abdominal pain. We went to the local hospital where for a whole day doctors tried to determine what was happening to her. After we got the lab results the doctor send us to Fajardo. We arrive in Fajardo at 9:00 pm. A pediatric doctor and pedi-

atric surgeon in Fajardo were also unable to determine what was wrong with her so they referred us to the Pediatric Hospital of Centro Medico in San Juan. . . At 3:00 am, the oncologists and hematologists told me that it was not leukemia. . . Two days later a battery of labs proved them wrong. In other words, we had to pass through three different channels to finally have a definitive diagnosis. . . That very Friday we started the battle against leukemia with radio and chemotherapy. For two years we went to Centro Medico every two weeks. . . To attend to my daughter I had to quit my job; I had to dedicate all my time to her because that was the only way to keep her alive. In March 1997, two months before finishing the protocol she could not resist any more and she died. This was very hard for me. Just like it happened to me, this tragedy happens to many others in Vieques” ( Mónica, 2003)

This and the following narratives underscore the inaccessibility of health care for cancer patients and ill people in Vieques. This inaccessibility, however, while not uncommon in similar isolated communities, becomes particularly problematical when the community in question has the highest incidences of cancer and other chronic diseases in Puerto Rico. And yet what is remarkable about Mónica’ s experience of frustration, death and loss, as she clearly points out, is that it is not an isolated experience but a socially shared one. That is, many other people in Vieques are passing through the same tragedy. None of the 50 people I interviewed are exempt from having a family member or close friend affected by chronic diseases. But exactly, what it mean for family members and the ill to be sick in Vieques?

Access to health services in Vieques is dramatic. Do you know what it is like to have birth pangs and to have to board an airplane to take you to delivery? . . . The problem is that once the airplane arrives there is no ambulance waiting for you! How about cancer patients? They have to receive treatment in Puerto Rico. How is that? They have to take the ferry before dawn. They arrive in Fajardo and then they have to take a

public bus to get to Centro Médico in Río Piedras. Then they get their therapy, throw up three or four times and catch the bus back to Fajardo. Often, by the time they are back in Fajardo the last ferry has already taken off. What do they do? They don't go '

It is a terrible thing. The simplest things become overwhelming. Sometimes I say that you have to plan when you get sick. Yeah, because if it is not the problem of the airplane, then the problem is the ferry, or that you don't have money. Getting pregnant for the most part is a nice experience. To be pregnant is not to be ill. However in Vieques it is a complication... Look at my case. I have to go to Río Piedras to see my gynecologist. In the last period of gestation my gynecologist told me: "I want you on this side of the island." I had to leave everything and I had to move to the other side. Economically speaking that's very hard. Fortunately, I have a good health plan and I have family over there in [Río Piedras]. But this is not the case of most families in here. Imagine having to take your son for dialysis. How about cancer patients? If your self-esteem is not strong, if you don't have the economic resources, then you say: "Whatever becomes of me is God's will" (Jesica, 2003)

For the ferry you have to wait like everybody else, it does not matter that you are sick. If there are 300 people, you have to wait for them to get out. Onboard there is no consideration for patients; there are no stretchers or a place to lie down. I would say that it is inhuman the treatment that cancer patients and other ill people receive. They become dehumanized; they are transformed into objects. I think that all this takes from people their self-esteem, their positive energies for healing. This is something very frustrating and painful (María, 2003).

This inaccessibility to health care highlights the fact that in Vieques no aspect of people's life escapes the experience of being sick. Confronting these frustrating

problems adds to the emotional stress not only of being sick but also of having to confront the danger of military practices; of fearing that you are going to fall ill next; of thinking that nothing can be done with your polluted body.

In personal terms, one always lives with the uncertainty of getting cancer. One always lives with the uncertainty of eating something that might be contaminated. . . One always lives with the uncertainty that you are living in such a highly polluted environment that you could get a fatal illness that will take your life (María, 2003).

Look, so that you can understand the impact of bombings in the range zone, my son fell into an emotional crisis. Every time he would hear bombs exploding he would pee on himself. He entered into a regression in which he would continue peeing and peeing and peeing. We took him to pediatricians, urologists and other specialists. What was their conclusion? He was fine. The pediatrician told me: "you have to take Ruben out of Vieques until the military practices are over. This is an emotional condition." But that's very hard because he lives here! He used to pick up the phone to talk to his grandma in Patillas and he used to tell me: "take me to grandma's, I don't want to live here. I don't want to hear any more bombs exploding." That's very hard in terms of emotional health. Sometimes you don't realize it, but I suffered, I cried with my son every time he would enter into his regression. He would tell me crying: "mom I can't control it." Just like I have to deal with this, many moms have to deal with this too. What about those moms that had to withstand this emotional turmoil for 50 years? (Jesica, 2003).

How can you explain the majority of my husband's coworkers dying from cancer? You know, if maybe one or two died from cancer, but all of them! We were traumatized because we even belong to a pro-navy organization. We were psychologically affected, you know, not having the resources to

pay for the health expenses. I was sitting right there, when I heard on television that it was true; people were getting sick [from the pollution] with heavy metals. I called [my husband]; I screamed: “Pepo!” Because until that moment I never thought that all the health problems we were confronting — even our 4 daughters and our nine grandchildren — were result of these metals. Last Saturday I had to rush my third daughter to the ferry to take her to the hospital. We have been going from doctor, to doctor, to doctor. Psychologically this has affected us. The baby, she is seven months old, is the only one we who we don’t know is contaminated like the rest of us. We are waiting for the lab results. I was sitting right there listening to the news (Ana, 2003).

Everyday life in Vieques cannot be understood outside of the medical gaze. Vieques’ health crises have forced people to inhabit the kingdom of medical institutions. As Taussig explains,

the relationship between doctor and patient ...can reinforce the culture’s basic premises in a most powerful manner. The sick person is an ...anxious person, malleable in the hands of the doctor and the health system ... This gives ... a powerful point of entry into the patient’s psyche, and also amounts to a structuration of the patient’s conventional understandings (Taussig, 1980).

However, instead of seeing people docilely agreeing with expert led explanations of disease etiology something else happened. In most contexts, chronic illness produces a “biographical disruption” that challenges people’s identity in disempowering ways. Confronting chronic diseases in Vieques, however, have enabled women to rearticulate both their traditional roles and their identities in surprising ways. Women have been at the forefront challenging biomedical assigned roles as passive patients/victims. I argue that inhabiting the experiential world of the sufferer have made evident for some women in Vieques the limits of biomedicine, thus creating a legitimization crisis.



That is, people comply with institutional requirements of behavior and definitions of what good and evil is only if people understand that such requirements are legitimate in moral or other terms.

### 4.2.2 Legitimation Crises

As social mobilization has demonstrated, the arguments offered by the U.S. Navy scientists and governmental scientists have not satisfied the health concerns of the inhabitants of Vieques, bringing a legitimation crises of the state and its institutions. That is, it has become evident the contradiction between government's responsibility for public health safety and Puerto Rican government's encouragement of military practices for the sake of maintaining non-conflictive relations with the U.S. government. In other words, people experiencing on an everyday basis the environmental degradation and the devastating results of military practices to their health, are more than suspicious of the claims from "the authorities." As Demeritt explains,

[Sciences] are met with increasing public unease and skepticism. Assurance from the ... men in white lab coats are no longer sufficient to ease public concern about toxic chemicals, nuclear contamination, and the other environmental "side effects of industrial society (Demeritt, 1998, 173).

The case of Vieques has generated a great deal of debate, never seen before in Puerto Rico, with regards to whether or not the military practices are the cause of high incidences of disease on the island. The novelty of these debates is found in the enormous involvement of people around discussions of disease causality in which what is at stake is the power to define. Governmental, military and biomedical definitions of disease etiology –that is official definitions– while justifying the order of things disregard people's everyday life experiences with disease.

A fundamental part of everyday life and of coping with disease is to search for meaning. However, conflict arises when biomedical institutions fail to address women's

embodied experiences, as has too often happened. In places like Vieques, where there is a public health crisis and biomedical institutions are unable to provide satisfactory answers in terms of meaning and causality, women become skeptical of experts and their corresponding institutions. In what follows we will hear not only women's expressions of skepticism but most importantly their sharp cultural critiques of biomedicine and expert knowledge steaming from their situated experience.

[The U.S. Federal government and the U.S. Navy] and other federal agencies such as CDR, all of them did studies saying that everything was fine. They say that there is no contamination; that the water is drinkable; that the food is eatable. Obviously it is in the Navy's best interests that such studies say that because then we will not be able to proceed with the class action. But it is absurd to think that after 60 years of bombing Vieques there is no contamination. If my house, my car and that of many others, are covered with Sahara's dust and Monserate's volcano's ashes, then what about the dust coming from the firing range? (María, 2003).

They can do a thousand scientific studies: they can show them or hide them. But we have it right in our sight; our own family, our own people are dealing with disease in our everyday life. This cannot be hidden. [Vieques] is too small and everybody knows each other and we know when somebody gets sick. If you go to a bigger place maybe you could hide but maybe not. Here we are like a big family (Milagros, 2003).

What traumatizes me the most is that you cannot do anything. My grandchildren are just starting [their lives] and if they feel the way I do now; what's going to become of them? Because they are going to have [heavy metal in their bodies] as I do, that's what I think. They are going to be going from doctor to doctor. Sometimes doctors, they look at you and they don't know what you are suffering from – sometimes it is even hard for you to explain it – and then they tell you that it is all in your head, that it is just mental (Ana, 2003).

The Department of Health used to have something dealing with environmental health. But that does not mean that they work with health conditions tied to the environment. In environmental health they work with septic tanks and their regulations; they work with the restaurant's hygiene and things like that. But they don't work with that relationship of health and environment. In other words, one thing is health and the other one is environment; there is not a connection between pollution and a sick person... But this disconnection also happens within the EPA; it also happens with Fisheries and Wild Life. They might look at the impact on soil, air and water but kind of disconnect from the people. People are on one side of the equation and the environment is on other side. Somehow they have to understand these coexist (Jesica, 2003).

When normalizing institutions fail to address people's experiences, spaces are open in which inscriptions other than the institutional ones acquire greater relevance in people's articulation of their own subject positions. In other words, the power institutions have over people to normalize certain ways of seeing and being becomes less effective. In the process of making sense of illness people start to develop collective ways of understanding the world and their place on it. In Vieques, women's participation in different organizations made possible the rebuilding of an altered world and an altered self – that unmade by suffering and disease.

Common sense tells you that if a place like Vieques has been used for testing all kinds of destructive military weapons for 60 years – weapons like uranium and NAPALM – and if you also see the impacted areas totally devoid of life; then you know that Navy's military practices are responsible for the pollution. One knows that pollution is carried by the wind; one knows that all of those particles get to our residential areas; we know that we are still breathing them. Everybody is getting hair samples tested for heavy metals. When you see that everybody getting tested has heavy metals in them, tons of heavy elements such as aluminum, uranium,

cadmium, then you know that metals are not only in the environment or in the air. These heavy metals are in people's bodies. These contaminants make your body more susceptible to illness (María, 2003).

### 4.2.3 Illness, Identity and Collective Action

[My son's condition] hurt me; it gave me a rage that propelled me into action. This rage gave me more energy to put into the protests (Jesica, 2003).

After my daughter's death I entered into a depressive stage. Many people have become depressed after losing a loved one... When my second granddaughter was born, though, I decided that something needed to be done. Things could not stay the way they were. I needed to help somehow... Thank god I got involved in la *Alianza de Mujeres*. There I'm working directly with health issues (Mónica, 2003).

While illness experiences are often debilitating, sometimes the shared experience of illness can be empowering. Critical medical anthropology, political ecology and the social movements' literatures seldom examine this issue of socio-cultural empowerment connected with disease. The emergent public health crises in Vieques, people's dissatisfaction with institutional responses to their issues, and their own experience with disease has forced them to develop both collective ways of understanding and of acting. This is particularly true of women in Vieques.

**Teresa:** The only thing that the navy has left us is disease. I know that some of my health problems are because of the U.S. Navy, but that's not proven yet.

**Víctor:** What do you mean by "that's not proven yet"?

**Teresa:** I know there have been some studies done and all that, but people are shady; now big chiefs say that [health] problems are because of

pollution, later they say that they are not. Whether they are manipulating the studies in favor or against Vieques I see little hope. But I know there is something here.

**Víctor:** What do you mean by, “I know there is something here”?

**Teresa:** Well because of what we are confronting; the people of Vieques are confronting serious diseases. I say this because I’m confronting illness, my family is confronting illness and all the people that died or are dying out of cancer. It’s rare knowing of people dying from other diseases. . . In other words, there is something in the environment. I cannot say it because I’m not a scientist, but I know that there is something evil. They say that cancer is because of heredity, but my dad died of tuberculosis, my mom died a natural death when she was 94 years old. I’m the one that has cancer and my brothers and my grandchildren.

**Víctor:** So do you think that a scientific study might . . .

**Teresa:** I think that if a scientific study is done to look for the truth many cases are going to come out of that.

**Víctor:** What if the study says that there is no relationship . . . .

**Teresa:** Then I will not trust it because I know there is something here. There is something here (Teresa, 2003).

The collective endeavor of confronting disease has allowed women not only to rework their understandings but most importantly their very selves.

What has happened in Vieques [in terms of the health crises and the subsequent protests] has been liberating. Vieques has liberated me in terms of: having the courage to speak out, participating [in mobilizations], and confronting many fears that haunted me. Vieques opened a door of possibilities for me. For instance, five years ago we started exploring our own reproductive health and what it means to recognize our own bodies, to feel them, to touch them. We talked among ourselves about how if you

don't know your own body and you get a cancer on the vaginal area and you have never seen yourself there, then how are you going to identify that cancer? (Jesica, 2003).

Believe it or not, my first trip abroad was to Washington as a representative of the people of Vieques. I had never before left Vieques. That's so that you can see how things changed around here, how [Vieques'] circumstances took me to unexpected places. Having to go there and see that many people didn't even know what Vieques was, God, gave me a stronger desire to keep the struggle. I went also to Philadelphia to speak about Vieques, and guess what? I had never spoken in public before; much less in English. But circumstances force you to do these new things; things come out of you that you didn't know you were capable of. I sat down and I wrote a message ...because I knew that in writing the message was going to arrive. I did not want my message to fall on deaf ears ( Mónica, 2003) .

That is from internalizing an oppressive law that forced them into accepting military practices, patriarchal roles of submission, and biomedicine's etiologic models and roles as blamed-passive-victims, to actively challenging this status quo.

The process of recognizing our bodies has liberated all of us because we grow up in a culture where recognizing and taking care of our bodies is not well seen. So maybe five years ago I wouldn't dare, but now I have to take care of myself. I have to know my body. Maybe five years ago I wouldn't dare to develop a program for girls and adolescents on how to manage their sexuality. Nonetheless, now I feel the strength, the energy, the social compromise and the support to do so. We have decided that if these girls are going to be the future of Vieques, then, they need to grow up healthy in physical, emotional and spiritual terms. We are putting all of our energy so that these girls don't have to pass through what we passed through (Jesica, 2003).

Through their interactions in protests, in women' s group meetings, in hospitals, in short, in the collective process of making sense of illness women have connected narratively

the cause and effects of their illness . . . to their ongoing lives . . . convert[ing] the liminality of [disease] into a social resource. In a . . . process of inversion . . . weakness becomes power" (Hunt, 2000, 99).

In this process of inversion women have challenged biomedical' s distrust in their senses and by doing so they have reaffirmed their own embodied knowledge forging a new politicized identity and action. Women' s bodies have become their centers of awareness of identity and of political action.

[This process of liberation] has allowed me to develop a number of health projects that are going to help improve Vieques' women' s health and quality of life. [This process of liberation] has allowed me to free myself of all those taboos and fears that didn' t allow me before to speak of certain things. Look, in the breast cancer prevention workshop, many women used to say: "I will not touch my self, touching oneself is shameful, it is scary." . . . After few workshops, though, women were happily taking off their shirts to check themselves in front of the other ones. . . I remember particularly this lady that had a few benign nodes on her breasts and she would say: "come here, touch here, feel them because this is how it is going to feel if you have a malignant node on your breast" (Jesica, 2003).

[Our alternative medicine explorations] emerged out of our deception with a government that does not respond [to our health issues], but it also emerged from not wanting to die, from the fact that I have to do something. It emerged out of our desire to live and from not wanting any other of our women dying. The process of losing our women has been really difficult. We don' t want to keep losing our women; we don' t want to keep seeing them die. [Our explorations and activism] emerged out of

our deception with a government that doesn't do anything. We cannot keep waiting for them. More than out of deception, our activism stems out of our desire to live in a Vieques without the Navy. Many people wondered, "Am I going to be able to see it? Some already passed away without seeing it... In my particular case, I celebrate knowing that my son is no longer going to be emotionally affected by the bombings. I tell my husband: "I contributed and guaranteed the possibility that if my son wants to live in the future in a Vieques without pollution he will be able to do it..." (Jesica, 2003).

However challenging the status quo through their bodies has not only meant putting themselves at odds with doctors and governmental representatives. It has also placed them at odd with their husbands, other activists groups and community members in general.

There is always criticism from those who don't understand the kind of work we are doing here. There have been moments in which not all of our husbands have agreed with our way of doing things. They have called us loonies, witches, lesbians; a little bit of everything. Sometimes my husband tells me, I mean he is supporting us, but sometimes he tells me: "so when are the lesbians going to meet again, it's been a while." You know, he is joking around but he is still calling us names like that (Jesica, 2003).

I have had to brave things in here. For instance, the other day I was sharing with Father Andres a situation I had with a guy. Father Andres told me, "that's odd, because he didn't tell me anything about it." I told Father Andres: "Well, you are Father Andres, but I'm young, black and a woman. It is ok to yell at me, but it is not so to yell at you." Of course, I don't allow anybody to do that to me. In that sense, in emotional and mental health terms, I have had to work with myself. I remember this time when I had to stop; go to my place and stay there trying to relax.



I had to look for professional help, because after that incident it became harder to continue the struggle. After that it was heavy to continue, to be able to be here telling you this is not easy either. For many women it is not easy. It is not easy to deal with issues of health, participation and many other things on which everybody has an opinion (Jesica, 2003).

While women's activism at times has been particularly trying they have been able to confront adversity by building and maintaining different kinds of social networks. The key to their success is in part because women were the first ones successfully articulating the U.S. Navy's offenses not in "political" or "economic" terms — like almost all other groups have done. Rather they focused their organizing around health concerns. Because of the apparent non-threatening character of health discourse and women's positions within their cultural matrix, women were able not only to enroll a variety of allies on their pleas but at times to invert the cultural expectations forbidding them from doing so.

We also have some male partners that openly say: "I am from la *Alianza de Mujeres*." When other activist groups organize something, these groups of male partners always volunteer to work with us, they say: "we are going to be with "el grupo de la Alianza." In other words they feel they belong to our women's group; they support us. Even in front of the worst criticisms, they have been the first ones defending us. Of course, they always say: "[these women] know how to take care of themselves alone." But just in case, they are there to help us (Jesica, 2003).

In our work with health, we have knocked at many doors. Look we have established alliances with the Department of Women Affairs, with the Department of Health, and with some private organizations. We are not thinking anymore in terms of well the government is not going to do anything. Now we take advantage of whatever help the government can provide us. It is very clear that the government has failed us in terms of public health. We have no problem saying this loud, as we had, and we

belong to all political parties: right wing, left wing, center, non-affiliated, Catholics, Methodists, a little of everything (Jesica, 2003).

Vieques' struggle has been a beautiful and a liberating experience for me. I feel very strong. For instance, in March we presented something that was never shown in Vieques before. It was wildly applauded for it represented our liberation from many things and fears that are tied to the Vieques' situation. We dare to bring to Vieques the Vagina Monologues. Initially many women were like, "oh my God!" We don't speak about that in our communities. Can you believe that more than 200 people went to the show? Two hundred people donating 30 dollars for la *Alianza de Mujeres*. To me, this was one way in which the community showed us their support for our work. Moreover, they were able to surpass their fears daring to see a piece that almost never makes it to places like Vieques. In this sense we have also been part of this liberating process. It was like when the producer gave us the Vagina monologues' shirt. I told her, "look, if you would give me this shirt five years ago, I would not dare to go outside of that door." Now, we walk the entire town with our shirts on. Sometimes people tell us, "Didn't you have anything else to wear? With this what I mean is that we have grown, we have liberated ourselves. (Jesica, 2003).

In this chapter I examined the intersection of health, environment and the military/industrial complex in Vieques, Puerto Rico, as it relates to questions of structural change, human agency and socio-cultural reproduction. I tried to show the interplay between globalization – as a set of practices that exploit the environment and the body for the sake of profit – and women's experiences and responses confronting pollution, disease and suffering. By looking at women's responses to the violent forces of the U.S. Navy scheme of capital accumulation in Vieques, I showed the subjective processes by which a politicized identity is forged, particularly as it pertains to women, thus making possible the emergence of social movements such as the one in Vieques.

## Chapter 5

# Testing, Health and Epistemological Struggles

As I have previously mentioned, Vieques provides a unique opportunity to understand the limitations and contradictions of science and technology. The environmental and health crises brought by military practices have opened spaces of public debate where science itself becomes a terrain of contestation. In this space, *Viequenses* have re-appropriated scientific discourses, at times to explain and validate their suffering, at others to challenge biomedicine or to enroll new actors in their cause. In Vieques these debates become more evident when questions of heavy metal tests arise. The contamination of Vieques with metals such as mercury, lead, cadmium and uranium, among others, is by now uncontested. But it was not always like this. In fact, this connection was not proven until very recently (2000) when activists found physical evidence of their existence. As epidemiologist Dr. Cruz Maria Nazario explains:

That whole year the Navy was forced to stop military training—as a result of the taking over of the bombing range by civil disobedience —scientists were able to take samples. This unique opportunity allowed scientists to do soil, plant and water tests. They found them all to be contaminated. Contamination was also found in the food chain; that is in fish and vegetables. Some of the contaminants were lead, cadmium and cobalt. Lead can affect the nervous system. Cadmium and cobalt can also affect it . . . Other

contaminants we found came exclusively from bombs. For instance, RDX known as Royal Detonation Explosive ... is a bomb component that is not found in nature. The same with TNT ... We also know that there is contamination with uranium. They [the U.S. Navy] were denying it, but we found it ... As you know, uranium also causes cancer (Cruz Maria Nazario).

However, finding heavy metals in the bombing range is not enough to make a legitimate case for disease causation in the courts. This is especially true of chronic diseases such as cancer. The judicial system follows the biomedical conception of disease etiology. Within this conception the cause of a disease is found at the cellular level—that is, when a pathogen or germ alters the natural balance of the organism. To restore health is to trace and eradicate the physiological entity affecting the organism. Causation in these terms is explained by one-to-one relationships. Chronic diseases such as cancer found in Vieques cannot be explained with this germ model of disease. As Rachel Carson (1962) has pointed out, the synergetic effects of multiple pollutants and their effects on health is at best poorly understood. This uncertainty, in terms of determining causation, spills also into diagnosis and prognosis, thus making Vieques a very precarious place to inhabit.

Laboratory tests, typically used in medical diagnosis/prognosis, are a fundamental part of validating biomedical knowledge. Once the samples leave Vieques, powerful machines in far away laboratories process them to reveal their hidden contents. These machines, therefore, inscribe in lab test results the enumeration and measurement of things otherwise inaccessible by sight. Tables, numbers and graphs are meant to visually represent objective reality itself. These inscriptions are intended to translate the objective world of pollution and the representational world of scientific facts. But as Latour (1987, 67) explains, “Showing and seeing are not simple flashes of intuition” (67). “The visual is no more self-evident than any other mode of relating in the world” (Haraway, 1997, 289). These laboratory inscriptions do not speak for themselves and therefore are the product of interpretation. The expert commentary is what renders them intelligible. Legitimation, thus, can never irradiate from the

margins, but only from the centers of power. Even when heavy metals lab results partially align with *Viequenses*' pleas, they do so by overshadowing their own embodied experience and knowledge.

Testing opens up contradictory and highly contested spaces. Not only does it bring *Viequenses* into biomedical and juridical discourse and practice but it also makes them question biomedicine because of its inability to deal with these kinds of environmental and health complexities. From the juridical point of view, however, *Viequenses* are clearly the losers, for they are placed with the burden of proving that which not even current biomedical understanding can prove: causality. From the medical point of view the story is no different, for doctors offer no course of action once they acknowledge people's poisoning with heavy metals. Hence, what becomes highly contested in Vieques is the relationship between bodies' heavy metals poisoning, disease etiology, diagnosis and prognosis. I will try to illustrate how a bottom-up cultural critique of science emerges through *Viequenses*' struggles over the meaning of these laboratory test results.

## 5.1 Testing and Diagnosis: Tropes of Contestation

From the beginning, testing in Vieques was an important trope from which people generated multiple meanings both within and outside of medical institutions. Given the kinds of chronic diseases found in Vieques, however, testing was never outside the realm of uncertainty. It was not uncommon to submit *Viequenses* to trial and error tests until a diagnosis was reached. While this is in general how biomedical practice works, in Vieques this uncertainty in diagnosis and treatment is more widespread given the higher frequency of chronic diseases. For instance, Zaide's experiences with her daughter point to this uncertainty in diagnosis:

One day, on April 16 1995, two days after my oldest son got married, my daughter woke up with abdominal pain. We went to the local hospital where for a whole day doctors tried to determine what was happening

to her. After we got the lab results the doctor sent us to Fajardo. We arrived in Fajardo at 9:00 pm. A pediatric doctor and pediatric surgeon in Fajardo were also unable to determine what was wrong with her, so they referred us to the Pediatric Hospital of Centro Medico in San Juan ... At 3:00 am, the oncologists and hematologists told me that it was not leukemia ... Two days later, after a battery of additional lab tests, we got a diagnosis. In other words, we had to pass through three different channels to finally get a definitive diagnosis ... (Zaide).

First, the symptoms needed to be deciphered; in this case Zaide's daughter's abdominal pain. In order to do this, doctors ordered laboratory tests. The initial test results did not offer evidence to support a given diagnosis, so the patient was sent to another group of experts to perform more laboratory tests. After passing through three different medical experts and many more laboratory tests, a "definitive diagnosis" was given. Diagnosis then is as much about the "objective" measurements that laboratory tests provide, as it is about the art of interpreting them. While in this instance a diagnosis was provided, there are other cases that never abandon the grey space of diagnostic uncertainty. This is the case of Don Molina and Don Eduardo, whose conditions not only remained in this grey space of uncertainty, but whose symptoms were treated as if they were something else.

Although I have been seeing doctors since 1992 for many health problems, they were unable to diagnose me. They started treating me for what they thought was arthritis ... (Molina).

Look at this rash; I'm treating it as if it were skin fungus (Eduardo).

However controversial laboratory tests may be from a diagnostic point of view, they are nonetheless powerful allies for whoever can wield them. In the realm of hospitals, they provide the objective facts needed to arrive at a diagnosis. Lab test results are the very sources of authoritative legitimation by virtue of their separation from the

subjective. This separation is only possible by the mediation of complex medical apparatuses that enable one to speak with certainty in an uncertain world. If the symbolic power of such inscriptions is capable of giving authority to speak and to be heard, then it makes sense that Vieques residents and people from different social movements within Vieques enrolled such a powerful ally in their plea. The administration of this test in the island started as part of gathering evidence of heavy metal poisoning on the island. As Conde explains.

Different people started the tests for heavy metals from hair samples. There was doctor Roque who took a few hair samples. [However] the majority [of the samples] were done by a law firm that is in the process of presenting a class action suit against the U.S. Navy ... Hair samples, among a battery of other tests, showed that people have super high levels of heavy metals [in their bodies] (Conde).

Thus the process of testing not only opened up Vieques to the realm of biomedicine but to the realm of law as well. The two, however, are intimately related. For any litigation to be successful in the courts, it has to follow the logic of scientific discourse and rationality of which testing is an integral part. That is how the law firm of x and y, seeing an obvious case of environmental inequality, and having experience in this kind of environmental litigation, decided to become involved in Vieques. Among the first things this firm did was to gather hair samples for lab testing. So far, including testing, this firm has already spent over 2.5 million dollars in Vieques in an attempt to make a case for a strong correlation—not causation—between heavy metals and disease. The legitimizing power of testing is evident.

According to the lawyers, Love Canal's class action suit is going to be small if Vieques class action suit ever gets settled. In fact, Love Canal had 180 families, whereas Vieques has more than 600 families (over 6,000 people) so far involved. Despite the similarities, the main difference between the two is that in Love Canal they were able to trace causation to a single known carcinogen and in Vieques the situation is more complicated. While the level of metals is high (depending on the test scale used) the

individual level of a single metal is not considered to be enough for a causal relation. Moreover, a clear understanding of causation for the kinds of chronic diseases confronting *Viequenses* is out of the reach of biomedicine's germ model of disease. The germ theory maintains that disease can be traced to a single physiological entity. While this is true of a few infectious diseases (which have been successfully explained by this model), it fails in the face of chronic diseases that cannot be pinned down to a single cause. Despite chronic diseases being endemic in contexts of environmental crisis, the biomedical model of disease has dominated and continues to dominate public etiologic discussions. This dichotomous and atomistic (host/pathogen) understanding of disease validates biomedicine as the bedrock of reality while devaluing *Viequenses'* disease etiologic model.

In spite of the legal and biomedical ramifications of testing (that is, whether or not they can scientifically prove disease causation), *Viequenses* needed a source of validation for their disease etiologic models. It is not enough that they physically experience heavy metals poisoning – through different kinds of chronic symptoms –, they also needed a disembodied source of validation to be taken seriously.

Sometimes doctors, they look at you and they don't know what you are suffering from –sometimes it is even hard for me to explain– and then they tell you that it is all in your head, that it is just mental (Molina).

However, knowing posed an even more serious problem for *Viequenses*. Test results force people to confront an uncertain health future.

I was sitting right there when I heard on television that it was true; people were getting sick [from the pollution] with heavy metals. I called [my husband]; I screamed: "Quiro! " Because until that moment I never thought that all the health problems we were confronting – including our 4 daughters and our nine grandchildren–were results of these metals. Last Saturday I had to rush my third daughter to the ferry to take her to the hospital. We have been going from doctor, to doctor, to doctor.



Psychologically this has affected us. My seven year old granddaughter has higher mercury levels than I have. The baby is seven months old and we don't know yet if she is contaminated like the rest of us. We are waiting for the lab results. I was sitting right there listening to the news (Molina).

This underscores the fact that while testing finally gave *Viequenses* the “scientific” certainty of their bodies being polluted, it also crystallized their worst fears.

When people come out of this battery of tests for heavy metals many fall into an [emotional] crisis. People were told, “you have this much lead”, but they were not told what to do about it. How do I work to improve my health if I have this? What do we do? How do I start cleaning my body? No program was developed, so people got anxious. [They would think] I'm dying. I'm contaminated. They were anxious because they were told they had cadmium and mercury poisoning and twenty other things but no tools to handle them. So what do I do now? (Conde).

Look at this medical evaluation. Doctors recommended low fat diets and exercise. They told me to get another evaluation from another [specialist] in order to manage the content of arsenic and mercury in my blood. What can another doctor do, if they themselves tell you that nothing can be done for this? I don't know if you have heard it before, but we found out in the Fortin's meeting that nothing can be done to get these toxins out of our bodies (Molina).

Angel and I did our hair tests with doctor Roque and we found that we were contaminated ... After this hair test, I was not doing well psychologically, you know, I was feeling alienated and disconnected with the world ... (Eduardo).

Finding out about having high concentrations of metals had different effects on people. While it paralyzed some from taking any action, for “nothing could be done”, it forced

others to engage the situation. One way in which people turned the biomedical dictum that “nothing could be done” into taking a stance, was by joining the class action suit. In this way, they could try at the very least to obtain the means to secure good health care. The suit offered this possibility. In fact, the class action suit was couched as a prognostic determinism, in which lab tests became oracles foreseeing as the only solution coping, not curing or cleaning the body of pollutants. All people could do to fight the pollutants within their bodies was to get the best health care money could buy. The means to get that money was through the class action suit. To this end, the lawyers aligned their interpretation of the test results with biomedicine, even if they were trying to prove the environmental conception of disease causality that *Viequenses* upheld. Presenting this deterministic interpretation of test results, the lawyers were able to convince many people to enroll in the class action suit. These results were the means to prove the inescapable reality of their bodies’ poisoning. But even this inescapability became a source of contention not only among the members of the class action suit themselves (to be discussed later), but also for other *Viequenses*.

## 5.2 Contesting Prognostic Determinism: the Case of Chelation

While many people agreed with the importance of testing to demonstrate the poisoning of *Viequenses*’ bodies with heavy metals, not everybody agreed with the deterministic biomedical dictum that nothing could be done to get rid of them. Charlie was one of the skeptics of this interpretation. I will quote him extensively here for various reasons, the main one being that his understanding of the relationship between chronic diseases and contaminants does not end with causation, as with most cases, but also includes healing. The level of sophistication in his understanding is also remarkable. Charlie embodies, in a way, all of those *Viequenses* unsatisfied with biomedical responses to their health problems and who went an extra step searching for alternatives. Charlie and his family, like *La Alianza de Mujeres*<sup>1</sup>, represent the

---

<sup>1</sup>La Alianza de Mujeres is a women’s activist group that emerged out of women’s concerns about health problems in Vieques. This organization is another example of people rejecting doctors’ grim

best example of organic intellectuals, for it was from their experience with disease, pollution and uncertainty that their understandings evolved.

As with the rest of the people living in Vieques, taking a hair sample was the first step in trying to find evidence that something was wrong with them; that symptoms such as fatigue, irritability, skin problems, sexual dysfunction, among others described, were not just the result of the stress created by military exercises; that there was a physical connection between the heavy metals released in their environs and their deteriorating health. By appropriating a hair sample test, a person or group was able to use a biomedical instrument to pursue an etiological explanation unpopular within the medical establishment confronting them. As Charlie's first encounter with the test's results illustrates, this confrontation was not easy:

The first time I saw my test results, feeling awful, I thought that they were like a Microsoft Excel Chart; horizontal lines that did not fit on the paper. You know, they could not fit. You have low, medium, high and these lines were off the charts . . . My lab test said I had tested eleven for aluminum. According to the legend they give you, eight is the maximum level. That is a dangerous level (Charlie).

The lab results made concrete—by virtue of visual representation— that which until then had been only inscribed in the body and experience through unexplainable symptoms. For many, the lab tests symbolically became a death sentence. As Nilda once explained, “to know that you were contaminated was as if your death had been announced” (Nilda). Again, for many, to know was to realize an uncertain future with dim prospects regarding one's health.

They put me through a lot of studies [and lab work] . . . doctors recommended exercise and diet. What can they do against arsenic and aluminum, if they themselves say that nothing can be done? They told us

---

prognoses and disease etiologies even when appropriating aspects of biomedical discourse, such as lab tests, to justify their search for alternative medicines.

that nothing can be done to get rid of these kinds of toxins from the body (Angel).

In the case of others, however, diagnostic determinism was not acceptable. In Charlie's case, that first confrontation with test results did not paralyze him, even when it did scare him.

You've got to remember that the human body should not have any amount of heavy metals. The human body needs zinc, calcium, etc, but it does not need aluminum or mercury. Look at my lab results; the limit is eight, what I mean is that eight is a high enough level to rush you to the hospital . . . This is how I decided to look for some system of detoxification (Charlie).

In confronting his lab test and dissatisfied with the prognosis, Charlie decided to engage in biomedical and scientific discourse by looking at alternative treatments to something that was said to be untreatable. As the literature in globalization has pointed out, information technologies make available a wealth of information to those that have access to them (Appadurai, 1996; Wilson, 1997a). Through the very same computer that Charlie uses to write the Vieques Times,<sup>2</sup> he was also able to research everything related to heavy metals poisoning.

I went crazy searching for information about chelation<sup>3</sup> on the Internet, the more I found the more scared I got. This time, instead of looking for chelation, I clicked a web-link on hazardous poisoning and there were different treatments for different metals: mercury poisoning, lead poisoning, aluminum, cadmium, nickel, there are many more. . . These treatments are

---

<sup>2</sup>The Vieques Times is the one of the newspapers printed in Vieques.

<sup>3</sup>Chelation therapy is a treatment that involves repeated intravenous administration of a synthetic solution called ethylenediaminetetraacetic acid, or EDTA, to pull toxins from the bloodstream. The word chelate comes from the Greek root chele, which means "to claw". EDTA chelation therapy is approved by the Food and Drug Administration (FDA) as a treatment for lead and heavy metal poisoning. An estimated 500,000 to 1,000,000 people in the United States are treated with EDTA chelation therapy every year ([www.unm.edu/altmed/ConsSupplements](http://www.unm.edu/altmed/ConsSupplements)).

available in every emergency room. What I'm saying is that these treatments are available in every important hospital in the U.S., including Harvard. Because you know that the federal government doesn't trust anybody who is not American. I did my research on American hospitals only because if I were to use Puerto Rican or Canadian hospital as examples of these treatments they would not be considered as valid as the American ones. Anyway, in every hospital I looked up they first stabilized the patient in order to give him a chelation treatment. They have a chelation agent for each kind of poison (Charlie).

The interesting thing about this passage is that it shows the emergence of an alternative etiologic and treatment model to deal with hazardous substances. The emergence of this alternative model is not a simple rejection to all things biomedical, but a strategic re-appropriation of biomedical discourses seeking to subvert those aspects contradictory to people's embodied experience. It is interesting to also note Charlie's keen awareness of the symbolic power of certain prestigious medical institutions to support his position. The legitimation of these "big U.S. hospitals", however does not come only from being big or associated with prestigious academic institutions such as Harvard, but from the fact that legitimation is defined in colonial terms. These are U.S. hospitals, not Puerto Rican.

Given that the kinds of pollutants present in Vieques are the result of military practices, it is not surprising that chelation treatments were first developed for warfare situations. The first chelating agents were introduced into medicine during World War I as a result of poison gas. As Charlie explains, from his Internet research on the matter,

The British Anti-Lewisite or BLA ... Well, in World War I the Germans were using mustard gas and the British decided to develop a gas of their own so they developed arsenic as a weapon. To protect their own soldiers from accidents with this new gas, the British also needed an antidote for arsenic and BLA was developed (Charlie).

This chelating agent works by binding the arsenic to itself, “forming a water soluble compound that [enters] the blood-stream, allowing it to be removed from the body by the kidneys and liver.” <sup>4</sup> EDTA, another widely used chelation agent after World War II, has a similar history:

The EDTA that was used against lead was approved by the FDA upon request of the U.S. Navy who realized that half of their fleet suffered from lead poisoning. Of course the U.S. Navy didn’t say the lead came from the bullets they were firing, but from the paint used on the hull of Navy ships: not from the bullets! [laughs] (Charlie).

Charlie’s sarcastic laughing points to his awareness of the continuation of the U.S. Navy’s concealment of the deleterious health effects of military practices. It is important to mention that while the use of EDTA as a lead chelation agent is completely established within the medical community (in fact FDA approval is only for lead treatment), other uses are fiercely debated. What is important about these findings is that they allow Charlie to challenge the prognostic determinism dictating the impossibility of human detoxification in Vieques. But in order for an alternative treatment model to work it has to respond to the circumstances of the people of Vieques. As Charlie explains,

The problem with EDTA is that it is expensive and it is administered intravenously. It is like a bag of serum that is hanging and releasing the liquid drop by drop into a vein. It costs like 100 dollars per bag. Depending on your condition they might use 10, 20 or 30 bags but it works quickly. However, it only works with lead and has no effect on mercury. The problem in Vieques is that everybody that has had lab tests has multiple metals [within their bodies]. In the movie, Erin Brackovich, there was one factory, one chemical and everybody had the same disease. In Vieques you have countless metals. That is without even counting

---

<sup>4</sup>[http://en.wikipedia.org/wiki/Chelation\\_therapy](http://en.wikipedia.org/wiki/Chelation_therapy)

the unknown ones, because without a doubt they have tried many non-conventional weapons here. (Charlie)

This is a key passage for it hints at important themes. It hints both at a possible way of detoxifying the body and the particular difficulties of doing so in Vieques. More importantly, it also points out the limits of toxicology and of biomedicine and its germ theory of disease. As previously discussed, the synergetic effects of toxic cocktails such as the ones present in Vieques and their particular health consequences are not understood. Moreover, the kinds of chronic diseases affecting *Viequenses*, ranging from cancer, lupus, leukemia, skin rashes, respiratory problems, liver disease, chronic pains, among many others, cannot be explained by a single factor.

Charlie's alternative etiologic model stems from a highly polluted environment and the knowledge of having within his body a multiplicity of heavy metals. His finding of EDTA as a chelator became a lead to further research on chelators for the kinds of metals found in Vieques. As he explains,

The British Anti-Lewisite was developed back in 1917. In other words it has been around for more than 80 years. Since then there have been other discoveries of things more reasonable, such as herbs, garlic, vitamin C, sargassum and other mundane things. Cilantro is the most potent one for mercury because it enters the smallest blood vessels; even those in the brain . . . These metals are like parasites; they like it inside and they don't want to come out. They hide in soft tissue like the lungs, the kidney, the liver and the brain. Some of the chemical agents that you can get in the pharmacy cannot penetrate the small blood vessels, but cilantro can move the mercury. But cilantro can only get the mercury out of where it is, but it cannot get it out of the body. What it does is reintroduce mercury back into the blood stream. That's why you have to combine cilantro with chlorella, a very common and inexpensive plant that is like algae and that is the best source of chlorophyll. Once chlorella finds mercury in the blood stream it gets it out of the body. Cilantro returns it to the blood stream

and chlorella takes it out of the body. It's not like I invented any of this stuff but it's out there and you can use it. You can take it in drops, pills or even apply it directly to the skin. The best way is intravenous, because it is more direct, but it's too expensive, it's like 100 dollars per dosage.(Charlie).

While the borrowing of medical discourse in this passage is obvious, particularly in the way in which chemical agents act within the body, this borrowing functions to support an alternative treatment unpopular within the medical community. In this etiologic model, multiple pollutants are responsible for chronic diseases. The logical treatment would be to get them out of the body. For instance, when I asked Charlie about doctors' responses to his theories he explained that,

They get defensive. Well, to begin with, there is no such thing as doctors, specialists is what they are. When you tell them that you are using natural remedies, they tell you "ah that's a nutritional approach, that's a nutritionist's job, I'm a doctor or a toxicologist." In other words, one is a plumber, the other a carpenter; [laughs] they are specialists. I'm learning at all costs to stay away from any specialist ... and it's not that doctors are not struggling for Vieques as well. Look, [a few years ago] a group of 26 doctors invaded the military base with their white gowns giving away information and explaining to military personnel the dangers of being exposed to those contaminants. They were arrested for trespassing.' But there was [activist] interest on their part. Doctors argued they were following their Hippocratic oath in defense of human life and that it was their responsibility to do that even for military people ... They did this act of civil disobedience and in court their defense was based on this Hippocratic ideal. The thing is that not even they are willing to discuss chelation at home. I have personally dealt with a few of them and some would be more than willing to send me to jail if they could. The first thing they are going to ask is whether [the chelation agents] are covered by "*la*



*tarjetita de Rosello*” [public insurance card]. Well, no, there is not even one doctor that will give you a prescription for something they consider “alternative medicine” (Charlie).

A holistic approach is what characterizes anthropology, and critical medical anthropology’s main criticism of biomedicine is precisely its lack of this approach. In this passage we have the same kind of criticism to biomedicine, however, it is bottom-up because it is rooted in experience. It is important to notice also that while the doctors mentioned above are what one might call “activist” doctors, their normalized understanding of the world limits their ability to consider alternative ways of coping with disease. The way in which Charlie explains the resistance to alternative medicine is not limited to the aforementioned epistemological critique, but also to an economic argument. Alternative medicine, as he points out, is almost never covered by insurance companies— let alone public health. Alternative medicine threatens traditional medicine because:

...it competes with the business of doctors. The ones with the white gowns are as greedy as [pharmaceutical] producers. For instance, let’s say that somebody invents a medicine for something that also works for a different thing ...chelation cleans your pipes like roto-rooter<sup>5</sup>; your plumbing drains better. If you clean your plumbing you are going to have better circulation. Suddenly, people with other conditions start feeling better and this might be competing with other doctors ... That is, if these pills help you even in preventing heart attacks, we are saying that they are affecting the 40.000 dollars a doctor can make for a bypass operation (Charlie).

What is important in this passage is not the validity of chelation in helping other conditions besides heavy metals poisoning— though this is something debated among some doctors in the medical community<sup>5</sup>— but the awareness of how economic in-

---

<sup>5</sup>For a detailed account on the controversies of chelation as a therapy, refer to Carter, James P. If EDTA Chelation Therapy is so Good, Why Is it Not More Widely Accepted? In the Journal of Advancement in Medicine, Vol.2 Num 1/2, 1989, 213-226. Also available online at <http://www.drcranon.com/chelation/carter.htm>

terest affects health services. This realization of the shortcomings of the medical establishment is what fuels not only Charlie's search for alternative medicine, but those of other activist groups as well.

Activists' encounter with biomedicine, while it has made them critical towards certain aspects of its discourse, has also made them aware of the necessity of following some sort of scientific method that validates their perspective. In the case of *La Alianza de Mujeres*, they developed and conducted a questionnaire in which they interviewed 209 families from Vieques. This "lay" research found that one third of the families surveyed had at least one family member with cancer. In this instance, they were trying to prove that there was an unusually high incidence of cancer in Vieques. This was one of the first attempts at engaging their etiologic model with scientific methodology even when recognizing that they did not "necessarily [follow] a research method" (Conde). In the case of Charlie he developed a "trial experiment" of some of the chelation agents in which he became the "guinea pig".

I was looking for a medication that wasn't too expensive and then, of course, you have to try it. I did not have any way of trying it and since there is no cooperation from doctors I became my own guinea pig. But of course before that, I reviewed all the research literature on the subject ... What I take ... I bought it on the Internet ... is a set of pills, which are in two different bottles. One of them I take at night and it is supposed to flush out [the heavy metals]. It cleans your plumbing. When you wake up, you take the other one to replenish yourself. With this system you are expelling from your blood both the bad as well as the good. Mornings are to replenish the good [minerals in your blood]. Well, look at this graph: they call it the reference point from which you are not supposed to pass ... in the case of aluminum the reference point was 8 and I had 11, which is quite high. After I started chelation treatment I went from 11 to 4 in both aluminum and lead. I wasn't completely clean but it was better than 11... I spent like four months taking the pills. So from the first [hair sample test] I went down from 11 to 4. During the next

four months they began military practices again and the airplanes were throwing shaft. I'm absolutely sure they were using shaft. I don't work in an aluminum factory. I don't eat anything that could contain that. You know that shaft is made out of fiberglass and aluminum and almost all explosives have these [ingredients]. I kept my chelation treatment at full strength during and after the practices. Well the third time I checked my hair test results, they had gone up to 8. They did not go up to 11, but they did double. This is too big of a coincidence (Charlie).

This re-signification of a hair sample test is a little different than previous ones in that it is not only about proving that you are poisoned with toxins. That is, it is not only about proving a disease etiologic model, but it is also about proving an alternative health treatment. The validation of this alternative treatment has to be done in the realist terms defined by biomedicine. People engaging with these discourses are fully aware of this. Just like in the case of *La Alianza de Mujeres*, this realist interpretation of testing— that is, counting the values before and after the treatments or counting how many people have cancer— uses paradoxically the very same logic that is denying them their perspectives. However, this is not as self-defeating as it might seem if it is understood as a creative negotiation with an uneven field of power and knowledge production. This creative negotiation allows different groups in Vieques to appropriate biomedical and other discourses and technologies in order to become actors in an arena in which they would not otherwise be able to participate. After all, *La Alianza de Mujeres* was successfully able to call the attention of public authorities to the increase in cancer in Vieques, even when their survey was not bound completely by scientific discourse. This re-appropriation of biomedical discourses also enables *Viequenses* to become healers in the sense of taking back their lives from the biographical disruption that (dis)ease presupposes. Moreover, it provides people with some hope and dignity in a place where state institutions —the military and the Department of Health— have done everything to deny them this.

Disease, as critical medical anthropologists stress, should not only be understood as an affliction of the individual body, but of the social body as well (Taussig, 1980).

In Vieques, (dis)ease refers to a feeling of uneasiness which is the result of inhabiting an altered and polluted body and environment. The inhabitation of this corporal, social and uncertain landscape at times severs and always changes social relations—interpersonal, within and without the household, professional and communal. Healing, then, is as much about treating the body as it is about reconstructing healthy social and environmental relations. Healing is also about connecting the cause and the effects of illness with the creative process of regaining control over ones' lives. Healing then becomes a social project.

If you look at the symptoms associated from poisoning with mercury and lead you will find that chronic fatigue syndrome and short attention span are a few among them. Everybody is affected. Look, I have known Joseph since he was a kid. He has always been very intelligent. Now, when you are having a conversation, he at times gets lost . . . I'm telling you because I know it from experience. I know that I sound like a reformed alcoholic, but I have obviously been affected by all of this. I'm no Charles Atlas anymore, age is age, but there were times in which I couldn't even get an ice cube from the ice tray. My son, who is as strong as a bull, is an electrician, and he noticed that at times he could not feel his extremities. As you might imagine this is not a good thing for an electrician. Well, he was telling me last night, that when he stops taking his pills for a month, he starts feeling this numbness again. Then he takes the pills for two or three days and feels fine for another couple of weeks. What I use is inoffensive: it is a combination of ingredients that works for me and for everybody else that has used it. Everybody that has used it for a while has felt much better. There is my family. For example, my daughter-in-law wants to stop the treatment because she says she cannot handle how energetic her kids become. It is true, [the chelation agents] energize you. I just talked to the machine shop guy, he has been using the products for 30 days. He told me that some of the symptoms are gone. I helped him get his hair sample test, which came out really high, and the [chelation

agents] as well. Before this, he spent like 2000 dollars on doctor's visits for a condition that is unusual for a guy his age. Now he has taken about 60 dollars in pills and he is already feeling better (Charlie).

The discursive and material appropriation of testing, as we have seen in the chelation example, has served in Vieques as both a way of proving a socially and environmentally conscious etiologic model and of exploring an alternative treatment. I will now discuss the role testing has played for pro-Navy supporters in relation to disease etiologic debates and occupational hazard discussions.

### **5.3 Working within the Fences: Occupational Hazards and Testing**

So far I have been telling the story of Vieques' health crises from outside of Camp Garcia's fences. However, within these fences another story is hidden. It is hidden not just in the metaphorical sense, but in the literal sense as well. More than hidden, silenced by a "Top Secret Clearance" and a fear to speak out. It is a story that while deeply inserted in the social drama of Vieques, is violently shaped by the global forces of neo-liberalism. It is a story of families pitted against each other over disease etiology and the meaning of testing. This is the story of those Puerto Rican workers performing one of the most hazardous jobs: cleaning up and maintaining the firing range. I will be quoting extensively these workers' experiences because of how revealing they are in terms of the kinds of pollutants and chronic health problems found elsewhere on the island.

I have to preface this section by saying that these interviews were among the most difficult to obtain: in part because of fear of reprisal from the U.S. Navy and also because these individuals were part of a legal suit. However, after explaining that I was researching health issues, these workers were eager to share their life experiences in the hopes of making public what was done to them. To protect their identity I am using pseudonyms.

The people I interviewed had a long occupational history with the Navy. This is the case of Angel.

I worked for more than 19 years in the Vieques' Navy range. I worked for a private company with a contract to work in the training facilities for the North Atlantic Fleet ... Because of health reasons they retired me without giving me anything ... They dumped me sick in my house because I could not work anymore ... I was able to pay for insurance that now pays me 113-dollars biweekly. I'm supposed to make a living of this ... After I started medical treatment, how can I say it, this was when the health problems started in Vieques. As a matter of fact, as an employee of the Vieques' Navy range, I knew of a lot of things that were wrong. We knew what was going on there, even about the bombings, but we could not say a thing because we did not dare. We did not dare because we have a Top Secret Clearance in which we could not say anything about what was going on within the fences (Angel).

A few themes need to be highlighted from this passage. As we will see in more detail shortly, the U.S. Navy, as with any other corporation, uses subcontracting as a source of cheap labor. Moreover, workers have to sign a "top secret clearance" in order to work within military facilities. Not only do subcontracted workers have to sign away their civil liberties, but they also remain unprotected from hazardous working conditions. This mixture of neo-liberal cost-cutting strategies with "national security" concerns only brews a toxic cocktail that is fatal for workers' health. The history of these subcontracting companies is rather complex as Eduardo and Angel explain.

We worked under various companies of which ITT was the last one under contract. The Navy has an agency that does the subcontracting. Beginning in 1979, I worked for ten and a half years with RCA. Then General Electric took over and I worked for them for two years. Afterwards came

MARC Martin Marietta for whom I worked for two more years. Then Lucky Martin came, after joining with Martin Marietta, and I worked for them three and a half years. Finally Lucky Martin lost its contract with ITT (Angel)

The last one that came was ITT Federal Service Corporation. All of these are North American companies: they cannot be foreign companies because they deal with military matters of the U.S.(Eduardo).

However confusing this history of military subcontracting in Vieques might seem, the logic is rather clear. The best bidder was the company that could offer the cheapest services to the U.S. Navy. In the final calculation of costs and benefits, the outcome was also very clear and occupational safety and workers' health did not factor in. Workers were fully aware of this, as Eduardo's narrative shows.

I blame everything on the dynamics of economics: the economic strategies of companies, the economic strategy of the Department of Defense for trying to save money. Our contract was for millions, but because they wanted to make a good profit, they reduced personnel and made us work three more jobs. For instance, I used to work in the tower where I was supposed to stay, but because we were short of personnel, I had to launch ships, help paint the targets and use lime to mark the path for the bombs to follow. Their profit was made at the expense of our safety (Eduardo).

Everyday labor in the Vieques firing range was the best education in neo-liberal economics a worker could get. That "profit was made at the expense" of their safety was evident, as were the dangerous conditions of their job. Let us explore workers' own narratives on the matter.

Well, I have many jobs. Every two years they had to remodel the firing range. The firing range is where the targets are located for the bombs

coming from ships and airplanes. The targets are painted wooden panels, old military vehicles and tanks. We had to clean the firing range. We had to be there when everything was removed . . . We also had to use lime to paint the targets for the gunfire. They would give us these cotton masks that were good for nothing. When we used to take them off, we had more debris on our faces than on the masks. Sometimes they would give us a cotton gown but that was just to protect our clothes from dirt; it did not offer any safety. When the wind would blow we would get all the dust inside our clothes anyway (Angel).

Every six months we would have to clean up the impacted areas of the firing range. During the year we would walk around in search of unexploded bombs. In a notebook, we used to keep a record of where the bombs were more or less. With this information, explosive experts would blow them up and then with a bulldozer, pile up all the debris. We used to get all covered in dust (Eduardo).

I was also in charge of the patrolling ship that protected the fishermen in case they entered the firing range. [The commander] would send us to a little island that they called the safe place.' This safe place was no farther than a mile away from the actual firing range. In this boat we used to have our breakfast and lunch. At times when those airplanes fired their bombs—alpha strike was when they would fire 10 or 11 bombs simultaneously—all the dust clouds would cover our food and us . . . Sometimes these live bombs would miss the target, flying over our heads . . . Immediately after the airplanes fired we had to pass through the firing range. In the impacted areas everything was on fire including the abundant vegetation and there was always a lot of smoke. We had to pass through there with all that smoke and with live unexploded bombs to paint new targets. Imagine having to pass over live 500 and 2000 pound unexploded bombs with the whole area on fire. What was the risk? That



the fire would detonate them, which happened but thank God we weren't there. Sometimes the heat of the sun would cook those bombs and they would blow up. Sometimes we would plead with them to let us wait at least half an hour before passing through the firing range, even if they would not pay us for overtime. We could not protest — they would tell us take it or leave it (Angel).

One would think that in the job description this would qualify as a hazardous duty, thus receiving some extra considerations in terms of workers' benefits. This was not the case.

Every time there was military training something always went wrong. There was always some kind of an accident. Injured soldiers, deaths, airplanes crashing in the sea, bombs missing targets ... So we told the company on various occasions that we were exposed to work hazards and asked them to consider us for hazardous duty. They would always tell us: "yes sure, we will look into it". But they would never get back to us. They totally ignored us (Eduardo).

It is important to note that until recently workers understood hazardous labor conditions exclusively in terms of the immediate risk of bodily injury—such as from an explosion and a bomb missing a target—and never in terms of long term health risks. As a matter of fact, despite the U.S. Navy's long-term acknowledgement of lead poisoning's deleterious health effects—just to mention one of the most known toxins—neither the subcontracting companies, nor the Navy informed the workers of this potential health risk.

At no time did they tell us that there was that kind of risk for us, because if they had told me, I wouldn't have gone to work there. I am a carpenter. I could do just fine working outside the base though even the ones on this side of the fence are also contaminated. This has entirely affected Vieques and maybe Puerto Rico too. But they never informed us (Angel).

With regards to the contamination, I have to tell you, they never informed us of the health risks of the chemicals, the smoke, the dust or anything like that. None of the employees knew about this. They used to give us physical exams but they were very superficial and they would not give us any kind of medical attention, you know, extensive or rigorous. You know, what upsets me the most is that even when they knew about this, they did not tell us anything, thus putting our lives at risk. Now we are contaminated with heavy metals (Eduardo).

Despite the misinformation with regards to hazardous substances and health risks, workers witnessed –as we will see shortly –how their coworkers were getting sick and dying of cancer. However, they were unable to develop an etiologic model to explain this in terms of environmental pollution, as the various social movements did. I would argue that their work alienated them from the rest of the community in ways more than physical. While the fences physically separated (some would say imprison) civil living areas from military ones, it was the debate around Puerto Rico's political status that discursively solidified this separation. This material and discursive separation alienated workers from circulating discursive repertoires available to everybody else, thus impeding them from appropriating social movements'etiologic model. This is not to say, however, that they were not aware that something was wrong.

Look, I'm telling you, we did not associate [that our health problems were related]. For instance Walter, our manager . . . he was American, he retired because of illness. He ended up with cancer. A year and three months passed by and he died. He had cancer of the stomach and esophagus. That's when we started getting a little afraid . . . This was around 1993. Then Teodoro, the cook, went on sick leave. He took Monday and Tuesday off and, on Wednesday they were going to fly him to Puerto Rico for an emergency but he died before taking off. He died of lung emphysema. He worked inside the base for 18 years. Then, there was my partner from the patrolling ship who was 56 years old. He got terminal cancer of the

stomach and esophagus and died nine months after getting out of there. It was then that we started thinking that something was wrong ... Even my wife's parents died of cancer in 1988 and 1995 respectively. Nobody knew why this was, but cancer is the disease that is killing people here ... Also, looking at some information the lawyer provided me, I learned that this really good friend of mine had died of cancer too (Angel).

Four coworkers and two family members died of cancer. That is a total of six people dying from the same condition. In addition to being alienated from discourses available to those outside the base, how can we explain workers' unawareness and even denial of a widely circulated etiologic model explaining disease in terms of military pollution? When I asked a similar question, one of the workers explained that:

There are people that don't think, they don't want to believe or they are just too fanatical in their work and don't want to accept the reality because right now in this civil action there are like 12 coworkers that don't want to participate. I told them you have what I have and like me you are going to suffer consequences later ... What they say is that these are stories made up by people that are against the Navy (Angel).

Underlying this narrative is the fact that military practices galvanized tensions between pro-statehood followers and *independentistas*. Pro-statehood followers support the U.S. Navy unconditionally. They argue that being unsupportive of the U.S. military would be unpatriotic. There was also the fear of risking the possibility of annexation if the U.S. government were to perceive a critical stance against their military.

*Independentistas*, *nacionalistas*<sup>6</sup> and other leftist groups, however, understand the U.S. military presence as the most concrete evidence of Puerto Rico's colonial sit-

---

<sup>6</sup>The main difference between these two political groups is that the independentistas follow traditional electoral politics as a way to attain political power. Nacionalistas, on the other hand, argue that because Puerto Rico is a colony, there is no real democracy. Thus they do not participate in elections. Both groups desire the independence of Puerto Rico from U.S. colonial rule.

uation. Even when the social movement was capable of reinventing itself in “non-political” terms by focusing mostly on health, pro-statehood and pro-Navy people tended to perceive the environmental etiologic model as a leftist-conspiracy. Most of the time their support for the military had to do more with economic pressures than with political disputes. After all, pro-Navy people, for the most part, used to work within Camp Garcia’s fences. There was also the notion of loyalty that some workers upheld: despite everything, Vieques has an over 60% unemployment rate and they were among the few that had a job. As Angel explains,

I was never against the Navy. I was pro-Navy and we used to have our meetings every Saturday at the military base ... I never participated in any protest against the Navy out of respect. Even though I’m sick because of working there, I am grateful because without them, I could not help my family. I was able to send my daughters to school: for this I’m grateful and I never speak negatively about them. I was never against the Navy, I will not fight against them, all I have to say is that they have to compensate the people of Vieques. We are going to do this through our lawyers (Angel).

Note that in the same way organizing around health was a “non-political” way of voicing activists’grievances, for workers, pursuing litigation meant the same thing. That is, litigation became a non-political way of asking for compensation without this meaning ungratefulness towards the U.S. Navy. Something similar happened with La Alianza de Mujeres who developed alternative ways of getting involved in their health struggle – such as adolescent sexual education programs, cancer support groups, etc. – without having to involve traditional civil disobedience activities – such as marches, protests, etc. Given the long history of leftist activism in Vieques, these activities at times were perceived as being too political. Despite how apolitical the civil action seemed, workers’participation in it depended upon believing activists’etiologic model. Indeed, workers’resistance to this model was hard to change. It was not until the insistence of activists, lawyers from the civil action suit, and later from other coworkers that this resistance started to fade away when workers agreed

to getting tested. Seeing the tests' results was what finally conjured their skepticism, for it gave them "scientific" evidence of their bodies' poisoning with heavy metals. As in the case of other *Viequenses*, these tests' results opened a Pandora's box filled with betrayal, rage, uncertainty and fear.

Even though I had been seeing doctors since 1992 for many health problems, they were unable to diagnose me. They started treating me for what they thought was arthritis, but they did not know that the toxins I had in my body were responsible for my health conditions. When we did the hair sample tests and the blood tests, everybody that worked in the firing range tested positive. We tested positive to uranium, mercury, cadmium, arsenic, aluminum, lead, all of that (Molina).

People from outside the fences told me to get tested. I went and I did it. I would have liked the results to be different, but unfortunately they weren't . . . When we did the hair sample test it came out positive. It was true: we were contaminated. After this hair test, I was not doing well psychologically, you know, I was out of touch with my surroundings . . . I feel betrayed, betrayed because, just like my coworkers, I worked hard there for many years from dusk till dawn. Everything was in favor of the national security of the U.S., which we share, and it is not fair that this job has to cost me my life (Eduardo).

Well, and this is why we started to fight with the legal suits we have. There have been pressures from everywhere, but if we don't look for help, who is going to do it? (Angel).

Testing, as we have seen so far, is a fertile trope of meaning generation. That is while scientific and biomedical practice try to stabilize testing's meaning, popular understandings are constantly re-assigning new meanings to it. I have tried to explode testing results' aura of certainty by showing its instability through the conflicting

processes of diagnosing chronic diseases in Vieques. In an uneven social field traversed with power, where science and technology occupy a privileged position, I have also shown that testing is a powerful ally. Its volatility of meanings makes it a material and discursive resource for multiple actors. I have shown how testing became a resource for doctors, lawyers and people. In this last section, I showed the ways in which testing was used to prove hazardous occupational conditions and to convince skeptical workers of an environmentally rooted disease etiology. By convincing people of this disease etiology, testing opened up the possibility of voicing their plea in legal terms as opposed to the non-traditional ways of civil disobedience. I will turn now to this legal space to explore the tensions between activists' and lawyers' understandings of how Vieques' health situation should be solved. Through this exploration, I hope to illustrate that the juridical system shares with biomedicine the same epistemological assumptions that greatly limit people's participation and voices.

## 5.4 After Testing: Reparation Debate

Testing, as I mentioned earlier, draws Vieques into the realm of law. There are no doubts that *Viequenses* need both access to health services and reparation for the Navy's misdeeds. However, there are differences of opinion on exactly what is the most appropriate way of attaining these common goals. These tensions are best exemplified in the discussions between civil action lawyers and activists from different groups. From these debates, it becomes evident that while a civil action suit might provide some alternatives, these might fall short of *Viequenses'* needs. This contention comes from the clash between the inherent limitations of a socially atomizing legal system and activists' holistic understanding of Vieques' situation.

All of the transcripts for this section, which illustrate these differences of opinion, come from a public meeting called by John Arthur Eaves, Jr. of the Mississippi-based law firm representing around 600 families in Vieques. Roughly twenty people attended the meeting. The purpose of this meeting was to explore how activists' projects could interface with lawyers' attempts to beneficially position Vieques in the U.S.

Congress. Instead, residents and activists pushed this agenda to the background. They were more concerned with discussing the possible outcomes of the civil action suit. What stirred debate, however, was whether the legal attempt to obtain monetary compensation for the Navy's misdeed was the most appropriate way of addressing Vieques' health crises. As Mirna explains,

Compensation, and I think that's the way Congressman are looking at it, but compensation is not the solution to our health problems . . . I'm sorry, John, but compensation is one thing and God knows this island deserves compensation but it is not our solution. What we have to demand here are clinics and treatments and follow up on complications and health. That you, that the case be a success will be a very big help for us in getting what we really, really need. There are a lot of people here that still don't even want to get tested because there is no treatment. I know that you are a lawyer representing a particular case and it is valid, and you have demonstrated a real serious interest and you have gained a lot of support in Congress for Vieques. But we have to get others involved; we have to get the Health Department somehow involved. We need clinics here; we need treatment . . . we have to stir up the fire at all levels. It's not . . . it all must happen together. I think maybe I have been screaming into the wind but somehow the case must express itself more strongly. And the fact is that we have no treatment here, no clinics here and there is no dialysis machine. Sickness is a reality here" (Mirna).

Mirna's comments hint at the fact that civil action outcomes, even when they are intended to legally address a collective of plaintiffs, are expressed in individual terms. In other words, in a civil action, the federal courts' final unit of analysis is the individual legal subject, not the communal or social one. Reparations usually do not go beyond the individual. The wide spread health crises in Vieques need solutions that would be available for those who while seemingly healthy now, might fall ill later—that is to say those people who are not currently part of the civil action suit. When Mirna

is calling for clinics, hospitals and medical equipment, she is referring to the social character of the health crises in Vieques, which activists sustain cannot be addressed by this civil action suit alone. That “sickness is a reality here” refers precisely to this social character of a health crises that touches everyday life in Vieques: it refers to the shared experience of having their world unmade by disease (Scarry, 1985).

I mean when Jose Alvarez, Milivy’s dad, was with us there [in Congress], it was heart breaking seeing him unable to stop crying because his little girl died ... I could not stop crying either. His little girl died only six months ago, but he has been suffering for years and the money that somebody could put in his pocket will not solve his suffering. It is not going to solve our suffering either: we are not going to celebrate that somebody give us money. We need to establish better health care and services for our people and we need that now. What I ask from you is more emphasis on the crisis we are living” (Mirna).

Jose’s little girl, Milivy, was diagnosed with neuroblastoma, a signature cancer, and by age three, she had already had nine tumors removed. She became the symbol of Vieques’ health crises until dying at age five. Activists’ success in enrolling people both locally and internationally has depended upon showing this disruptive character of disease in Vieques. In their organizing, they have used symbolically powerful images such as Milivy’s. However, their use of such images was based upon close knit social relations. Mirna’s comments seem to resent the lawyer’s use of these strategies, for she might perceive their suffering to be unrightfully objectified. Whereas the social movement is a total project of remaking a world torn by disease, the civil action suit is about obtaining monetary reparation. Human dignity, or lack thereof seems to be an underlying theme here. Referring to that visit to Congress organized by the lawyers, Mirna continues,

It is unfair to the mother ... sitting with her baby in her arms ... I know it is a question of respect as far as compensation for our people ... [but] compensation has to go the whole nine yards”



The lawyer's response to this was,

We are not made of gold, but I'm committed and we cannot do this without you. You are the only one that can mobilize people. You have to do it for the people here and you have to do it for yourself (John).

What is important to note from this exchange is that because activists and plaintiffs do not feel they "own" the civil action suit in the same way they "own" the various social movements, mobilization becomes an issue. It becomes an issue because in going to Congress, lawyers were not only mobilizing "symbolically powerful narratives," but actual sick people. From the lawyer's point of view the end justifies the means, even if this mobilization has culturally inappropriate aspects. The end of the civil action suit is obtaining compensation. The way in which the lawyer explains compensation itself is by saying that:

Compensation, and I will not call it compensation, I want to call it choices, because when you have money you have choices. When you have money you have a choice. When you are sick you know what your options are ... I'm a lawyer and all I can do is force them to pay you within the bounds of the law. We need to negotiate ... I cannot negotiate for the future or for the long-term solutions. I cannot do that; I'm just a small part of the solution. This is a very important moment because [of] this compensation. Guess what? Doctors will come if they receive compensation because they will be able to support their families. Then they will come to Vieques. I believe that the government should provide services ... If this compensation is about past wrongs, then this money can be used for [your] families. So that families can make their own choices (John).

Looking at what Mirna and the lawyer are saying, we can recognize two positions. The lawyer's position is pragmatic even when it uses social injustice's rhetoric to make a case. Mirna's position, on the other hand, while recognizing the need for retribution,

resists attaching monetary value to their suffering. While the scope of *Viequenses'* remaking of their world is a life project, the scope of the lawyer's civil action suit can only be short-term: for it will last as long as money lasts. While activists are trying to confront the collective problem of the health crises, lawyers offer the possibility of individual compensation. Compensation is then defined in terms of the choice, where only the possessive individual who has the resources can buy the best help that money can buy. Note that the health crises would be solved not by forcing the federal government to establish hospitals in Vieques to serve the necessities of people, but by individual families having the money to lure private doctors into coming to Vieques. That is, the force of supply and demand will take care of the health crises. In relation to this point, other activists explain that:

Decontamination and good quality of life are the most important things for us. We have a good quality of life when we have good health services: hospitals, pharmacies and clinics. But to get these we need to pressure our government so that they pressure the U.S. government. Compensation cannot be only for [individual] families, we need compensation for the community for all the environmental degradation (Bob).

[To win the case and get compensation] money will take time: it's not going to be right away. In the mean time, are we going to continue dying like flies? No. We need to address both things simultaneously [referring to the civil action suit and pressuring the government] (Mirna)

What is evident from these exchanges is that *Viequenses* are demanding more than simple monetary compensation for individual families: their understanding is that *Viequenses'* health crises demand solutions for the whole community. As one of the activists explains: "What we are saying is that we need more than compensation ... We want to see in what way we can use this civil action suit [for our purposes]" (Bob). This environmentally rooted understanding of the health crises also made activists wary of possible outcomes of the civil action that while benefiting plaintiffs directly, could potentially also harm the community as a whole.

[The lawyers] say that if the civil action suit wins it could open other doors for decontamination, for clinics, etc ... Our [activists'] concern is that if the suit does win over there, then it could have a negative impact over here in terms of other kinds of compensation such as the clean up of the land. With this kind of worry, how can we be sure of this civil action being a motor to continue [the struggle] and not an obstacle to get the government to provide necessary funds ... That's why it's so important to start developing big campaigns that will go parallel, underneath, above and after the civil action ... [We need] compensation but we also need the necessary funds to provide health attention to those that need it right now (Bob).

I have a doubt. Lawyers have to represent their clients and they will make decisions that will affect them. We just heard that the civil action suit could affect not only the sick people that are being represented by the legal action but also other people as well. Communal damages are an example. How is it that we could separate one thing from another? How is it that a *Vieques* who is not part of the civil action could be affected by it without having a say? What worries me the most is that with this suit it's as if we were putting all the eggs in one basket. There are not going to be more claims: case closed. If a need to reclaim something there is not going to possibility of doing so. People who are not in the civil action suit have no participation in something that will affect them (Maelo).

It is evident that activists see their role in the struggle as benefiting the whole community. Indeed the way in which they have redefined their activist agenda is with what they call the four D's: Decontamination, sustainable Development, Return of the land (*Devolución*), and now Detoxification<sup>7</sup>. Given the fact that they were able

---

<sup>7</sup>Until Charlie and others challenged prognosis determinism, detoxification was not part of the larger activist agenda. In this particular meeting main activists were constantly reminded of including detoxification in the original three D's, thus the new four D's agenda.

to force the Navy out of Vieques, they are now concerned with making sure that their attempts at forcing the clean up and the establishment of health services are not hindered by the civil action suit. These fears are well founded since once a legal suit gets settled it is settled for good—meaning that if the settlement was not comprehensive enough, people could not reissue another one. The lawyer's position is that the civil action suit might be the only chance they have at getting reparations. He explains that:

What we are saying is very simple ... Washington and the White House, the administration and the Congress will want to have a total package to settle because they don't want to come back again to say this is the sixth time they have dealt with this problem. They think now ... this issue is over in Washington except for the Hispanic caucus, they think they washed their hands. Once you bring it up again, they will start saying you know what we don't want is to deal with this anymore, so that's when they come to the table. They may not settle until they know that they will never have to deal with it again. In other words, they will not deal with us until we can present to them a total package, a total, solution so that they don't have to deal with this again" (John).

As activists' final response to the lawyer illustrates, activists remained skeptical:

It seems that there is danger in there for the community in the long run that now we are putting all the eggs in one basket; in a one time action with a community and an organization and a struggle that are not really knowingly participating (Bob)

The point that Nilda is making is that you guys are here doing this on your own, that you are spending all your money and that is a very honorable thing that is happening here. But at the same time ... well maybe we should talk about this in another meeting ... how are we going to be sure

that this is not going to have a negative effect on the long-term struggle?

I think we should talk about this matter in another meeting (Bob).

This overview of the tensions between activists and lawyers underscores several important themes addressed in this chapter. I have tried to show that the limitations of the juridical systems are similar to the limitations of biomedicine because of their shared Western epistemological assumptions. The tacit separation of the producer of knowledge from the object of knowledge that validates Western tradition not only denies popular epistemologies, but also eclipses the political nature of biomedicine and science. We can see this object/subject separation working through laboratory tests whether in the courtroom or in the hospital as a kind of voyeuristic institutional practice. The visual representation of a thing (people's poisoning with heavy metals, laboratory test results) allows its definition while maintaining it at a distance. This disembodied way of perception characteristic of Western epistemology— and which is in stark contrast with *Viequenses'* embodied understandings— situates the spectator-subject (the doctor, the lawyer, the judge) in an all-powerful position of seeing, like God himself. As Metz explains, “[t]he place of the ego in the institution of the signifier, is transcendental yet [is a] radically deluded subject, since it is the institution (and even the equipment) that gives it this place”(Metz, 1974, 255). According to Latour, subject/object distinctions, which allow “a detached mind gazing at an outside world”(Latour, 1999, 7) in the strongest Kantian tradition, impose a truth-giving oracle, transcendental reason, which justifies the rule of the few over the many in the interest of preventing “mob rule.” This is only possible by the creation of a higher “natural order” external to humans yet which is not only reachable—by means of “objective inquiry” —but is the source of all truth. In appealing to nature instead of might, elites managed to mask politics in the shadows of objective reality (Latour, 1999, 222). This means that however well intentioned activist doctors and lawyers might be, their position within biomedical and juridical institutions significantly limit their space of action given that they have to work within the institutional ontological framework. In the case of toxic exposure, it results in placing the burden of proof on those exposed to toxins rather than those causing the exposure. In

the case of *Viequenses*, their subject position, within both biomedical and juridical space, is the same: a passive subject who, as the object of knowledge, remains silent and for whom the experts must speak. Here we see how this Western epistemology shapes a particular atomistic view of reality while precluding other environmentally or embodied views, with serious sociopolitical consequences.

Despite laboratory test results' normative power—of transfiguring a subject into an object of knowledge— this power is never total, as I have tried to show here. Some *Viequenses* have actively re-appropriated the symbolic power of tests' results not to accept their fate as passive subjects/objects of knowledge, but to develop their own hybrid understandings of their situation. Through multiple repertoires of discourses (biomedical) and technologies (laboratory test results) and their own embodied experiences, not only have they tried to build a life project out of a world torn apart by disease, but they have also been able to provide a bottom up critique of biomedical epistemologies. Issues of participation, situated knowledge, human dignity, transparency in politics and colonialism have been at the core of *Viequenses*' environmental and health struggle.

Many scholars of science and technology have argued passionately for the necessity of democratizing science: Latour (1999, 258) speaks of a “science freed from the politics of doing away with politics.” Haraway (1997, 15) calls for an antiracist feminist democratic science, and Harding (1991, 119) calls for a radical pluralism of situated knowledge. The cases discussed here, particularly concerning laboratory tests for heavy metals poisoning, constitute an example of how a multiplicity of actors, including *Viequenses* from different organizations, have engaged, debated and challenged traditional science, creating many new “knowledge events” (Turner, 1990, 353). I believe the implications of contestations such as these are critically challenging the practice of science, because through their engagement, people bring back from the shadows hidden political realm of science.

# Conclusion

## 5.5 The Aleph as the Body

...an Aleph is one of the points in space which contains within itself all the possible points... It is the place through which you can see without confusion all places, from all angles...! It is the microcosm of alchemist and magicians, our proverbial friend...<sup>8</sup> Jorge Luis Borges (1997)

Since the person is a being-in-the-world, the coming-into-being of the person is part and parcel of the process of coming-into-being of the world. Ingold (Ingold, 2000)

The Aleph in Borges' short story, *El Aleph*, is that mythical point which contains within itself all possible places and things inhabiting the universe. Through that point in space you can see in their full complexity and yet without confusion all the interconnections of our human existence. Although Borges' Aleph is forever lost at the end of his story, there is still a chance for us to rediscover it. The Aleph I propose to rediscover though, unlike Borges', does not contain the whole universe within itself, but a discrete set of human/environmental relations. Like Borges' Aleph, mine should enable us to witness the complexity of such relationships, but unlike his I cannot promise that it is not going to be without confusions.

---

<sup>8</sup>Translation mine. "...un Aleph es uno de los puntos del espacio que contienen todos los puntos... ¡es el lugar donde estan, sin confundirse todos los lugares del orbe, visto desde todos los ángulos...! El microcosmo de alquimistas y cabalistas, nuestro amigo proverbial" (206-07). Borges, J. L. 1997. "El Aleph," in Jorge Luis Borges Ficcionario: Una Antología de sus Textos. Edited by E. Rodríguez Monegal. México: Fondo de Cultura Económica.

If Ingold is right when he asserts “the coming-into-being of the person is part and parcel of the process of coming-into-being of the world” (Ingold, 2000, 168), then I shall say that our search for the Aleph is over, because it has always been with us: in our bodies. I had argued throughout this dissertation for the body – always entangled in definite ways of being-in-the-world – as an Aleph through which to understand the socio/political implications of current rapidly changing environments. Negative environmental and epidemiological changes, after all, become evident in the body through disease. Despite the simplicity of this assertion, state agencies and private capital ignore people’s embodied experiences and understandings about socio/environmental relations until it is often too late. People’s perceptions, therefore, are underestimated, at best, and overlooked by the biomedical establishment, at worst.

But when I said, “we actively assist” in the “coming-into-being of the world” I should qualify whose “we” I was referring to, for in a militarized or industrialized landscape this “we” does not refer to the dwellers of such landscapes. By and large, dwellers are neither responsible nor have a voice in the military or industrial processes affecting their environments. Yet, despite this fact, the “coming-into-being” of dweller’s embodied selves, whether they want it or not, is metamorphosized along the “coming-into-being” of an environment in which they did not assist in creating. At least initially this goes on with little if any contestation. Although discourses on national security and economic development – which governments repeats like a mantra everywhere – are indeed persuasive, this initial acceptance cannot be explained by their rhetorical powers alone. How else can we explain this?

What makes possible the initial acceptance of hazardous “by-products” in people’s living surroundings is the word of a trusted and neutral judge, who assures the economic benefits of industrialized activities by far surpass any minor environmental or health annoyance. Despite this neutral judge’s chameleonic nature, now transubstantiating in an epidemiologist, then in a biologist and later in a physician, the source of authority remains unchanging: an entry’s right to Nature’s truths accessible only through Science. Although the source of scientists’ authority remains fixed, it does



not go without contestation. Increasingly and in spite of their claims, people confronting polluted environments often put into question scientist's assertions about safety when these contradict their embodied experiences.

Environmental health sciences, such as environmental epidemiology and toxicology, provide scores of examples of science engaged with government, industry, and civil society over highly contested claims. For instance, despite their claims to certainty, epidemiology and toxicology have difficulty assessing the effects of multiple contaminants interacting. Rachel Carson addressed this issue as early as 1962 when she discussed the problem of synergistic effects and "potentiation," or the way toxins in combination can have much more lethal impacts than merely additive (Carson, 1962, 28). Contaminated landscapes, whether in industrial or military areas, are likely to contain mixtures of all kinds of chemicals with which they would not otherwise come into contact, creating new kinds of unruly, unpredictable quasi-objects<sup>9</sup> (Haraway, 1997; Latour, 1987; Latour, 1999). Regardless of the likelihood of synergistic effects with complex mixtures, the near impossibility of assessing with certainty their human health effects has led to the absurd policy outcome that "acceptable levels" of contaminants are set individually with no accounting for potential synergistic effects whatsoever. These standard levels have become part of the legal and scientific structures regulating industries, governments and community health, while discrediting people's experiences and perceptions.

In a context of unchecked production of hazardous substances that increasingly threaten public health (Hofrichter, 2000), we need to ask: whether current approaches to environmental and health problems perpetuate the conditions that produced them firstly, and what does it mean to live in a democracy, when your most basic life sustaining bodily processes are threaten by pollution (Latour, 2002)?<sup>10</sup>

I suspect that policies trying to solve environmental and health predicaments, whether coming from "natural sciences" or "social sciences," are doomed as long as the on-

---

<sup>9</sup>These are things that go beyond the realm of scientific knowledge; that challenge scientific knowledge by virtue of their unruly and unpredictable character (Latour 1987).

<sup>10</sup>Or as Latour (2002) has asked, "What it is to bring democracy to the question of having a body?"

tological assumption of the separation of nature from society – out of which these disciplinary boundaries are made – is not put into question. Since this foundational separation is a deep-seated assumption of mainstream rationality, the best way of exposing its contradictions is from the vantage point of the margins where its limitations and inadequacies are more visible.

Health and environmental crises in Vieques offers such a view from the margins, because of its sheer socio/environmental complexity. This complexity resists the reductionisms of most biomedical practices. Just as biomedical practitioners cannot reduce chronic pain to a single locus of origin (Good, 1994c), nor can cancer and other diseases experienced in Vieques be reduced to a single cause. Cancer in Vieques is just the tip of the iceberg towards a whole host of other diseases that challenge scientific rationality by inhabiting the gray space of etiologic uncertainty. In other words, the authority of biomedical discourse – rooted in the success of performing and managing certain diseases under controlled laboratory conditions – does not easily translate into the world outside the laboratory. As Good explains, “Those diseases for which a clear understanding of the mechanism has been achieved provide the prototypes of medical knowledge, suggesting that all disease is of this kind” (Good, 1994b). I propose an alternative approach that challenges these boundary practices by locating the sentient body as a vantage position of engagement from which to understand the complex entanglements at work, in both the production and contestation of unhealthy environments. By posing embodied processes of identity formation as a privileged site of observation we can also gain a nontraditional insight on how environmental justice movements emergence.

In this dissertation I aimed at developing an analysis from which to address people’s everyday experiences and understandings of a drastically changing environment: that of a militarized landscape. I did this by examining how Vieques’ people articulated and deployed disease explanatory narratives in their search to make sense and change what they perceive as a health and environmental crises. Instead of taking people’s perception as clothing an ulterior reality, I took them as explanations with ontological validity, since these were based on their everyday engagements with their changing

environment. As Ingold explains,

The ontological weight of people's disease and environmental explanatory narratives came from having to dwell in a militarized landscape for more than 60 years. By their bodies becoming centers of awareness – through their everyday engagements with their living surrounding – people tuned in with the environmental and embodied signs revealed to them. I tried to show how in Vieques the awakening of political consciousness could not be separated from the experiential body. If people's disease explanatory narratives depart from the traditionally atomistic biomedical accounts it is because of their different positioning within Vieques emerging as a militarized landscape.

The formation of the self is, at one and the same time, the formation of an environment for that self, and both emerge out of a common process of maturation and personal experience. . . . The self, in this view, is not the captive subject of the standard Western model, enclosed within the confines of a body, and entertaining its own conjectures about what the outside world might be like on the basis of the limited information available to it. On the contrary. . . . the self exists in its ongoing engagement with the environment: it is open to the world, not closed in (Ingold, 2000, 100).

In Vieques, an environmental crisis has translated into a public health crisis. Public health concerns have lead to a third crisis: one of identity. This identity crisis, I have tried to show, emerged out of having to confront increased public health risks and having to make sense of these risks in the face of biomedical practitioners delegitimizing the experience of illness.

As we have seen, the relationship between illness and identity is one of “biographical disruption,” a relationship that poses serious challenges to people's identity (Good, 1994c; Hunt, 2000; Sontag, 1990). This threat to identity transforms people into another plane of being altogether: it places people in an undemocratic world ruled by

objective, disembodied scientific rationality.

As Dr. Nazario pointed out, since the eighties the people of Vieques have faced ever-greater medical problems, from respiratory diseases and skin problems to cancer (Nazario, 2001). This has meant that more people have been forced to inhabit the kingdom of medical institutions both in Vieques and in the mainland of Puerto Rico.

We observed this in Vieques where, for at least a decade after increases in health risks started to emerge, people's conventional understandings of disease etiology seemed to agree with Western biomedical accounts.<sup>11</sup> Although this analysis, Foucauldian (1995) in nature, helps us to understand how the biomedical establishment kept people's skepticism at bay following the increase in health risks, it falls short in the face of unfolding events. As we have seen, *Viequenses*, instead of accepting experts' expectations of conformity in facing disease, made disease a source of empowerment, hence, rejecting the role of passive victims. Collective mobilizations organized around issues of health and environment are an example of their challenge to authoritative expert knowledge.

I have tried to demonstrate – expanding Foucault's work – that the constitution of subjectivity not only takes place within powerful normalizing institutions such as hospitals, schools or churches. It also takes place out of everyday life engagements of people among themselves with their environments and with transnational discourses. We cannot just look at how an institution imposes meaning over people but also need to look at how people themselves create meaning out of illness.

In the searching for meaning – in front of serious existential challenges presented by disease – people engage in a “creative reconstruction of an altered self and an altered lifeworld” (Hunt, 2000). Illness narratives can provide the occasion for resisting forms of oppression (whether institutional, political, economic or social) by providing a language to challenge authority without necessarily being upfront about it (Hunt, 2000; Kleinman, 1992; Kleinman et al., 1992). Arguments within critical medical anthropology find that illness narratives can make it possible to legitimize

---

<sup>11</sup>In this explanatory model, the etiology of diseases resides within individual behavior.

resistance to prescribed roles (of gender, of the family, of a profession, of patient) without challenging the status quo. Similarly, such narratives can also make possible forms of resistance that challenge the institutions within which conformity is implicitly mandated. The move that has to take place to challenge authoritative and normalizing institutions is that from the liminal state of illness (individual existential crisis) back into larger institutional contexts transcending the personal conflicts of the illness itself (Hunt, 2000, 89). As we have seen from my research, when people were explaining what it meant to face prospects of sickness their narratives framed their identities in such a way that empowered rather than victimized them.

As the case of Vieques illustrates, while a person may experience illness within the body such experience has implications that go far beyond that person's body. In this sense, illness and people's experiences of it is fundamentally intersubjective. That is, in their daily interaction people exchanges narratives, stories, local and global discourses that help them to collectively give meaning to a experience that is affecting them all. The circulation of these narratives (on disease etiology, mobilization, alternative medicine, etc.) in the case of Vieques not only helped people to make sense of illness but it also enabled them imagine a healthier world and to act on that idea.

But the materials people draw upon to make sense of their world are not simply reducible to intersubjectivity. On the contrary, intersubjectivity of the sort being addressed here depends on the active cooptation and reinterpretation of biomedical discourses and the institutions within which they are embedded. This is why biomedical discourses are at the core of people's rebellion against the Department of Health, for medical institutions themselves provide people experiencing illness with a powerful transnational vocabulary in which to articulate their grievances and understandings. Paradoxically, the power and allure of this vocabulary resides on its bearing of the unchallenged authority of Science, even in front of etiologic uncertainty.

As discussed in Chapter 5, *Viequenses* used the discursive materials of biomedical science in multiple and creative ways. It was not uncommon to hear people talking about having the "vibroacoustic disease," weeks after mass media aired a full-blown

coverage of this object of scientific debate.<sup>12</sup> Scientific tests that found high levels of uranium in some residents' bodies were also appropriated by the untested population. Humor and sarcasm became other culturally specific means through which people reassigned meaning to a threatening experience, thus helping them to overcome fear. For instance it was not uncommon to hear people in the island joking about the "nutritiousness" of mangoes flavored with uranium.<sup>13</sup> Whether by politicized appropriation, humor or sarcasm, these examples point to residents' creative resilience in seizing and reinterpreting unstable biomedical signs. Hence, "talking medicine" but by in so doing subverting conventional biomedical understandings in empowering ways.

My nerves in constant expansion are  
 fusing with the clay, with the walls  
 embracing the tree branches  
 they penetrate the earth  
 spreading in thin air until reaching the sky  
 Any animal, any rock  
 shares blood from my own veins  
 any of their pain, thus,  
 afflicts my flesh, my bones <sup>14</sup>  
 Oliverio Girondo

The idea that we inhabit our world as much as our world inhabits in us is central to the environmentally and socially situated epistemology that *Viequenses* uphold. While this mutual cohabitation might sound romantic, it is far from this, for there are other not so welcome neighbors. More than ever, toxic wastes are part every-

---

<sup>12</sup>This debate was over the scientific validity of a study exploring the connection between the high decibels of Navy's bombs and the reported high incidences of heart conditions among fisherman in Vieques

<sup>13</sup>Uranium has been found in stool specimen of civilians in Vieques with radioactivity levels of up to 220% above natural levels.

<sup>14</sup>Translation mine. "Los nervios se me adhieren/ al barro, a las paredes, / abrazan los ramajes, / penetran en la tierra, / hasta alcanzar el cielo. / El marmol, los caballos / tienen mis propias venas. / Cualquier dolor lastima / mi carne, me esqueleto" (Girondo 1999: 142).

day life. Although, “relatively minor environmentally induced diseases have plagued humans since antiquity, more severe environmentally induced diseases are a recent phenomenon” (Baer, 1996, 453). The articulation of subject positions whose defining feature is people’s internalization of pollutants within their bodies is a recent phenomenon as well.

Throughout this dissertation I explored the way in which *Viequenses*, whose bodies have been carved by global forces, were able to organize in order to confront that which they see and experience as affecting them. Rather than assuming the existence of coherent identities through which *Viequenses* organize collective actions, I have shown how they negotiated, embraced and discarded different subject positions while strategically using available discursive repertoires (Wilson, 1997b; Appadurai, 1996). Vieques collective mobilizations emerged, therefore, as the result of struggles at the interface of global and local processes and not as a priory (Massey, 1994). By looking at the intersection of health, environment and the industrial complex I have tried to explore questions of structural change and human agency. Collective mobilizations in Vieques illustrate that while globalization did negatively affect the island, *Viequenses* also had the power to confront and change these exogenous forces.

I have tried to show that in the face of a health crisis, the institutional inability of giving meaningful answers to questions of disease etiology in Vieques made people skeptical of experts explanations. It also made people question the very legitimacy of the state institutions such as the Department of Health. As we have seen, in the absence of satisfactory disease explanatory models *Viequenses* developed their own understandings by adapting biomedical explanations to their embodied experiences. The combination of using biomedical discourses on health and their own experiences with disease prove to be a powerful strategy to enroll people in their struggle. Ultimately, these coalitions organized the massive collective mobilizations and civil disobediences in Puerto Rico and abroad that in May 2003 forced the U.S. Navy to withdraw their facilities from Vieques.

Given the rapid expansion of globalization and its negative environmental and health

consequences it became fundamental to understand not only how these social movements emerged but the alternative they might offer in terms of more livable worlds. As a first step in this direction we need to start re-conceptualizing globalization. Popularly and within academia globalization is represented as the spatio-temporal dispersion of productive activities across territorial boundaries. However, within this characterization the body disappears within the flows of money and commodities. In this dissertation I resituated the body, and particularly women's bodies, as the center of my analysis. My theoretical contribution, thus, can be defined as an embodied dialectic, that is paying attention to the often-overlooked interplay between globalization and the body. On one side of the dialectic, more than ever capital accumulation is situated in subaltern bodies (Hall, 1991; Harvey, 2000). On the other side, this intensified corporeal exploitation transforms the body into a vital "trope" of resistance and struggle (Harvey, 1999; Lowe, 1995; Morgan, 1987; Taussig, 1980). This is so because as we have seen social and environmental contradictions are more blatantly expressed through "(dis)ease." Hence, it is from the body that awareness of, and action against, such contradictions emerge.

In Vieques the objective pretensions of governmental, biomedical and military institutions socialized people into distrusting their senses and the somatic messages experienced through their bodies. However, it was through their embodied experience of disease and suffering that *Viequenses* were able to break with the hidden mechanisms of capitalist accumulation. By revealing these hidden mechanisms, however, not only did they break with the amnesia of reification, but most importantly they break with the alienating inertia of the oldest colonial regime in the world.



# Bibliography

Abramson, A.

1993. Between autobiography and method: Being male, seeing myth and the analysis of structures of gender and sexuality in the eastern interior of fiji. In *Gendered Fields: Women, Men and Ethnography*, D. Bell, P. Caplan, and N. Al-Ali, eds., Pp. 63–77. New York: Routledge.

Althusser, L.

1971. *Lenin and Philosophy and Other Essays*. New York: Monthly Review Press.

Amadiume, I.

1993. The mouth that spoke a falsehood will later speak the truth: Going home to the field in eastern nigeria. In *Gendered Fields: Women, Men and Ethnography*, D. Bell, P. Caplan, and W. J. Karin, eds., Pp. 182–198. New York: Routledge.

Anderson, B.

1993. *Imagined Community: Reflections on the Origin and Spread of Nationalism*. London and New York: Verso.

Anderson, K. and D. C. Jack

1991. Learning to listen: Interview techniques and analyses. In *The Feminist Practice of Oral History*, S. Berger Gluck and D. Patai, eds. New York: Routledge.

Appadurai, A.

1996. *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press.

Appadurai, A.

2001. Grassroots globalization and the research imagination. In *Globalization*, A. Appadurai, ed., Pp. 1–21. Durham and London: Duke University Press.

Baer, H. A.

1996. Toward a political ecology of health in medical anthropology. *Medical Anthropology Quarterly*, 10(4):451–454.

Bandarage, A.

1997. *Women, Polpulation and Global Crisis: A Political-Economic Analysis*. Zewd Books.

Bernard, H. R.

2002. **Research Methods in Anthropology: Qualitative and Quantitative Approaches**, 3rd edition. Walnut Creek, CA: AltaMira Press. H. Russell Bernard. Includes bibliographical references (p. 661-700) and indexes.
- Bird, E. A. R.  
1987. The social construction of nature: Theoretical approaches to the history of environmental problems. *Environmental Review*, 11(4):255–264.
- Blaikie, P. M.  
1985. *The Political Economy of Soil Erosion in Developing Countries*. London; New York: Longman.
- Blaikie, P. M. and H. C. Brookfield  
1987. *Land Degradation and Society*. London; New York: Methuen.
- Borges, J. L.  
1997. El aleph. In Jorge Luis Borges *Ficcionario: Una Antología de sus Textos*, E. Rodríguez Monegal, ed. México: Fondo de Cultura Económica.
- Brown, P. J., M. C. Inhorn, and D. J. Smith  
1996. Disease, ecology, and human behavior. In *Medical Anthropology: Contemporary Theory and Method*, C. F. Sargent and T. M. Johnson, eds. New York: Praeger.
- Carson, R.  
1962. *Silent Spring*. Boston,: Houghton Mifflin.
- Castree, N. and B. Braun  
1998. The construction of nature and the nature of construction: Analytical and political tools for building survivable futures. In *Remaking Reality : Nature at the Millenium*. London and New York: Routledge.
- Clifford, J.  
1997. *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge, Mass.: Harvard University Press.
- Csordas, T. J.  
1988. The conceptual status of hegemony and critique in medical anthropology. *Medical Anthropology*, 2:416–421.
- Csordas, T. J.  
1993. Somatic modes of attention. *Cultural Anthropology*, 8(2):135–156.
- Csordas, T. J.

1994. *Embodiment and Experience: The Existential Ground of Culture and Self*. Cambridge, UK: Cambridge University Press.
- Demeritt, D.  
1998. Science, social construction and nature. In *Remaking Reality: Nature at the Millenium*, N. Castree and B. Braun, eds., Pp. 173–193. Routledge.
- DeWalt, K. M. and B. R. DeWalt  
2002. *Participant Observation: A Guide for Fieldworkers*. Walnut Creek, CA: AltaMira Press.
- Di Chiro, G.  
1998. *Environmental Justice from the Grassroots: Reflections on History, Gender and Expertise*. Guilford.
- Doyle, L.  
2001. *Bodies of Resistance: New Phenomenologies of Politics, Agency, and Culture*, Philosophy, literature, and culture. Evanston, Ill.: Northwestern University Press.
- Eagleton, T.  
1994. *Ideology*, Longman critical readers. London ; New York: Logman.
- Epstein, B.  
1997. The environmental justice/toxic movement: Politics of race and gender. *Capitalism Nature Socialism*, 8(3):63–87.
- Escobar, A.  
1995. *Encountering Development: The Making and Unmaking of the Third World*. Princeton, New Jersey: Princeton Univerisity Press.
- Ferguson, A.  
1997. Imagining a new political ecology of health. In *American Anthropological Association*, Pp. 1–15, Washington, D.C. Department of Anthropology, Michigan State University.
- Ferguson, A. and B. Derman  
2003. Value of water: Political ecology and water reform in southern africa. *Human Organization*, 62(3):277.
- Foucault, M.  
1980. *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*. New York: Pantheon Books.
- Foucault, M.

1995. *Discipline and Punish: the Birth of the Prison*, 2nd vintage books edition. New York: Vintage Books.
- Geurts, K. L.  
2002. *Culture and the Senses: Bodily Ways of Knowing in an African Community*, *Ethnographic studies in subjectivity* ; 3. Berkeley: University of California Press.
- Glick Schiller, N.  
1999. *Who are These Guys? : a Transnational Perspective on National Identities*. Houston: University of Texas Press.
- Good, B.  
1994a. The body, illness experience, and the lifeworld: A phenomenological account of chronic pain. In *Medicine, Rationality, and Experience: An Anthropological Perspective*. Cambridge ; New York: Cambridge University Press.
- Good, B.  
1994b. Medical anthropology and the problem of belief. In *Medicine, Rationality, and Experience: An Anthropological Perspective*. Cambridge ; New York: Cambridge University Press.
- Good, B.  
1994c. *Medicine, Rationality, and Experience: An Anthropological Perspective*, The Lewis Henry Morgan lectures ; 1990. Cambridge ; New York: Cambridge University Press.
- Greenberg, J. B. and T. K. Park  
1994. Political ecology. *Journal of Political Ecology: Case Studies in History and Society*, 1-12.
- Gruenbaum, E.  
1996. The cultural debate over female circumcision: The sudanese are arguing this one out for themselves. *Medical Anthropology Quarterly*, 10(4):455–475.
- Gupta, A. and J. Ferguson  
1997. Beyond "culture": Space, identity, and the politics of difference. In *Culture, Power and Place: Explorations in Critical Anthropology*, A. Gupta and J. Ferguson, eds. Durham and London: Duke University Press.
- Hall, S.  
1990. Cultural identity and diaspora. In *Identity: Community, Culture, Difference*, Rutherford, ed. London: Lawrence and Wishard Publisher.
- Hall, S.

1991. The local and the global: Globalization and ethnicity. In *Culture, Globalization and The World System*, A. King, ed. NY: SUNY.
- Haraway, D.  
 1991a. A cyborg manifesto: Science, technology, and socialist-feminism in the late twentieth century. In *Simians, Cyborgs and Women: The Reinvention of Nature*, Pp. 149–181. New York: Routledge.
- Haraway, D.  
 1991b. Situated knowledges: the science question in feminism and the privilege of partial perspective. In *Simians, Cyborgs and Women: the Reinvention of Nature*. London: Free Association.
- Haraway, D.  
 1992. The promises of monsters: A regenerative politics for inappropriate/d others. In *Cultural Studies*, L. Grossberg, C. Nelson, and P. Treichler, eds., Pp. 295–337. New York and London: Routledge.
- Haraway, D.  
 1997. *Modest\_Witness@Second\_Millennium. FemaleMan©\_Meets\_OncoMouseTM: Feminism and Technoscience*. New York and London: Routledge.
- Harding, S.  
 1991. *Whose Science? Whose Knowledge? Thinking from Women's Lives*. Ithaca, New York: Cornell University Press.
- Harding, S.  
 1998. Postcolonialism, feminism and epistemologies. In *Is Science Multicultural?* Pp. 73–104.
- Hardt, M. and A. Negri  
 2000. *Empire*. Harvard: Harvard University Press.
- Harper, J.  
 2002. *Endangered Species: Health, Illness and Death among Madagascar's People of the Forest*. Durham: Carolina Academic.
- Harvey, D.  
 1990. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Massachusetts: Blackwell Publishers.
- Harvey, D.  
 1996. *Justice, Nature and the Geography of Difference*. Massachusetts: Blackwell Publishers.

- Harvey, D.  
1999. *The Limits of Capital*. New York: Verso.
- Harvey, D.  
2000. The body as an accumulation strategy. In *Spaces of Hope*. Berkeley, California: University of California Press.
- Hofrichter, R.  
2000. *Reclaiming the Environmental Debate: The Politics of Health in a Toxic Culture*. Cambridge, Massachusetts: The MIT Press.
- Hunt, L.  
2000. Strategic suffering: Illness narratives as social empowerment among mexican cancer patients. In *Narrative and the Cultural Construction of Illness and Healing*, C. Mattingly and L. Garro, eds., Pp. 88–107. Berkeley: University of California Press.
- Ingold, T.  
2000. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. London ; New York: Routledge.
- Johnston, B. R.  
1997. *Life and death matters : human rights and the environment at the end of the millennium*. Walnut Creek, Calif.: AltaMira Press.
- Johnston, B. R., S. for Applied Anthropology. Committee on Human Rights, and the Environment.  
1994. *Who pays the price? : the sociocultural context of environmental crisis*. Washington, D.C.: Island Press.
- Kafka, F.  
1957. *The Trial*, definitive edition. New York,: Knopf.
- Kalipeni, E. and J. Oppon  
1998. The refugee crisis in africa and implications for health and disease: A political ecology approach. *Social Science and Medicine*, 46(12):1637–1653.
- Kleinman, A.  
1992. Chapter seven: Pain and resistance: The delegitimation and relegitimation of local worlds. In *Pain as Human Experience: An Anthropological Perspective*, M.-J. DelVecchio Good, P. E. Brodwin, B. Good, and A. Kleinman, eds. Berkeley: University of California Press.
- Kleinman, A., P. E. Brodwin, B. Good, and M.-J. DelVecchio Good  
1992. Chapter one: Pain as human experience: An introduction. In *Pain as Human Experience: An Anthropological Perspective*, M.-J. DelVecchio Good, P. E.

- Brodwin, B. Good, and A. Kleinman, eds. Berkeley: University of California Press.
- Laclau, E. and C. Mouffe  
1985. *Hegemony and Socialist Strategy: Towards a radical Democratic Politics*. London: Verso. Primary text.
- Latour, B.  
1987. *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge, Massachusetts: Harvard University Press.
- Latour, B.  
1999. *Pandora's Hope: Essays on the Reality of Science Studies*. Cambridge, Massacusetts: Harvard University Press.
- Latour, B.  
2002. Body, cyborgs and the politics of incarnation. In *The Body*, S. Sweeney and I. Hodder, eds. Cambridge, UK: Cambridge University Press.
- Leatherman, Thomas, A. G. and R. B. Thomas  
1993. On seeking common ground between medical ecology and critical medical anthropology. *Medical Anthropology Quarterly*, 7(2):202–207.
- Leatherman, T.  
1996. A biocultural perspective on health and household economy in southern peru. *Medical Anthropology Quarterly*, 10(4):476–95.
- Lefebvre, H.  
1974. *The Production of Space*. Malden, Massachusetts: Blackwell Publishers.
- Levins, R. and R. Lewontin  
1985. Dialectics and reductionism in ecology. In *The Dialectical Biologist*, Pp. 132–160. Harvard University Press.
- Lock, M. and N. Sheper-Hughes  
1996. A critical-interpretive approach in medical anthropology: Rituals and routines of discipline and dissent. In *Medical Anthropology: Contemporary Theory and Method*, C. F. Sargent and T. M. Johnson, eds. New York: Praeger.
- Lowe, D.  
1995. *The Body in Late-Capitalist USA*. Durham and London: Duke University Press.
- Marx, K., F. Engels, and R. C. Tucker  
1978. *The Marx-Engels Reader*, 2d edition. New York: Norton.

- Massey, D.  
1994. *Space, Place, and Gender*. Minneapolis: University of Minnesota Press.
- Massol-Deya, A. and E. Diaz  
2003. Trace elements composition in forage samples from various anthropogenically impacted areas in puerto rico. *Caribbean Journal of Science*, 29:215–220.
- Maxwell, J. A.  
1998. Designing a qualitative study. In *Applied Research Design: A Practical Approach*, L. Bickman, D. J. Rog, and T. E. Hedrick, eds. London: Thousand Oaks.
- Mayer, J.  
2000. Geography, ecology and emerging infectious diseases. *Soc. Sci. Med.*, 50:937–952.
- McElroy, A.  
1996. Should medical ecology be political? *Medical Anthropology Quarterly*, 10(4):519–22.
- Medina, L.  
2001. Encountering the “global”: Collective action and the shape of “local” development in belize.
- Metz, C.  
1974. *Film Language: a Semiotics of the Cinema*. New York and Cambridge: Oxford University Press.
- Moore, R. and L. Head  
1993. Acknowledging the past, confronting the present: Environmental justice in the 1990s. In *Toxic Struggles: The Theory and Practice of Environmental Justice*, R. Hofrichter, ed. New Society.
- Morgan, L.  
1987. Dependency theory in the political economy of health: An anthropological critique. *Medical Anthropology Quarterly*, 1.
- Morgan, L.  
1993. Comments on wiley’s “adaptation and the biocultural paradigm in medical anthropology: A critical review”. *Medical Anthropology Quarterly*, 7(2):199–201.
- Morsy, S. A.  
1996. Political economy in medical anthropology. In *Medical Anthropology: Contemporary Theory and Method*, C. F. Sargent and T. M. Johnson, eds. New



York: Praeger.

Murillo, M.

2001. *Islands of Resistance: Puerto Rico, Vieques and U.S. Policy*, The Open Meida Pamphlet Series. New York: Seven Stories Press.

Nazario, C. M.

2001. *Informe Final del Proyecto de Estudio de Cáncer en Vieques*. Río Piedras: Universidad de Puerto Rico; Recinto de Ciencias Médicas; Escuela Graduada de Salud Pública.

O'Connor, J.

1973. *The Fiscal Crisis of the State*. New York: St. Martin's Press.

O'Connor, J.

1998. *Natural Causes: Essays in Ecological Marxism*. New York: The Guilford Press.

O'Connor, J.

2002. *The Fiscal Crisis of the State*, chapter *Introduction to The Fiscal Crisis of the State* 2nd edition. New Brunswick, N.J.: Transaction, 2nd edition edition.

Ong, A.

1995. *Making the biopolitical subject: Cambodian immigrants, refugee medicine and cultural citizenship in california*. *Soc. Sci. Med.*, 40(9):1243–1257.

Ortner, S.

1974. *Is female to male as nature is to culture?* In *Women, Culture and Society*, L. L. Rosaldo and Michelle, eds. Bekeley: University of California Press.

Ortner, S.

1994. *Theory in anthropology since the sixties*. In *Culture/Power/History: A Reader in Contemporary Social Theory*, N. B. Dirks, G. Eley, and S. B. Ortner, eds., Pp. 372–411. Princeton, N.J.: Princeton University Press.

Pantojas-García, E.

1990. *Development Strategies as Ideology: Puerto Rico's Export-led Industrialization Experience*. Boulder: L. Rienner.

Paulson, S. L. G. M. W.

2003. *Locating the political in political ecology*. *Human Organization*, 62(3):2005.

Pedersen, D.

1996. Disease ecology at a crossroads: Man-made environments, human rights and perpetual development utopias. *Soc. Sci. Med.*, 43(5):745–758.
- Peet, R. and M. Watts  
1996. *Liberation Ecologies: Environment, Development, Social Movements*. London and New York: Routledge.
- Polanyi, K.  
1957. *The Great Transformation*. Boston: Beacon Press.
- Rist, G.  
1997. *The History of Development: From Western Origins to Global Faith*. Zed Books.
- Rivera, P. A.  
1986. *Manos a la Obra: the Story Behind Operation Bootstrap*. [New York, N.Y.]: Centro de Estudios Puertorriqueños Hunter College of the City University of New York.
- Rivera, P. A., S. Zeig, C. U. of New York. Centro de Estudios Puertorriqueños., and C. Guild.  
1983. *Manos a la obra the story of operation bootstrap*.
- Rocheleau, D., B. Thomas-Slayter, and E. Wangari  
1999. Gender and environment: A feminist political ecology perspective. In *Feminist Political Ecology: Global Issues and Local Experiences*, D. Rocheleau, B. Thomas-Slayter, and E. Wangari, eds., Pp. 3–26. New York: Routledge.
- Rodriguez Beruff, J.  
1988. *Política Militar y Dominación: Puerto Rico en el Contexto Latinoamericano*. Río Piedras, Puerto Rico: Ediciones Huracán.
- Ross, A  
.1996. The future is a risky business. In *Future Natural: Nature, Science, Culture*, G. Robertson, ed., Pp. 7–21. London: Routledge. Primary text.
- Rouse, R.  
1995. Thinking through transnationalism: Notes on the cultural politics of class relations in the contemporary united states. *Public Culture*, 7:353–402.
- Rudy, A.  
1994. On the dialectics of capitalism and nature. *Capitalism Nature Socialism*, 5(2):95–106.
- Said, E. W.

1979. *Orientalism*. New York: Vintage Books.
- Said, E. W.  
1993. *Culture and Imperialism*. New York: Vintage Books.
- Scarry, E.  
1985. *The Body in Pain: the Making and Unmaking of the World*. New York ; Oxford: Oxford University Press.
- Schein, L.  
1999. Forged transnationality and oppositional cosmopolitanism. In *Transnationalism from Below*, M. Smith and E. Guarnizo, eds. New Brunswick: Transaction Publishers.
- Schensul, S. L., J. J. Schensul, and M. D. LeCompte  
1999. Structured ethnographic data collection: Ethnographic surveys. In *Essential Ethnographic Methods: Observations, Interviews, and Questionnaires*. Walnut Creek, CA: AltaMira Press.
- Scheper-Hughes, N.  
1992. *Death Without Weeping: The Violence of Everyday Life in Brazil*. Berkeley: University of California Press.
- Scheper-Hughes, N.  
2001. Neo-cannibalism: The global trade in human organs. *The Hedgehog Review*, 3(2):79–99.
- Shiva, V.  
1989. *Staying Alive: Women, Ecology and Development*. London, UK: Zed Books.
- Singer, M.  
1986. Developing a critical perspective in medical anthropology. *Medical Anthropology Quarterly*, 7(2):128–129.
- Singer, M.  
1992. Biomedicine and political economy of science. *Medical Anthropology Quarterly*, 6(4):400–404.
- Singer, M.  
1993. A rejoinder to wiley's critique of critical medical anthropology. *Medical Anthropology Quarterly*, 7(2):185–199.
- Singer, M.

1995. Beyond the ivory tower: Critical praxis in medical anthropology. *Medical Anthropology Quarterly*, 7(2):80–106.
- Smith, N.  
1984a. The ideology of nature. In *Uneven Development: Nature, Capital and the Production of Space*, Pp. 1–31. Blackwell.
- Smith, N.  
1984b. The production of nature. In *Uneven Development: Nature, Capital and the Production of Space*, Pp. 33–65. Blackwell.
- Sontag, S.  
1990. *Illness as Metaphor and AIDS and its Metaphors*. New York: Doubleday.
- Soper, K.  
1996. Nature/nature. In *Future Nature: Nature, Science and Culture*, G. R. e. al., ed. Routledge.
- Taussig, M.  
1980. Reification and the consciousness of the patient. *Social Science and Medicine*, 14.
- Taylor, P. J.  
1997. How do we know we have global environmental problems? In *Changing Life: Genomes, Ecologies, Bodies, Commodities*, chapter How Do We Know We Have Global Environmental Problems? , Pp. 149–174. Minnesota.
- Tsing, A.  
2001. Inside the economy of appearances. In *Globalization*, A. Appadurai, ed. Duke University Press.
- Turner, J.  
1990. Democratizing science: A humble proposal. *Science, Technology, and Human Values*, 15(3):336–359.
- Vayda, A. and B. Walters  
1999. Against political ecology. *Human Ecology*, 27:167–179.
- Waitzkin, H.  
1981. The social origins of illness: A neglected history. *International Journal of Health Services*, 11(1):77–103.
- Watts, M.  
1983. *Silent Violence: Food, Famine, and Peasantry in Northern Nigeria*. Berkeley: University of California Press.

- Wiley, A.**  
1992. Adaptation and the biocultural paradigm in medical anthropology: A critical review. *Medical Anthropology Quarterly*, 6(216-236).
- Wilson, R.**  
1997a. *Human Rights, Culture and Context: Anthropological Perspectives*. London and Chicago, Illinois: Pluto Press.
- Wilson, R.**  
1997b. *Human Rights, Culture and Context: Anthropological Perspectives*. London and Chicago, Illinois: Pluto Press.

MICHIGAN STATE UNIVERSITY LIBRARIES



3 1293 02956 0335