

REMAKING NATURE IN IRAN:
ENVIRONMENTALISM, SCIENCE, AND THE NATION

by

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ABSTRACT

In the last 30 years, Iran has experienced mounting environmental problems, such as air and water pollution, that are perceived as in need of redress. In order to address and confront these problems, Iran has recently adopted the language and framework of ecological science. Subsequently, the prestige of science in the country has been growing through extensive applications of ecological science at various levels of Iranian society. Viewing this development as a socio-cultural process of modernity in Iran, this dissertation addresses two major issues: First, it investigates the discursive historical conditions of Iran in which modern science, including ecological science, has been developed and practiced since the nineteenth century. Second, it explores the cultural dimensions of environmentalism in Iran through examining its reception by Iranian environmentalists, researchers, and non-expert citizens in Tehran and their attitudes toward it.

The analyses of the genealogies of science in Iran show that modern science has provided Iranians with a conceptual framework through which to govern the objects that state authorities, with accuracy and efficiency, wish to identify, analyze, and organize. I argue that the “population” has been a prominent object in the governance of Iran in the nineteenth and twentieth centuries and that, more recently, “the environment” has become such an object. Scientific knowledge and management have played a vital role in establishing these mechanisms of governance, thereby the status of science is kept intact in Iran.

Drawing on thirteen months of fieldwork in Tehran, I also examine the recent development of environmentalism in urban Iran through changing conceptions of “nature.” With Iran’s utilization of ecological science, a new conception of nature is recently introduced to society: a scientific formulation of nature. I demonstrate how this notion of nature has become influential along with growing environmental discourses in Iran, and yet, argue that another conception of nature—relating to Iranian nationhood—also makes a key contribution to Iranian environmentalism. In particular, I engage the anthropological perspectives of “materiality” and “heteroglossia” to highlight this point.

CHAPTER 1

In the past 30 years, Iran has increasingly seen environmental problems in many parts of the country, due mainly to their policy emphasis on industrial activities. These policies are deeply conditioned by the international milieu in which Iran often finds itself challenged. After the war against Iraq, Iran pursued recovery of its crumbling economy through industrial sectors. The industrial policies required bulldozing vast areas of lands to pave roads and build related facilities throughout the country. During this period, constant population growth and urban migration, which picked up a little after the initiation of the Iran-Iraq war, also deteriorated the conditions of city lives and caused a need for raw materials to sustain the growing population. These occurrences steadily gave rise to environmental concerns at the national level, being reflected, for example, in the country's five-year development plan from the early 1990s onward. Since then, Iranians' awareness of the environment increases yearly to the point where environmental concerns crucially shape the ways in which urban projects are planned and implemented. Consequently, despite their economic hardships, ordinary citizens are beginning to be more self-conscious of behaviors that might lead to environmental damage.

This study explores the receptions, characteristics, and dimensions of urban Iranians' recent awareness of discourses of the environment. In particular, I use a conception of "nature" to examine these points; cross-culturally, the idea of nature has been a key site wherein essential cultural values are embedded, while providing a conceptual framework from which a variety of cultural practices were derived. This point is worthwhile especially when considering that the foundation of ecological science is built around a particular historically instituted notion of nature in the West (Latour 2004). With the increasing presence of ecological science applied in

multiple spheres of Iranian society, in what ways has this notion of nature been informed and adopted in Iranian contexts?

The research has attempted to elucidate certain aspects of social mechanisms in which a set of newly-introduced knowledge is taken up by citizens. I have approached this study with an understanding that new knowledges of the environment are principally circulated in urban Iran through related institutions, the discourses produced therefrom, and the projects that are carried out at the local through national levels. This work thus engages not just with knowledge production itself but also with a network of institutions, experts, non-expert citizens, and practices that transpire within a social space substantially organized through the official language of Islam.

Reflecting on the pervasive roles that Islam plays within the society of the Islamic Republic, I was interested in how uniquely the discourses of nature relating to ecological science are being viewed, framed, and practiced in relation to Iranians' reading of Islam. At another level, I discovered that the sentiments regarding pre-Islamic Iran are vividly present among many locals, shaping their individual, cultural and even social experiences. For this reason, I was also interested in the ways in which the narratives derived in the pre-Islamic heritage are dialectically interacting with the discourses, practices, and experiences of ecological science. In short, these heterogeneous forces of Islam and pre-Islamic Iran delineate a social landscape through which the official language of Islam operates. It is in this space shaped by the languages of Islam and pre-Islamic Iran that this research has attempted to locate unique characteristics of the recent environmental awareness in urban parts of Iran.

Two main chapters and three appended articles comprise this dissertation. The current chapter presents an overview of my research scheme, scope, and objectives, literature reviews

concerning the pertinent fields, and scholarly contributions of this work. The second chapter describes the methods, findings and results, and the conclusions of this research. The three appended articles, which have been published or submitted for publication, provide in-depth analyses of key issues drawn from fieldwork.

This chapter succinctly presents the reviews of the literature that helped me conceptualize and elucidate some key issues that arose while I was conducting fieldwork. These reviews include the following fields: Anthropology of Nature, Modernity in the Middle East, and Ethnography.

Anthropology of Nature

The idea of nature has been a crucial conceptual site through which diverse cultural practices take forms being situated in times and places (Sahlins 1976, 2008). Therefore, the concept of nature is a reflection and product of the contingent historical corollaries wherein humans have established a particular relationship with their surrounding environment. From this standpoint, numerous scholars have examined a variety of ways in which a particular notion of nature has been practiced in different cultural settings. Evernden (1992), for example, examines the historical changes of the concept of nature in the West and argues that nature has gradually become an objectifiable and manageable field, a proposition that ecologists employ in their research schemes (Latour 2004). In anthropology, a concept of nature, especially being contrasted to that of culture, was used in the past as a criterion by which the civilized was distinguished from the uncivilized, men from women, and rationality from emotions (Ortner 1984, Latour 1993, Lutz 1988). More recently, nature, as a technologically malleable object, is serving as a median around which new social norms are established (Rabinow 1996). All these examples point to an authority that has been attributed and instituted around nature that is

profoundly embedded in cultural practices. Examination of conceptions of nature thus helps us understand an assumption that underlies cultural practices in a particular manner.

In Iran, one idea of nature seems to have become prominent recently; with the urgent need to address growing environmental concerns, the kind of nature that is deemed objectifiable by science is increasingly becoming the dominant mode of comprehending the relationships of humans, non-humans, and the natural environment. In light of state authorities' concerns to govern the environment, the practices that involve this nature as a form of environmentalism have become key, for example, in urban planning of major cities.

In this regard, Evernden's accounts of nature are highly instructive to conceptualize the recent rise of environmentalism in Iran; it well illuminates the processes by which practices of a particular conception of nature have led to the development of a particular field called "the environment." Evernden's research shows that nature became a domain of science after the Renaissance and that this nature was assumed to be objectifiable and knowable and to be an independent, material object that obeys natural laws. This understanding of nature has contributed to certain practices, discourses, and institutions that we observe in Western societies today (Oelschlaeger 1991; Worster 1977). Ecological science is one example: its advocates often hope for a harmonious, orderly relationship between humans and the separate, natural world and seek to establish that relationship (Cronon 1996).

From this relationship between scientific nature and ecological science, I was led to suppose that the recent increasing recourse to ecological science in contemporary Iran might be a growing sign of scientific discourses of nature, especially in urban parts of the country. At the same time, I also attempted to investigate how other conceptions of nature that are also

prominent and indigenous to Iranian traditions might play a role in the politics of nature in contemporary Iran.

In Iran, differing ideas about nature existed prior to the introduction of the scientific, materialistic understanding of nature, namely those from Islamic traditions and relatively elaborate discourses about Persian gardens. These ideas are still a part of popular Iranian views and are held alongside conceptions of nature produced by environmentalism. In the tradition of Islamic scholarship, nature signifies the totality of the universe of which humans are part (Nasr 1996).¹ Humans and nature are inseparable and interconnected in that the human, as the vicegerent of God, is given the role to ideally gain knowledge of the order of things in nature. It is in the beauty of nature and the signs of transcendence in natural phenomena that the human is to affirm God's sovereignty and grace (Graham 1995). In the traditional Persian garden, the principles of harmony and the cosmic order were emphasized as an earthly representation of Paradise, and it was a place for contemplation of the cosmos (Khansari 2003; Meisami 1985). These elements seem to be present in the ways people experience modern parks. And yet, recently constructed parks are also sites where new practices and identities flourish, such as "exercise" (Adelkhah 2000).

My work builds on an anthropology of nature in that it explores the politics of nature in Iran in which differing discourses of nature continually interact to shape urban Iranians' experience of surging environmentalism in the country. The proliferation of ecological science in modern Iran does not simply mean the replacement of "pre-modern" discourses and practices relating to nature. Rather, it reflects on other discourses of nature in Iran that exist in parallel or in contrast to that of environmentalism. I draw on ethnographic accounts of local

¹ See also *Encyclopaedia Islam*, s.v. "Tabi'a (Nature)."

environmentalists to describe a continuing interplay that uniquely informs environmentalism in Iran. In the midst of genuine worldwide environmental crises, the implication of this research can shed light on a variety of ways in which environmentalism might be unfolding in different cultural settings.

Modernity in the Middle East

In addition to the investigation on politics of nature, this work delineates the genealogies of a scientific tradition in Iran, where science has steadily build up its status and influence since the early nineteenth century. I use the term “genealogy” as a concept explored by Foucault and Nietzsche: genealogical investigations assume neither historical continuities nor schemes of progress whereby the allegedly power-free knowledge is expected to debunk and liberate the false consciousness of the uncivilized. Rather, the genealogist views its development as another form of subjugation or governance through which power, at the same time, is further exercised on the subjects (Foucault 1984; Dreyfus and Rabinow 1983). In short, the knowledge concerned here is understood to be a product of contingent power relations involving the “dispositions, manoeuvres, tactics, techniques, [and] functionings” (Foucault 1997: 26).

Concerning the ways in which scientific rationality spreads outside the “West,” Weber (1948) calls that process a “disenchantment” whereby objective explanations allegedly made available through science would disenchant the “pre-modern” views that are considered non-scientific, irrational, and indigenous. This view implicitly assumes the dichotomy between modern and non-modern as well as the proposition that the scientific modern supersedes the non-scientific traditional, a transition from the traditional to the modern. Furthermore, the idea of “a singular history” can be elaborated out of this proposition; as Chakrabarty explains, it posits “historical time as a measure of the cultural difference...that was assumed to exist between the

West and the non-West” and feeds into the narrative of “the West in the first and then elsewhere” (2000: 7).

This way of inquiries into modernity in non-Western contexts can be problematic analytically; the non-West is viewed to be the “local version” of the Western modernity, thus prompting one to use the analytical categories common to the West as a tool to study the sociocultural traditions and institutions in the non-West, a place that is allegedly in transit to become modern. For example, cultural practices that do not fit into the framework of a Western paradigm will be marginalized as something insignificant, while at the same time reinforcing the idea that there exists a singular, universal history against which local histories of the non-West are defined and written (Mitchell 2000).

The study of a scientific tradition of Iran here is attentive to these analytical pitfalls that are entailed by historicist narratives. In this regard, I found it useful to approach my research through what Chakrabarty refers to as “provincialization.”: the genealogical studies of non-Western societies that focus on the local articulations of modernity without recourse to the analytical categories presupposed in the Enlightenment modernity of Europe. It concerns a “translation,” rather than a transition, of the European modernity into non-Western contexts. This project of translation has been especially elaborated in Subaltern Studies, from which I benefited through learning a variety of ways to analyze the provincialization in an Iranian context (Chakrabarty 2000; Chatterjee 2000, 2004; Prakash 1999).

Furthermore, I draw on MacIntyre’s (1981) idea of “tradition” in attempts to understand modern Iran where science, as a part of modernity projects, has been discussed, developed, and practiced in a distinctive manner. MacIntyre uses this term differently from the sense in which Weber does. For MacIntyre, tradition is not something that existed prior to modernity in

contrastive terms; rather, it continually evolves through the discourses that are collectively judged to be correct among those involved. With this perspective, traditions do not remain “stagnated” or “backward” in the age of modernity, as the practitioners’ consensus of correct forms vary in accordance to changing contexts in which they are situated. Therefore, the debates or styles of reasoning of practitioners that contribute to forming a tradition are a major investigation site to study Iranian modernity as a tradition. In this light, the analyses of traditions also concern the structure and effects of power relations through which traditions are delineated and formed in one way rather than other ways.

Elaborating on MacIntyre’s notion of tradition, Talal Asad (1986) developed a conceptual framework to study Islam as a tradition in *An Anthropology of Islam*. He sees Islam not as a rigid constellation of religious essentials around which social structures, institutions, and cultures are established but as a tradition that is dependent on the contingent power structures produced within given historical conditions. Drawing on Asad’s idea, several scholars have tried to apprehend the discursive relationship between Islam and modernity in the contemporary Middle East (Hirschkind 2006; Mahmood 2005; Silverstein 2008). These works are helpful to lay out my research scheme and vision in modern Iran, where Islam as a tradition takes a variety of social and cultural forms and produces institutions and cultural practices in accordance with their historical contexts.

For genealogical studies of modern Iran, the roles of knowledge are of particular importance in my research. Foucault (1977, 1984) demonstrates how knowledge production about certain objects, such as the population, often unknowingly facilitates the exercise of power and thus leads to the saturation of power in modern societies. Although the official census about the population as statistical data had not been taken by 1956 (Bharier 1968), the systematic

census-taking in Iran began in 1871.² In order to study a scientific tradition of Iran within which particular power relations are being formed and changing, my research looks at the growing influence of science in the country, especially its roles to efficiently organize and manage the state.

In important ways, my work contributes to a narrative of provincialization in Iran. First, it demonstrates that modernity projects were undertaken simultaneously with those of the West in the early to mid nineteenth century. Genealogical investigations on science allowed me to explore how, in the guise of military reforms initially and in other fields thereafter, modernity occurred in Iran as early as the nineteenth century by dispatching Iranian personnel to Europe for education in 1811.³ These projects, while entailing principles based on the Enlightenment, were unfolding in Iranian contexts. In the critical examination of these projects as a tradition, my research makes another contribution to the literature of modernity in the Middle East by analyzing the local articulations and applications of science. Moreover, numerous studies concerning Iran have tended to focus on the disjuncture that transpired on and/or between the two major Iranian revolutions—the Constitutional Revolution (1906–1911) and the Islamic Revolution (1979). However, this work, while being attentive to the local discourses and practices of science, provides accounts that address the continuities as well as discontinuities of contemporary Iranian history.

Writing Ethnography

The presence of an ethnographer in the field, its inevitable effects on informants, and the ways s/he writes ethnography in a post-fieldwork phase have been a subject of debates in anthropology for some time (Clifford 1986; Marcus and Cushman 1982; Rabinow and Marcus

² *Encyclopaedia Iranica*, s.v. “Census in Iran.”

³ *Ibid.*, s.v. “Education Abroad.”

2008). The discussion centers around the status of the ethnographer as an “observer” or scientist who is arguably entrusted to “represent” his or her research subject. Although few anthropologists now take seriously the objectivity once attributed to the ethnographer, here I explore the literature concerning ethnography. Some of the insights that emerged from its discussion provided me with conceptual tools to analyze Iranian environmentalism. In particular, for my research, the discussion in this literature helped me bring into question the adequacy of the subject/object dichotomy, a presupposition developed out of the Enlightenment notion of the subject as being an autonomous and rational individual.

First, in this approach, agency is primarily ascribed to subjects as interpreters or observers, while objects are usually regarded as things that “wait” to be interpreted or observed by the subjects (Latour 1993, 2004). According to Hamilton and Placas (2011), the analytical assumption of this dichotomy still slips into the analyses of many anthropological works. Especially in the process of writing, this approach can overlook some important dimensions of the subtlety and complexity that make up the actual field encounters; for example, the atmosphere, such as a network of objects in the room, that helps constitute the context of interactions can be minimized in favor of a subject’s ability to represent the scene (Keane 2007). It is here that my analyses of fieldwork turned to the concept of materiality of objects to examine unique characteristics of environmentalism in Iran. Miller (2005) succinctly puts its approach as follows: materiality is concerned “to show how the things that people make, make people” (38). Recently, many scholars have studied a variety of ways in which material forms as agentive objects crucially shape the experiences and mundane practices of subjects (Appadurai 1986; Bennett 2010; Bourdieu 1977; Keane 2005; Kopytoff 1986; Miller 2005; Mitchell 2002). Building on these works, I draw on the analyses of materiality to identify and describe the

Iranian conception of nature, thereby contributing to the studies of ethnography that are attentive to the changing relationships of subjects and objects.

Second, as Clifford (1986) points out, ethnographic writing used to be merely the field accounts produced by ethnographers who, as “experienced” observers, described and interpreted cultural customs; in these accounts, polyvocality that exists in the field is restricted in a particular manner by giving one voice to an ethnographic author and others to the informants. In order to ease the restraint, Clifford introduces more reflective accounts that stage dialogues as a way to better capture the encounter between the ethnographer and informants. In this regard, I elaborated Bakhtin’s concept of heteroglossia to explore how dialogic interactions generated multiple voices of nature concerning environmentalism in Iran. Heteroglossia refers to a situation where a subject is imbued with an array of his/her own voices concerning a particular subject that emerges in response to a particular context (Bakhtin 1981, 1986; Holquist 1990). This approach breaks away from the Enlightenment tradition in which individuals are deemed rational and, irrespective of contexts, being capable of transparent communications through one coherent voice, especially in the public sphere (Connolly 1999; Habermas 1989). Being grounded in heteroglossia as a conceptual tool for analyses, my research is highly attentive to the roles the dialogues played in the field and the heteroglot conversations that are reflective of the sociocultural contexts in which both the informants and I were engaging and embedded. In this light, this study enriches the ethnographic dimensions of Iranian environmentalism by showing that dialogic interactions in the field, rather than the subjects’ rational comprehension of the subject by itself, are key in examining multivocal discourses of nature (Hill 1995; Smith 2004; Strauss 1990).

CHAPTER 2 (PRESENT STUDY)

This chapter presents the methods, results, and conclusions of this research. Specific findings about these aspects are found in the appended papers. I begin this chapter with the description of research settings and design. Then, I provide major results for the issues being addressed in the previous chapter and close the chapter with the conclusions and future research prospects drawn from this study.

Setting

I conducted my research in Iran's capital city, Tehran, over a period of 13 months, for which I made two trips: one from April 2009 to March 2010 and the other from June 2011 through August 2011. For this research, I interviewed about 135 individuals whose professional backgrounds include (environmental) researchers, students, self-proclaimed environmentalists, journalists, and ordinary, non-expert Iranian citizens. The interviews mainly took place in northern and central parts of Tehran, where many environmental NGO (Non-Governmental Organization) offices, universities, and research centers happen to be located.

Phase 1

In the initial phase of my research, I was interested in how the knowledge regarding the environment was being produced and circulated in Tehran. I began this investigation with researchers and students at the Graduate Faculty of the Environment at the University of Tehran, with which I was officially affiliated as a visiting researcher. Questions during this phase were mainly concerned with their understandings of nature, expertise, educational backgrounds (including the question of whether or not they were educated in seminary schools), and motivations to enter the field. The interviews usually took a casual form, such that I initiated conversations and asked them my prepared questions in an open-ended style. These semi-

structured interviews took place at classrooms, corridors, or the cafeteria inside the Faculty facility, which itself is a walled and segregated space from other facilities of the University of Tehran. Perhaps, due to this condition, most, if not all, interviewees had no objections to the recording of our conversations. These interviews helped me understand the purview of experts' discourses on nature and the environment, their educational backgrounds, and the ways in which they were initially exposed to and became acquainted with the field of the environment.

Once the students at the Graduate Faculty understood the objectives of my research, some of them began to offer assistance with my research by, for example, suggesting places to visit and people to meet. Some of them had acquaintances at places such as the Department of the Environment (DOE) and city municipality offices. With their assistance, I was able to arrange appointments and visit these places multiple times. In these places, I interviewed the workers or, if permitted, distributed a handout that included questions similar to those I had used previously for the students. Here, in addition to the questions concerning environmental expertise, I had opportunities to inquire about the trend of environmental policies in the country, major environmental issues that they as an official environmental institution currently faced, their strategies to communicate with citizens on these issues, and their relationships with other national or local environmental institutions.

Another site where I conducted field research during the first phase were public parks. Parks are said to be a semi-natural place, a place where nature is created to help ease high-stress lifestyle in the city.⁴ Notably, it is this conception of nature as being manageable that is assumed among the Iranian environmental experts. I had interests in studying how park users were incorporating this notion of nature into their everyday lives and how their understandings of

⁴ *Sazman-e Parkha va Fazaye-e Sabz-e Shahr-e Tehran* (Tehran Parks and Green Space Organization); accessed online at <http://parks.tehran.ir>.

nature are similar to or different from those of the experts at the institutions I visited. How do park visits and the activities undertaken there help the citizens delineate their notion of nature? When possible, I observed kinds of social or individual activities in which they were engaging. I also attempted to evaluate how the differences of their opinions on nature, if any, could be explained by socio-economic factors, since I found out that the Iranians I met often attributed the differences of social experiences or worldviews to socio-economic status. For this purpose, I classified public parks into three categories, namely the North, Central, and South, as being wealthy, middle-class, and low-income Tehran neighborhoods, respectively. At some parks I conducted interviews by myself; otherwise, my friends from the Faculty were willing to accompany me to the parks and helped with securing interviewees and translation. While some park users participated but did not feel comfortable having their conversations recorded, others simply and politely declined to be interviewed. During my fieldwork, I visited and conducted interviews at 5 parks in the north, 4 parks centrally, and 3 parks in the south until I was advised by several University of Tehran faculty members to refrain from public interviews after the 2009 presidential elections.

Phase 2

After numerous conversations with environmental experts, I gradually began to see a network of an environmental community in Tehran. For example, one NGO worker with whom I spoke turned out to be the friend or acquaintance of someone I knew from a previous interview. Some environmental experts committed themselves to environmental NGOs, while working at environmental or non-environmental institutions. Through Iran's DOE website, I obtained a list of environmental NGOs in Tehran on which the names and contact information were printed. Based on the list, I attempted to contact the NGOs one by one. I was unable to reach some of the

groups, either because they did not answer my phone calls or because we lost touch in the process of correspondence. However, I did not have major issues getting in touch with most, and they responded to my requests to visit their offices or homes politely. After introducing myself and the purpose of my research, I was usually able to arrange an appointment for a visit. They usually gave the address and, if necessary, instructions to get there; some had their own offices in town, while others privately coordinated activities from their house. Most of the places I visited were located in the central or northern parts of the city. For the duration of my stay, I visited 17 environmental NGOs that addressed a variety of environmental concerns, such as a general environmental awareness of the citizens, water conservation, mountain climbing and research, environmental education for children, recycling garbage waste, and wildlife conservation, among others.

From these visits, I intended to get a sense as to how non-expert citizens in Tehran receive and respond to the systematic efforts initiated by official environment-related institutions. The NGOs often mentioned that they were in a good position to comprehend the situations that these ordinary citizens were experiencing, since they engaged in grassroots-based activities. I was also researching the gamut of the NGOs' activity schemes and interests in comparison with those of official environmental institutions as well as those of international environmental NGOs.

I was also introduced to journalists who were covering "environment" sections in newspapers. I took interest in meeting with them, because I noticed an environment section in several major newspapers on a regular basis. A journalist, who was an editor of the environmental section of the Tehrani newspaper, *Hamshahri*, told me that news coverage of environmental problems began to appear in newspapers around the late 1990s and the early

2000s. Many Iranians with whom I spoke pointed to the inception of these environmental sections as evidence that more Iranians were now paying attention to the issues of the environment. In light of this milieu, the interviews with journalists intended to clarify key issues that emerged from findings in the field: 1) the background to the Iranian newspapers' coverage of environmental problems (for example, the year of publication, length of coverage, and nature of contents); 2) journalists' impressions about readers' receptions of the coverage; and 3) the trend of Iranians' stance about the environment, and their understandings of nature (that is most likely reflective of their experience as a journalist to cover a range of environmental issues in the country).

Phase 3

After the analyses of the data I gathered in the first two phases of my research from 2009 to 2010, I was able to single out one distinctive conception of nature that underlay the views of many of the people I had encountered in several significant ways, the nature that I call "Iranian nature." This nature reflects the discourses of Iranian nationhood in that conversations about nature invoke what they see as the intrinsic (usually positive) characteristics of the Iranians. In short, these two discourses of nature—one relating to ecological science and another to nationhood—are continually interacting and evolving in the midst of a rising environmental awareness in the country. Given this finding, I was interested in exploring the ways Iranian nature concretely takes form and is subsumed within discussions about environmental issues, especially among the environmentalists.

Remembering some of the interactions I was engaging in during earlier phases of my fieldwork, I came to heed the roles of objects that seemed to invoke in many of my informants a particular feeling about the Iranian nation through nature. In light of this standpoint, I reviewed

my fieldnotes and compiled a list of environmental NGOs or other organizations that I could visit in order to analyze further how Iranian nature transpires within the framework of environmentalism. In particular, the NGOs that focus on wildlife conservation seemed pertinent, because their activities revolve around the protection of endangered species, of which most exist only within Iran. How do the images or objects concerning these animals, that are considered part of nature, conjure up environmentalists' perceptions of the Iranian nation? Are there any other objects that play similar roles as the endangered animals? My assumption was that these species or objects that embody them might provide an apt framework through which a particular idea of nature is linked with Iranian nationhood.

In the summer of 2011, I arranged appointments with two wildlife-conservation NGOs. One NGO is specifically concerned with the protection of the (Asian) cheetah, a species found only in Iran, while the other NGO is for endangered species in Iran. I had recorded conversations with the representatives of each organization in their offices. In light of the questions described above, I asked them about the objectives, activities, and significance of their organization as well as their personal views on environmental problems and on the concept of nature. Their offices are located in the northwestern part of Tehran, and when I arrived there, staff members who were in their mid-20s warmly welcomed my visit.

Meanwhile, when possible, I attempted to participate in environment-related events, such as the International Exhibition for the Environment. These events indicated that science and technology played an increasing role in a variety of environmental fields; noticeably, many of these fields, such as automotive quality and recycling, are closely related to everyday life of citizens. With regard to environmental efforts undertaken in Tehran, I immediately noticed some of the changes that had occurred since my last trip in 2010; one of the most noticeable changes I

witnessed was seen in public transportation programs. The Tehran municipality views them as key policies to confronting air pollution. For example, the subway system in the city was expanded by opening up new lines and stations. The municipality increased the number of lines on the energy-efficient city buses (*BRT*) that run through Tehran. Because of these developments, I was attentive to see ensuing changes reflected in the behavior and views of citizens, the aspects of which I attempted to explore in interviews and participant observation.

Phase 4

Based on my preliminary research and fieldwork, I came to realize that the field of the environment is recently developed in Iran. To contextualize my findings in the field more in-depth, I began to examine the genealogies of the environment and, more generally, of a scientific tradition in Iran from which the recent environmentalism emerged. As is explored in the previous chapter, the ways in which science has been viewed, discussed, and practiced are particular to Iranian contexts. My analyses concerned such questions as follow: In what contexts does the environment arise in urban parts of Iran? What is the nature of debates that took place regarding the environment? Has the proliferation of ecological science in Iran enhanced the status of modern science and, if so, how?

Results

I clearly remember the day I conducted the very first interviews at the cafeteria inside the Faculty with a mixed feeling of relief and misgiving. A feeling of relief, because it took me almost a month before I could start research; finding an apartment, bargain purchasing and (literally) carrying the essentials—including a bed mattress and furniture—into my apartment room, multiple trips to a police station where I had to wait in a long line to process my visa extension, and getting around town with shared taxis and crowded buses were daunting enough

to make me feel that even getting my research started was an accomplishment. Yet, at the same time, I experienced a feeling of misgiving, because I had almost no local contacts at that point. Additionally, I was self-conscious about my presence in what appeared to be a foreign land and highly anxious about Iranians' reception of my research. In short, despite the research agenda I had prepared in the proposal, I was unsure of how my research would unfold. It was only after a couple of months—when some acquaintances began to show interest in my research and offered assistance with connections, interviews, and even translation—that I felt my fieldwork research truly took off.

At nights, after coming back from the field, I usually reflected and jotted down what had happened that day. One of my major challenges was to connect the immediate events I encountered to a “big picture” that I laid out in the proposal, from which a series of events could be (or should be, I hoped!) somehow linked and systematically examined and explained. From time to time, some of the occurrences in the field did not seem to make sense in light of my original hypotheses or expectations, thus forcing me to rethink and readjust my perspectives and approaches to fieldwork. This was when I revisited my fieldnotes and went back to the recorded conversations. I then discussed my views with different friends, who in turn shared with me their views and feedback on the given subjects. It was out of these feedback loops that I attempted to come up with the most suitable interview questions through which I hoped to obtain the answers that I was searching.

I approached the recent Iranians' heightened environmental awareness with different theoretical points of view. Genealogical studies of science in Iran allowed me to contextualize the historical conditions from which the field of the environment emerged in Iran and to illuminate how uniquely this field has been developed in its contexts. To explain some

distinctive characteristics of this environmentalism in Iran, I elaborated on the anthropological concepts of materiality and heteroglossia, which enabled me to explore the interplay of the differing discourses of nature that are grounded in ecological science and Iranian nationhood.

In the first paper (Appendix A), “Genealogies of Science in Iran: Knowledge, Government, and the Emergence of the Environment,” I examine the changing status of modern science in Iran and provide the genealogical accounts as to how the current prestige of science has been historically conditioned. This investigation is crucial to understand contemporary Iran, where the “ownership” of science is increasingly claimed to be theirs, not solely the West’s. I trace how modern science was initially introduced to Iran and, in turn, gradually incorporated and internalized into the polity of Iranian governance in miscellaneous ways. My argument is that the status of science has increased through the scientific knowledge and management of objects that are conducive to governance of the state. In the nineteenth and twentieth centuries, when the political circumstances were continually unstable for Iranian monarchs, scientific management of the population was viewed as key to effectively govern and strengthen the state; knowledge about the population was surveyed, collected, and systematized. It is within this realm that science continues to be productive even to the present, thereby keeping its prestige intact.

More recently, my analyses suggest, the reputation of science is enhanced through another route: the field of “the environment.” As Iran expanded industrial sectors from the 1960s, concerns for the environment arose and have steadily grown, first at the official level and then among citizens by the late 1990s. The paper examines how the environment over time has become an object of scientific inquiry to be identified, analyzed, and governed, thus signaling

Iranians' increasing concerns and production of environmental knowledge. I argue that this trend is contributing to the development and high standing of a scientific tradition in Iran.

The second paper (Appendix B), "Conceptions of Nature in Iran: Science, Nationalism, and Heteroglossia," demonstrates some of the unique qualities of Iranian environmentalism I encountered in the field. As is shown in my first paper, the scientific approach to the environment, namely ecological science, has become a mainstream framework and vocabulary to scrutinize the recurring environmental problems in Iran. In this paper, I explore through conceptions of nature how environmentalism in Iran is similar to and different from that of the West. In the first half of the article, I present several examples from my fieldwork that reflect the proliferation of the scientific notion of nature in Iran, a characteristic found in western environmentalism. The second half introduces another conception of nature—nature related to Iranian nationhood—being uniquely practiced in Iran. My argument is that, in addition to scientific understanding of nature, this notion contributes to the ways environmentalism unfolds in Iran.

I use Bakhtin's concept of heteroglossia to discuss the continual interplay of these two differing discourses of nature. As explained in the previous chapter, heteroglossia refers to a situation in which multiple voices concerning a given subject, instead of a singular voice allegedly contained within the psyche of a rational individual, would arise through dialogic interactions. Thus, by drawing on the actual interactions that took place during my fieldwork, I demonstrate how two differing voices regarding nature that I identified contribute to some features of Iranian environmentalism.

The third article (Appendix C), "Iranian Environmentalism: Nationhood, Alternative Natures, and the Materiality of Objects," explores the same research question examined in the

second article with a different theoretical lens; in this article, I used the concept of materiality of objects to highlight the ways in which an Iranian conception of nature is embedded in the environmentalists' discussions. I recalled in several meetings with Iranian environmentalists, where they referred to particular objects to describe their activities and their views on environmental issues. In conventional studies, objects are usually relegated to "things" that lack agency and that passively wait to be used and interpreted by agentive subjects.

In contrast to this viewpoint, my analyses of materiality in this paper provide an ethnographical account in which some objects—a map, a poster, and a photograph—critically shape the environmentalists' understanding of nature; these objects distinctively evoke the environmentalists' feelings about the Iranian nation in a particular manner. In our conversations, the environmentalists related their efforts to restore what they regarded as the higher life principles practiced by their ancestors who made up of the glory of the pre-Islamic Persian Empire. Thus, their reference to objects during these conversations often prompted them to discuss Iranian conceptions of nature. My argument is that, although the scientific conception of nature has become mainstream in modern Iran, this notion also constitutes an essential framework with which Iranian environmentalists engage in their scientifically-based activities.

Conclusions

This work explores the sociocultural dimensions of what is commonly known to be environmentalism in an Iranian context. Assuming that this West-born environmentalism is not copied verbatim to Iran, I showed how urban Iranians, while incorporating ecological scientific schemes to society at various levels, view and address environmental problems. The appended articles provide some concrete examples of Iranians' reception to environmentalism and examine

the historical conditions in which the field of the environment as an object of science emerged in Iran.

The accounts shed light on how science, as one form of modernity, is translated and internalized in the Islamic Republic. During my fieldwork, contrary to my original hypotheses, I was surprised to witness the level of penetration of scientific discourses in Tehran. I came into the field with an expectation that social landscapes, including those concerning the environment, are strongly filtered through the languages of Islam; for example, I anticipated from an Islamic view of the material environment that the outer environmental problems would be understood to be a reflection the inner (problematic) moral state of humans (Beeman 1986; Nasr 1996).

However, many of my informants did not share this view. Being asked about their views on nature and the adequate ways to confront environmental problems, they usually alluded to scientific views of nature and their solutions. At parks, when possible, I spent time interviewing non-expert citizens about their views on the environment. Some of them, typically elder males, in the southern parks expressed that they could feel closer to God when they were surrounded by nature in the parks. An overwhelming majority, however, provided the scientific, material explanations of what nature does for them; for example, the nature in the park provides them with clean air, which in turn will enhance their mental and physical conditions. Only when I inquired to them about the general relationships between Islam and the environment did some informants bring up the roles of Islam in environmental consciousness by drawing on some of the hadith narratives relating to the environment, such as water and animals. I was often told that religion is concerned with the moral conduct of everyday life, but not necessarily with environmental issues. Generally, their visions of environmental issues revolve around the perspectives of science. Almost everywhere, I encountered these scientific views in the field

whether it was at parks (in central and northern parts of Tehran), local cafes, university campuses, environmental NGOs, newspaper headquarters, and the DOE.

In addition, scientific research and programs concerning the environment are also broadly practiced and incorporated into the urban planning of Tehran. This shows that the field of the environment is elaborated through science and that Iranians' recent environmental awareness contributes to the prestige of science. The international exhibition of the environment that I attended in 2011 exemplifies the degree to which scientific discourses are widely applied in the field of ecological science. The subjects featured at the event included automobile and motorcycle manufacturing, petrochemicals, gas, soil, water, cement, copper, and industrial equipment. Scientific research relating to the environment has also become indispensable in urban planning. For example, in order to attenuate the effects of air pollution mainly caused by car traffic in the capital, the Tehran municipality initiated in 2005 a traffic plan called *tarh-e zouj o fard* (odd- and even-number plan); it assigned personal vehicles with even- and odd-numbered license plates and limited their access to city centers on alternate days, thus restricting traffic flow. This plan is carried out based on scientific studies concerning air pollution and its management, among other issues. Similarly, the environmental NGOs that I visited in Tehran exhibited a variety of environmental projects that are grounded in the scientific notion of nature. They dealt with topics including mountain, water, and waste management, creation of city environment, and the conservation of wildlife and biodiversity. In light of an increasing number of environmental issues in Tehran, it becomes clear that urban Iranians are more and more immersed with scientific discourses of nature.

From genealogical viewpoints concerning the environment in Iran, it seems that the state's environmental efforts that have grown in scale and frequency over the last two decades

are reflected in the citizens' scientific views of nature. They also show that the field of the environment has entailed the involvement of more organizations, thus providing the citizens with many more venues through which to be immersed in this field. This point was touched on by those who worked in official branches of the environment, such as the DOE and the Tehran municipality. Many of them expressed that more Iranians are conscious about environmental issues now than were previously, and the workers often related this outcome to their increasing efforts to variously reach out to the citizens. They emphasized that, while embracing the value of education, they have attempted to promote environmental awareness through the media outlets like TV and the radio as well as through increasing coordination with local grass-roots organizations. Interestingly, a number of the environmentalists that I met told me that they took initial interest in the environment on account of the media broadcasts. From the accounts of environmentalists, journalists, and non-expert citizens, it is generally agreed that environmental discourses began to appear in the Iranian public in the late 1990s and the early 2000s.

Another finding about Iranian environmentalism, or more broadly Iranian society, was Iranians' deep sense of their own history that is grounded in their experience of everyday life. During my fieldwork, I often encountered views that regarded Iran's past prosperous era (the Achaemenid period, ca. 404–358 BCE) to be a highpoint in Iranian history. From this perspective, the current situation of Iran is judged to be less than ideal (Zerubavel 2003). This view was expressed not just by my "informants" but also by non-informants, whether they were taxi drivers, passengers on the bus, shopkeepers, and customers in cafes. Materiality of objects appears to play an important role in fashioning their views on Iranian history; many objects, such as posters of Damavand and Iranian art works related to nature, are vividly displayed in major streets of Tehran, embodying a particular relationship between nature and the 2,500-year old

Iranian state. It seems that this particular way of looking at their nation's past provides a framework through which their experiences as Iranians are being formed and reinforced.

It was through this perspective that I was beginning to recognize some relationship between Iranians' sentiments and aspiration towards a prosperous nation and environmentalism. In this regard, wildlife NGOs well embodied this connection; their environmental efforts are directed to protect and conserve the endangered animals, most notably the Asiatic cheetah, that primarily reside in Iran. Many NGO members expressed that, because these animals exist primarily in Iran, NGOs' activities are not a mere act of animal protection but are concerned with the national interests of Iran. The following comment by an NGO founder sums up this point: "Some animals are found only in Iran, and they are so precious, not only for the environmentalists but also for Iranians. That is why they are carefully conserved at national parks." In other words, these animals as a constituent of nature provide the environmentalist with the framework of another conception of nature that specifically relates to Iranian nationhood. While the environmentalists have adopted scientific projects and research in their activities, this alternative conception is a key feature in the schemes of their efforts. In my second and third articles, I presented how differing notions of nature interact and evolve in Iranian contexts.

Once I identified this feature of Iranian environmentalism, I backtracked through my fieldnotes and interviews and reexamined the manners in which my informants spoke about nature and environmental problems in Iran. I then recognized that many had discussed nature in light of what they considered distinctive characteristics of nature that are unique to Iran. For example, seasonality was understood to be a unique feature to Iran in comparison to other Middle Eastern countries which, in their view, lacked this quality. In a similar manner, the diversity of natural resources in Iran was considered a special trait by the interviewees. From

their viewpoints, it was this nature that is in need of protection. One group that I wished to interview concerning environmental issues was religious students and scholars at seminary schools (*howzeh*'-ye *'elmie*). Although their number and size is small in comparison to that of non-religious schools, I was informed that clerics also began to address environmental problems at local mosques. However, I did not have contacts to visit seminary schools, and, additionally, the heightened political climate at the time of my fieldwork did not provide the most promising occasion for a foreigner to conduct interviews at such places. Seminarians' views could have possibly shed light on some of the ways in which Islam is framed into scientific environmental discourses.

This work critically examined the emergence, development, and receptions of the environment as an object of scientific inquiries in Iran. It saw science as a key element of modernity that brought profound changes to the ways of governing Iranian society. Among these changes, a new scientific conception of nature is particularly important, especially at a time when Iran is confronted with genuine environmental problems. Nature is increasingly understood to be a discrete object to be defined and governed, and Iran, while claiming its ownership of science, pushes forward scientific agendas based on this notion of nature. This domestication of science intersects with the global contexts in which Iran is attempting to articulate and assure its status as a nation state in the international community. I argue it is in this space that another conception of nature relating to Iranian nationhood is inscribed into the discourses of environmentalism in Iran. In this sense, "remaking nature" has two theoretical implications. First, nature is a discursive concept that is reflective of particular historical conditions in which its ideas are meaningfully defined and practiced. Second, after the internalization of science that followed the Cultural

Revolution in Iran between 1980 and 1983, a scientific formulation of nature, while conditioning other notions of nature, increasingly gains importance in the governance of modern Iran.

For my future projects, I am interested in exploring further the processes by which science is increasingly viewed by Iranians to be their own intellectual enterprise; they do not consider that they “borrow” science from the West and then develop it, but rather that they advance science from within their own tradition. Going beyond its political implications, this attitude is well embodied in the slogan widely used to claim Iranians’ right for the nuclear program, a national scientific project: “Nuclear energy is our absolute right.” (*enerzhi hasteh ‘yi haqq-ye mosallam-e mast*). It will be interesting to examine the historical constitution of school and university teachers, whether they are native Iranians or hired Western experts, in the science education of the country. This will help us understand the degree to which science is integrated into Iran’s domestic system of education as its own enterprise. Furthermore, this line of inquiry will allow me to situate the nationalistic turn of scientific environmental discourses and practices within a larger framework of scientific tradition in Iran.

It seems that Iran’s recent policy emphasis and investment on the natural sciences has gradually opened up the field of the behavioral sciences. This development is of particular interest in light of the post-revolutionary Iran’s cautious stance towards human sciences (*olum-e ensani*). Since the mid-1980s, while the natural sciences have been favorably received at the official level, the human sciences—which concern human behaviors—have continued to be a subject of suspicion. In recent years, urban planning, including environmental management, is increasingly relying on the frameworks and vocabularies of the natural sciences. At the same time, it also aims to regulate and shape behaviors of citizens at public places, such as parks, thus entailing a further recourse to the knowledge of behavioral science in a subtle manner. The

examination of the changing relationships between natural and behavioral sciences conditioned by Iran's application of modern science could thus provide insights on some of the important socio-cultural changes of contemporary Iran.

The issues concerning nationalism in Iran can also take this research to another direction. Nationalism is essentially a "project" that originated and was deliberately launched in the late nineteenth and early twentieth centuries in Europe (Hobsbawn 1983). The concept of the nation—a nation that shares the common ancestors, language, and territories—is a relatively new notion. In Iran, this idea of a unified nation began to appear in the late nineteenth century, when their "national" sovereignty was perceived to be under threat by foreign powers (Algar 1969; Tavakoli-Targhi 2001). In these circumstances, the notion of *vatan* (homeland), in particular, has emerged as a critical channel through which Iranians delineate, imagine, and embody the Iranian nation and territories (Kashani-Sabet 1999; Tavakoli-Targhi 2001; Najmabadi 2005). However, Iranians' sentiments toward their own roots are manifested in a variety of forms—through poetry, for example— and at different times in its history, even prior to the rise of nationalism. Given this background, the analyses of the historical reciprocation between these elements could greatly enhance an understanding of the nationalistic sentiments shaping the experiences and practices of Iranians that we observe today.

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APPENDIX A

GENEALOGIES OF SCIENCE IN IRAN: KNOWLEDGE, GOVERNMENT, AND THE EMERGENCE OF THE ENVIRONMENT

(Submitted to *Comparative Studies of South Asia, Africa, and the Middle East*.)

ABSTRACT: In the early nineteenth century, Iran adopted the language and framework of modern science to defend its territories from foreign powers. Over the last three decades, modern science has percolated throughout Iranian society to such an extent that it has become a major criterion to measure the success of Iran's national standing. How has science grown to be an intellectual enterprise over which Iranians now claim ownership? This study critically examines the discursive historical conditions of the development and practice of modern science in Iran since the nineteenth century. I argue that science has provided Iranians with a conceptual framework for the rational, efficient management of the objects that state authorities wish to identify, analyze, and organize for governance. The study shows that knowledge of the population has been a prominent object of scientific management and that, more recently, the field of the "environment" has increasingly become such an object. Furthermore, the scientific management of the environment has become a key priority for the Iranian national polity, thereby contributing to the status of science in the country.

Introduction

Modern science was introduced to Iran in the early nineteenth century, and its status in the country appears to have grown continually since. Iran now claims ownership of science and considers it a major criterion by which the degree of the country's development is measured; the more science proliferates in the country, the more "advanced" its level of development is considered to be.¹ Against this background, Iran is vigorously promoting scientific research and science-based projects, and the achievements therefrom are increasingly thought to embody national status.

What are the historical conditions that have allowed science to acquire and preserve its prestige throughout modern Iranian history? Are there any characteristics of science that might have contributed to this growing prestige? This study explores the genealogies² of a scientific tradition in Iran that has critically shaped the discursive framework of knowledge production, governance, and practices of science in the country.

I argue that science has furnished Iran with a conceptual tool with which to scientifically manage and govern the state.³ It has promoted efficiency and productivity through which the governance of objects has been pursued and, in the process, new objects have emerged in an Iranian context. At the time of the inception of science in Iran, the welfare of the population was a key, primary objective of scientific management. State authorities were able to use science to identify, classify, and then manage related objects for the well-being of the population.⁴ Although the knowledge of objects produced in this process has evolved over time, the use of science to enable and facilitate governance continues to have significance for the management of the Iranian state, thus keeping the prestige of science intact. In the last three decades, I argue, “the environment” has become an object of scientific research that has increasingly drawn Iranians’ attention. This paper examines the genealogies of science in Iran by looking at the ways in which scientific management plays a key role in the government of the state and involves specific forms of knowledge production of objects.

Institution of Modern Science in Iran

During the Safavid dynasty, from 1501 to 1722, Iran extended its reach to the West mostly through the silk trade, but, as Lambton (1957) argues, it was not until the late eighteenth and early nineteenth centuries that the West began to noticeably exert its influence on Iran. This was the period when the Qajar dynasty (1785–1925) was still at a rudimentary phase of state formation.⁵ Iran was highly vulnerable to and was under heavy pressure from territorial threats by its neighboring states. In particular, Iran’s losses in wars against Russia in 1813 and 1828 posed a serious territorial threat, resulting in the actual concession of some territories.⁶ Given the special significance of their lands in their cultural traditions,⁷ Iranians were challenged to seriously reconsider ways to organize, fortify, and defend the state and its territories. The

reformation of the military was one of the first measures taken that served this purpose.⁸ Military programs, especially in regard to new modalities of power and new technologies, were one way in which the West increasingly exerted its influence in Iran.

In the first decade of the nineteenth century, Abbas Mirza, crown prince of the Qajar dynasty, sought to create a European-style standing army named *Nezām-i Jadīd* (New Army). In order to promote *Nezām-i Jadīd*, he recruited a number of European military, medical, and technical experts to Iran and dispatched Iranian students to England for the acquisition of military techniques. Although his premature death in 1834 halted the project until the reign of Nasr al-Din Shah (1848–96), ruling elites, such as Amir Kabir and Mirza Husayn Khan, followed the path pioneered by Abbas Mirza in the years after his death (Nashat 1982). Through their rule, the scientific organization of the military and the efficient execution of its orders, rather than courage, came to be considered key to winning wars (Bakhash 1978; Nashat 1982). A military academy that provided scientifically organized training was also established during this period. Numbers of government-sponsored students who had studied abroad brought a new corpus of knowledge home to Iran with them. This included such fields as engineering and mathematics that were advantageous to the army (Menashri 1982). Subsequently, military techniques based on the new knowledge were promoted, including the detailed coordination of military training, division into regiments, and assignment of uniforms, barracks, and individual rooms. The military increasingly relied upon organization founded in an assortment of the new knowledges to efficiently train and manage itself. Modern forms of power, made available through what Foucault termed governmentality, were essential to the development of science in Iran, and vice versa. It is therefore in the context of an emerging power/knowledge mechanism

that science initially developed in Iran, providing Iranian authorities with a means to efficiently achieve given ends in the military and, later, in other fields.

Science From Within: the *Dār al-Funūn*

The establishment of the *Dār al-Funūn* (Polytechnic Institute) in 1851 is considered a turning point of scientific development in Iranian history.⁹ Ringer (2001) describes the reasoning behind the founding of this institution: “Amir Kabir [the founder] believed that the policy followed by Abbas Mirza and Mohammad Shah [r. 1834–1848] of recruiting foreign military advisors and of dispatching select groups of students abroad was insufficient to train the large number of students required to implement substantive reform measures” (70). In effect, the institution was founded with the primary objective of training sufficient numbers of Iranians as experts in science, who were in return expected to help strengthen royal power and the state. The curriculum initially consisted of military sciences, math and physics, medicine, and mining. Military drills, although not exclusive to *Dār al-Funūn* students, also regularly took place. Enrollment in the opening year was 100, and this number reached 387 in 1891 (Menashri 1982, 55). This institution greatly contributed to a new development in scientific discourses in Iran.

Importantly, the *Dār al-Funūn* introduced to Iran the institutionalization of a new educational system. Based on a European school model learned by way of Russia and the Ottoman Empire, new requirements and standards were stipulated in ways that were radically different from those in the *madreseh* system.¹⁰ Standardized exams—which all students without exception were to complete—produced the disciplinary technologies by which the students were objectified, distributed, and normalized (Foucault 1977). Although the *Dār al-Funūn* was not designed for primary education, this transformation heralded the model of modern mass educational institutions and programs to come. The exams culminated in the diplomas of the

institution,¹¹ which were substantially different from the qualifications obtained through the *madraseh* system, thereby furthering the dichotomy between two differing bodies of knowledge (Ringer 2001). This new institutionalization also reinforced a new power relationship that had started with the military reforms. Modern western knowledge, such as that of medicine and chemistry, was required by law to be duly practiced by appropriate individuals, who must held a diploma in their respective subject from either a European institution or the *Dār al-Funūn*. In contrast, there had been no overarching rules or “examination” for the certification processes for becoming a medical expert prior to this institutionalization.

Gradually, especially from 1870 onward, the realms of each corps of knowledge were beginning to be marked off; scientific knowledge was deemed valuable especially for utilitarian purposes, whereas religiously-based indigenous knowledge was increasingly restricted to a moral system of everyday life among Iranians (Ringer 2001, 243). By the late 1920s, science had become the predominant mode of inquiry in the fields of astronomy and medicine, as concluded independently by Arjomand (1997) and Ebrahaminejad (2002). This epistemological differentiation continues up to the present day in Iran.¹²

New Objects and Scientific Management: Hygiene Programs

The prestige of science was also steadily growing outside the realms of military and education; the state attempted to employ scientific knowledge and management to systematically tackle the epidemic diseases that were erupting in the mid-nineteenth century. This period marked an important transition to a new governance of power. With regard to “the population” in Iran, knowledge manifested as statistics (*āmār*), began to be collected and generated.¹³ These statistics then became a primary source of reference from which to design effective preventive measures, such as quarantine and vaccination. Initially, these preventive measures were primarily

organized and spearheaded by councils in which European “doctors” occupied directorship positions. Gradually, these leadership roles were shifted towards and organized through Iranian elites, who had either learned the necessary knowledge and management skills for public hygiene under their European predecessors or had had an opportunity to acquire the knowledge and skills in European institutions or the *Dār al-Funūn*. Thus, by adopting new preventive measures organized through scientific knowledge into newly established institutions, Iranians voluntarily came to engage in scientific practices, thereby furthering the status of science in the country.

In response to the 1868 cholera eruption in Tehran, the *Majles-i Hefz al-Şehhâ* (Sanitary Board or the Society for Maintaining Good Health) was formed under the directorship of Dr. Tholozan. He wrote a pamphlet entitled “How To Diagnose Cholera and What To Do.” Dr. Polak, one of Nasir al-Din Shah’s personal physicians, was reportedly satisfied with its intended outcomes (Floor 2004, 205). Furthermore, Floor (2004) notes that, without being deterred by the lack of consistent governmental assistance, Tholozan put proposals forward to the Shah concerning public hygiene. These proposals included the establishment of a Public Health Council, construction of public latrines and sewers, renovation of public baths, and the appointment of public health doctors in the main towns of Iran, among others (206). Importantly, especially from the viewpoint of a power/knowledge mechanism, these projects required ruling authorities to gather knowledge about the population. Although these proposals were not fully implemented until the 1950s, they nonetheless laid the foundations for the public hygiene programs that followed.

At the beginning of the twentieth century, the government increasingly initiated quarantine programs as systematic preventive measures against epidemics like cholera and the plague, especially in the border regions of the country. Although these programs were mostly

staffed and supervised by Europeans or their delegates (e.g., Indians), Iranians also gained experience in quarantine management.¹⁴ Furthermore, effectively implementing such preventive measures required more elaborate statistics, coordination, and organization. By the beginning of the twentieth century, for example, numerous categories were generated and investigated in attempts to render the population visible, calculable, and manageable; new categories included mortality rates, occupations, marriage status, population density, religion, and household size (Shahri 1378 [1999]). New technologies, such as the telegraph, enhanced the ways local quarantine offices communicated with each other (Floor 2004). Thus, it was the state's concern for the health of its population that led them to collect more particular data about it, thereby reconfiguring power relations through which the status of science was heightened.

The establishment of the *Dār al-Funūn* was a critical moment with regard to the genealogies of science in Iran. It not only formally introduced and instituted Western scientific knowledge in Iran, but also produced a group of Iranian students who later, as instructors or policy makers, disseminated science to a larger audience, a process of modernity that Chakrabarty (2000) calls “provincialization.” The concept of population was gradually developed as the state authority initiated its systematic efforts to contain public hygiene problems caused by such epidemics as cholera. It was around the end of the nineteenth century that this newly introduced scientific knowledge and rationality were further employed to gather statistics about population, thereby slowly augmenting the status of science in Iran. Against this background, nationalist sentiments spurred, instead of deterring, its prestige.¹⁵ However, it was not until after Reza Shah's reign that these scientific developments took a more prominent role in Iran.

Reza Shah: Bureaucracy and Increasing Use of Scientific Management

While the status of science was being heightened at the turn of the twentieth century,¹⁶ Reza Shah (r. 1925–1941) further pursued and utilized scientific rationality to increase the accuracy and efficiency of state management. With the wide application of this rationality in multifarious fields, he was able to establish a large-scale bureaucratic state in a manner unprecedented in Iranian history. Consequently, bureaucratization spread, especially in urban areas, and conditioned particular power structures in which scientific knowledge was systematically subsumed into disciplinary practices. During this period, Reza Shah also assiduously promoted a nationalism that had roots in pre-Islamic Iran.

Reza Shah's reform of the army well represents the way that bureaucracy transformed the structure of power relations in Iran. As a central project of the regime, conscription was introduced to Iran in 1925. With this conscription law, the issuing of birth certificates and the use of mandatory family names were enforced for the first time in Iranian history, serving as instruments through which to gain and systematize knowledge about the Iranian population and subject all Iranians to the uniform rules of bureaucracy. Conscription required all able-bodied males over 21 years of age to enroll in active service for two years and in the reserves for another four years. By the 1930s, a culture of athletic prowess among men, which was instituted based on certain physiological knowledge and physical training methods from Germany, was celebrated as a hallmark of Iranians (Matthee 1993). Through conscription programs, Reza Shah was able to draw peasantry, tribes, and urbanities from throughout Iran to the army. He gradually incorporated previously tribal-based groups into some 90,000 full-time government personnel employed in ten civilian ministries (Abrahamian 2008). This trend of state expansion continued through the reign of Reza Shah's son, Mohammad Reza Shah. By 1975, the state employed more

than 304,000 civil servants as well as one million blue- and white-collar workers (Abrahamian 2008, 126). Through these processes, increasing numbers of Iranians were made into objects to be classified, examined, trained, and manipulated.

In addition to reform of the army, a number of new state-sponsored institutions and programs, in which bureaucracy played a central role and prompted further governmentality, were inaugurated during the reign of Reza Shah: state-sponsored schooling systems, the Street Widening Act, modern prisons and hospitals, the *Farhangestān* (Language Institute of the Persian Language), the institutionalization of a standard Persian calendar and language, and construction of modern parks, among others.

Scientific management of the economy¹⁷ was another important development during this period, especially in the 1930s; it introduced to Iran new techniques with which to efficiently manage and finance the state. As Iran's economy and its political programs diversified, they began to require expertise from various fields to be cost-beneficial. The 1930s were a decade in which Iran embarked on a national economy or, as Clawson (1993) states, in which "production from one part of the country was more likely to be sold elsewhere inside Iran than abroad" (235). Iran also experienced a rapid expansion in modern-style industries and an increase in exports and agricultural output (Clawson 1993). Furthermore, Clawson and Floor show that technological innovations significantly helped to lower transportation costs throughout the 1940s. This, in turn, enabled Iran to produce agricultural export items, such as cotton, wool, and raisins, more effectively and stay competitive in the international market. In order to financially benefit from these international transactions, the Iranian government attempted to pursue methods that instituted efficiency and productivity.

It was under these circumstances that scientific management of the body, in the form of disciplinary practices, was incorporated into industrial sectors and other fields. The use of disciplinary practices outside the realm of the military¹⁸ began to noticeably grow in Iran from the late 1920s onward. Weber (1946) describes one such practice: “organizational discipline in the factory is founded upon a completely rational basis. With the help of appropriate methods of measurement, the optimum profitability of the individual worker is calculated like that of any material means of production” (261). Schayegh (2009) notes a critique mounted against an employee who lacked discipline at work: “his work [would] be carried out better if it were ordered and regulated...It is a lack of order at work that tires people, and it is the same lack of order at work and in personal affairs that renders life’s minutes and hours useless and destroys them” (quoted in Schayegh 100). A disciplinary scheme, specifically a structured daily schedule, was presented as a solution to the problem of unproductive workers and came to play a central role in “correcting” their attitudes and behaviors at work (Schayegh 2009).

The concept of leisure in contrast to that of work also emerged around this time with the assumption that the “correct” use of one’s leisure time would lead to productive work. According to Schayegh, time became profoundly quantifiable in ways that enabled state officials or employers to rationally calculate and create optimal working conditions for optimal productivity (2009).¹⁹ Thus, scientific management, embodied as disciplinary practices, provided urban Iranian workers with a rational scheme based on the calculation of “the optimum profitability of the individual worker.” At work, employees were expected to use time in the most efficient way to be most productive at their assigned task.

Development Plans Before the Islamic Revolution (1946–1972)

The trend of focusing on economic productivity and efficiency continued through the 1950s and onward. In the post-Reza Shah period, under Mosaddeq (1951–1953), industrial activities that entailed scientific management of the work forces gradually grew in size and scale as domestic private capital started flowing into industrial sectors in Iran (Rahnema 1995). These industrial efforts, however, came to a temporary halt with an oil embargo by the British, which severely cut Iran's oil revenue.

Systematic industrialization resumed after Mohammad Reza Shah was returned to the throne by a U.S and British coup in 1953. For the first time he promulgated Iran's long-term comprehensive development program, called the Plan of Development (*Barnāmeḥ-i 'Omrānī*) or Seven-Year Plan, in which the government sketched out the ways that Iran's visions of social and economic development would be realized over the coming years. The Plan's agenda pushed the path that Reza Shah had initiated further by including efficiency and productivity within management. The Plan required elaborate investigations and studies concerning available resources, facilities, and practical procedures, for all of which scientific analyses and management were key. Some of the major objectives in the Plan included increasing efficiency in production, expanding exports, providing the people with basic necessities, developing agriculture and oil industries, improving public health, and so on. A deputy to the *majles* and professor at the University of Tehran, who also served on the board of the Plan Organization (*Sāzamān-i Barnāmeḥ*), revealed a view of the Plan that points to the essential role of science in this program:

The Seven-Year Development Plan is Iran's first attempt at an economic and social program drawn up as a result of scientific investigation, ratified by the legislature....Of all the evils in Iran, poverty is certainly the greatest. Yet the country, with proper planning of its resources and potentialities, should be able not only to

feed and clothe its 17 million people but produce quantities of products for the world market.²⁰

It can be observed in this statement and others²¹ that the well-being of the population, a major issue, was viewed to be contingent on proper management of resources elucidated through scientific investigations. Thus, continuing on Reza Shah's social and economic policies, the knowledge associated with particular objects, such as oil fields, irrigation lands, and public health-related diseases, was further refined in relation to the population. Statistics concerning the population, while not the most prioritized item in the Plan, were also targeted in the policy agenda, revealing that the population had become an essential component of national planning.

The trend of pursuing efficiency and productivity continued through the 1960s. In the drafts of the second and third Seven-Year Plans, a similar prospect in regard to Iran's economic and social development is laid out. Export activities in oil and agricultural industries, with an emphasis on high productivity, were viewed to be a primary source of state revenue. Based on this revenue, the government sought to improve the general condition of citizens' lives, as well as social conditions. Additionally, in their attempts to promote efficient planning and policy implementations, the government underscored the roles of experts in their respective fields; for example, engineers (*mohandesīn*) assumed a responsibility to consult on public engineering projects. Given that Iran was beginning to undertake multiple economic activities at that time, the roles of these experts became increasingly influential and prestigious (Rahnema 1995). The Plans not only helped further Mohammad Reza Shah's socio-economic agenda but also contributed to the ways in which science and scientific management became more distinct and prominent in Iran, thus presenting scientific discourses to the Iranian public in a particular manner.²²

Emergence of the New Field, “the Environment: (Fourth and Fifth Development Plans)

Among the many scientific fields, “the environment” has become particularly prestigious in contemporary Iran for two main reasons: Firstly, its management was of crucial importance in shaping the health of citizens. Secondly, this field began to involve diverse realms from within the political economy of the country. This gave rise to a gradual differentiation of knowledge concerning the environment over time, revealing Iran’s increasing concern for this field.

A rudimentary form of this field is found in the fourth Development Plan of 1347 (1968), indicating that an interest in the “the environment” as a site of knowledge production emerged around this time. This interest arose in relation to economic activities. In the draft, industrial activities remained a top priority for Iran’s economy, but some cautious considerations were crafted onto their guidelines. Here, the Plan attempted to frame Iran’s economic efforts from a broader standpoint by stating that “for the first time, this program looks at the issue of regional planning as one national process, and the organization of this regional planning should depend on natural capacity and logical consideration that is attentive to future projects” (*Barnāmeḥ-i ‘Omrānī* 1347). Instead of organizing regional activities independently within the country, this draft suggests that development activities be planned as a comprehensive process, including every region of Iran in the analyses. Moreover, science was given a further role of providing the necessary information on related issues and facilitating efficient management of the state as a whole. Thus, we observe that, while the utilization of science and scientific management were continually valued in Iran, the object of their interests was gradually growing and shifting during this period.

By the early 1970s, in the midst of Iran’s economic boom, it became clear that a new field, “the environment” was emerging as an object to be researched, identified, and managed in

Iran; a new set of objects was steadily being thought about in relation to governance. This was a time when the government's oil revenue quadrupled and industrial expansion took place with aid from multinational corporations. A major characteristic of the industrial policy during this period was the de-centralization of industry outside of the capital, resulting in industrial production in such places as Azerbaijan, Isfahan, and Khuzestan (Rahnema 1995). Against such a background, in 1971, the Department of the Environment (DOE) (*Sāzmān-i Hefāzat-i Mohīṭ-i Zīst*), which initially started as a watchdog organization against poaching, was reorganized as an environmental institution for monitoring industrial activities and projects. Trained in nature studies and recognized by some as the father of environmental studies in Iran, Eskandar Firuz was the first head of the DOE and remained the head until a year before the Islamic Revolution. Under his directorship, new environmental practices were initiated; these included environmental protection laws, the creation of national parks, and the establishment of protected areas for animals and natural resources. On the same year as the DOE's reorganization, Iran hosted an international environmental convention in Ramsar, during which a treaty concerning the conservation of wetlands was signed. Furthermore, environmental issues were addressed in tandem with socio-economic development in the country for the first time in the fifth Development Plan of 1352 (1973). This series of events thus reflected that an important change was occurring with regard to the ways Iranians comprehended the material environment.

As discourses on the environment disseminated further in Iranian society, science played more of a role. Ecological science, a scientific approach to the environment, was introduced to the Plan for the first time. An "ecological approach" based on science was presented to investigate the "ecosystems" of Iran and to restore and protect them from what were regarded as destructive forces. According to the Plan, ecological science concerned the assessment of

environmental quality (e.g. water, air, and soil), the identification and examination of pollutants, and the preservation of natural resources, among other things. These objects of studies are very similar to those found in Western ecological science, which began to develop in the late 1960s, especially after the publication of Rachel Carson's *Silent Spring*.²³ The Plan also stated that world-class scientific research should be employed to these ends. Thus, the realm of this new field, the environment, was explicitly delineated through scientific knowledge, field experts, and related institutions. Scientific management was also considered key to the successful implementation of these policy guidelines; it is stated that environmental issues are a result of a the mixture of Iran's population growth, industrialization, and economic expansion that necessitated the extensive use of natural resources.

However, the scope of this new research concerning the environment was more narrowly framed and practiced at that time than in later times. Only the DOE and a handful of other scientific centers were instructed to undertake tasks relating to the environment. Moreover, the total number of Iranian scientists (and engineers) at that time was rather small (Rahnema 1995). Although education was also seen as a means to disseminate and raise environmental awareness,²⁴ the effectiveness of education systems in general was hardly ideal (Menashri 1982). In short, while science remained important in management, the degree to which the environment was incorporated into this scientific management was still limited in the 1970s.

Islamization of Science (the Cultural Revolution)

The Islamic Revolution of 1979 brought a major change in the ways in which science and, therefore, environmental sciences were practiced. The Cultural Revolution resulted in a 3-year closure of Iranian universities between 1980 and 1983, during which time scientific activities barely continued except at a few research institutions (Khosrokhavar 2004a; Lotfalian

2009). To organize an educational system that served the ideals of the new Islamic regime, the government established the Supreme Office of the Cultural Revolution where *'ulamā* (religious scholars) played a central role. In prescribing school curricula for elementary through higher education, they mapped out what subjects should and should not be taught and researched at the institutions. The integration of universities into the religious school (*huūzeh-i 'ilmīeh*) system was the grand vision toward which these efforts were pointed (Golnar 1997). Upon the reopening of the universities in Iran, science, including the human sciences and natural sciences, was judged to be an impediment to the purpose of education, encouraging views and actions based on Islamic scriptural tradition; the human sciences were labeled as anti-Islamic (*zēdd-i Islām*), whereas the natural sciences were referred to as useless (*bīmaşraf*).²⁵

However, in the midst of the prolonged war against Iraq (1980–1988), the regime began to realize a decline in the country's techno-scientific standing, and ensuing inconveniences were seen both on and off the battlefields. Under these circumstances, the regime felt compelled to readjust their educational policies and vision in regard to science. It was not until the first Rafsanjani presidency in the early 1990s that Iran's scientific standings were reversed (Khosrokhavar 2004a, 2004b). The restructuring of science programs in major universities and research centers in Iran produced an increasing number of local experts in such fields as physics, mathematics, and chemistry, thus contributing to the restoration of a scientific tradition in the country (Khosrokhavar 2004a). It was in this context in 1989 that, along with the revival of a scientific community, the first five-year Plan after the Islamic Revolution was incorporated and put forth as a guideline for Iran's socio-economic development (Gheissari and Nasr 2006).

The Cultural Revolution affected the different branches of science in various ways. Although local scientists exhibited a wide range of rationales to pursue their own work after the

1990s,²⁶ their research achievements in the natural sciences helped lay the groundwork for the growing prestige of the natural sciences in Iran.²⁷ On the other hand, the human sciences have been continually viewed with suspicion since the Cultural Revolution, because they, as an imported discipline from the West, might mislead students or cause them to digress from the correct path prescribed by (an official reading of) Islam.²⁸

Considering that the field of the environment was associated with that of natural science prior to the revolution and judging from the content of Development Plans before and after the revolution, I argue that there are continuities, rather than discontinuities, concerning the ways in which the field of the environment has been developed in the Iranian context.

Continuities after the Cultural Revolution (Rafsanjani and Beyond)

The trend of post-revolution five-year plans, the first of which was published in 1989, reveals that the realm of the environment has been noticeably diversified in the Iranian context. Its roles have been broadened and more clearly defined, and science is increasingly interrelated with the field of the environment. Furthermore, this trend is considered an indication of Iran's (1) increasing attention to the environment, (2) production of new knowledge concerning the environment, and (3) intentions to efficiently govern the environment for the well-being of the population and society. Unlike the human sciences, the field of the environment is not directly a topic of Islamization, and I argue that the development of this field after the revolution is a continuation of the project that was temporarily halted during the turmoil of the revolutionary period. This section demonstrates how the field of the environment has been elaborated since the revolution and how environmental issues that are seen as problematic by the Iranian public have shifted. I argue that the environment, while contributing to the prestige of science, has become a key field in operating the polity of post-revolutionary Iran.

The first five-year Plan after the Islamic Revolution was unveiled under Rafsanjani in 1989, a year after the end of the Iran-Iraq war. Large-scale investment in heavy industries and infrastructure was promoted as a way to revitalize Iran's devastated economy (Arjomand 2009; Gheissari and Nasr 2006). The environmental agenda reflected this situation, as the DOE was made responsible to keep the quality of industrial facilities and equipment in check. For example, for every one thousand product sales, factories were scrutinized by the DOE in regard to controlling the pollution level, compensating for environmental loss, and creating green spaces. Thus, the Plan introduced a new dimension to the management of the environment, for which the DOE played a leading role. In addition, the DOE was stipulated to expand their responsibilities to the realm of the economy. Given the economic components involved in these activities, they began to partially share responsibilities with the Ministry of Economic Affairs and Finance (*Vezārat-i Umūr-i Iqteṣādī va Dārāyī*), an organization that steers Iran's economic and financial affairs both domestically and overseas. The significance of this new connection is clear in that, while earlier environmental activities were ambiguously related to certain aspects of the economy, this Plan officially endorsed a new perspective wherein the environment was considered not only a separate realm from the social, but also a field that is more broadly interrelated with other realms. One sign of the importance placed on the protection of the environment and natural resources is the fact that it was illustratively promoted in the Plan as something contributing to the betterment of public customs.

The trend of the elaboration of the environmental field was furthered under the second five-year Plan (1995) and beyond. Many of my informants mentioned that it was during this period that ordinary Iranians became attentive to environmental issues. By this time, the DOE was under the direct supervision of the government cabinet.²⁹ Ma' sumeh Ebtekar, the first

female to hold a cabinet position in the Islamic Republic, took the lead in environmental activities.³⁰ The political atmosphere during the Khatami era (especially in his first term), which promoted the notion of civil society, also helped to develop discourses about the environment in Iran; in addition to government initiatives, grass roots–based environmental NGOs also flourished and attempted to raise environmental awareness among citizens (Foltz 2001).

It is notable that in the second Plan (1995) the sections relating to the environment are more clearly defined and fleshed out. For example, the roles of the DOE are described more specifically than in the previous Plan: “Before the implementation of large industrial projects, research studies concerning environmental feasibility and locality—based on the models approved by the DOE council—must be conducted first” (*Barnāmeḥ-i Tūse‘eh* 1374). In contrast to the previous draft in which the responsibilities of the DOE were somewhat abstractly laid out, this Plan introduced a concrete procedure by which to monitor industrial activities. The realm of the environment was more clearly delineated through employing such concepts as environmental feasibility and locality. The descriptions in regard to the environment further signaled that the field had become a “calculable” and “manageable” object of scientific research; for the first time, the concept of “sustainable development” (*tūse‘eh-i pāydār*) was presented in the text. It referred to a general notion wherein development projects could continue within the constraints allowed by an allegedly self-resilient environmental capacity.

Year by year, the importance placed on the environment increased further; by the time of 1379 (2000), the publication year of the third Plan, one whole chapter was reserved for the environment, under the title “Environmental Policies” (*siāsat ‘hā-i moḥīt-i zīst*). The Plan reveals, by setting down new public regulations concerning environmental issues, that its field was enlarged to include the mundane realms of ordinary citizens, not just those of experts. From an

environmental perspective, personal vehicles, especially cars and motorcycles—the main means to get around cities in Iran—are now subject to particular emission standards by which gas emission levels of cities are regulated. Those who failed to abide by these standards, or “those who are creating pollutants in the air,” (*Barnāmeḥ-i Tūse ‘eh* 1379) as they described, were charged with fines. The direct involvement of citizens in such agendas seems to be a turning point in the environmental policies of Iran in two important ways: citizens, not just the DOE and related organizations, became responsible for the care the environment, and discourses on the environment and environmental stewardship became more prominent in Iran.

At the same time, the field of the environment continued to expand and change, involving greater numbers of public institutions. For example, in order to decrease air pollution in Tehran, the third Plan proposed that “all of the ministries, institutions, governmental companies, and facilities that use public funds are obliged to provide a measure to mend the mechanical deficiencies which are viewed as contributing to air pollution” (*Barnāmeḥ-i Tūse ‘eh* 1379). In addition, connoting their serious commitment to the environmental cause, the government for the first time spelled out the budgets for the DOE to manage these mechanical issues. They also began to systematically embark on an environmental education policy geared toward a wider public by utilizing national media (*ṣedā ū ṣīmā*) outlets and information systems. Indeed, these efforts in the decade of the 2000s appear to have had an effect on the citizens. In response to my question as to how and when they became aware of and familiar with environmental issues, many informants noted that, in the early 2000s, they started hearing on the radio and TV about the destruction of forests and the pollution of the air and water.

It was also around this time that environmental concerns became a critical subject matter that was taken into account in various aspects and stages of urban planning. Continuing

population growth and urban immigration after the Iran-Iraq war gave rise to overpopulation in major cities of Iran (Amuzegar 1992). In order to accommodate an ever-growing population, the Iranian government was forced to initiate housing projects. However, these projects brought about environmental problems relating to the air, water, and soil.³¹ Consequently, the DOE was instructed to work and consult with the Ministry of Housing and Urban Development (*Vezārat-i Maskan va Shahrāsāzī*)³² as well as the Ministry of Energy (*Vezārat-i Nīrū*)—whose primary objectives concern the assurance of water, roads, and sanitation facilities, an indication that the management of the environment is officially appropriating that of the quotidian social realms.

The genealogies of the environment in Iran show that this field has continually involved various disciplinary grounds over time and has produced relevant knowledge. With a growing network of pertinent knowledge, the field now markedly dictates the ways in which city regulations are formulated and implemented. This is also a sign that the environment has been particularly problematized in recent years in Iranian society and that the efforts to govern this field have been actively pursued.

Practices of the Environment: Park Creation in Tehran

While the field of the environment evolves through a variety of research subjects that are particular to times and places in an Iranian context, this analysis suggests that it has evolved into an identifiable and manageable object that is now an explicit focus of control.³³ To reflect these genealogies, scientific management of the environment has lately been conceptualized and practiced as a key urban planning project in Iran. Here, I draw on a mainstream practice of the environment in Tehran—park projects or management of green space (*faḏā-yi sabz*)—to demonstrate how the notion of the environment is incorporated into urban projects and how citizens experience these projects.

In recent years, management of green space has been one of the primary concerns in the city planning of Tehran. In the capital, one municipal branch called the Tehran Parks and Green Space Organization (*Sāzmān-i Pārk'hā va Faḏā-yi Sabz-i Shahr-i Tehrān*) is responsible for the maintenance of the city environment, including the management and creation of parks.

According to this branch, the creation of parks and green space is of particular significance in light of the current city milieu in which the citizens are increasingly constricted to small spaces (*mohīṭ'hā-yi kūchek*) due to population increases. Furthermore, they believe that population increase and its smothering effects have made it necessary for citizens to decompress themselves by visiting parks or green space. Parks are expected to alleviate the mental and physiological conditions of citizens, many of whom the municipality considers to be experiencing fatigue from a city lifestyle.³⁴ It is from this point of view that the municipality calls parks the symbols of hygiene and health (*sambūl-i behdāsht va salāmatī*) or the life of cities (*hayāt-i shahr'hā*).

In these schemes, parks or green spaces are viewed as a space through which environmental problems are addressed and through which a suitable city environment is built. In order to effectively create a suitable environment, the municipality carefully examines the optimal conditions for park creation in the city.³⁵ Here, parks are part of a city environmental scheme according to which proper management of the environment is considered to lead to a sustainable way of city life. For example, the planners take into account such factors as the appropriateness of park location, park design, sidewalk layout, nearby traffic conditions, the availability of parking space, park equipment, types of trees to be planted, tree trimming, the seasonal variation of the local weather, and neighborhood conditions and ambience.³⁶ The benefits of constructing green space are also discussed from various angles: the creation of an “empty” (*khalvat*), quiet (*ārām*) space, the reduction of dust dispersion that comes from

neighboring countries, a decrease in the level of traffic noise, and the improvement of pollution caused by sewage. In all these considerations, parks are regarded as public space that helps constitute a healthy environment and that can be properly managed under a municipal environmental plan. A list of these considerations for park construction also makes it clear that their management involves a *mélange* of subjects that requires the coordination of various organizations.³⁷

Being coupled with local physical and mental health, the atmosphere of parks is also considered vital in urban planning. This emphasis suggests that management of the environment would even encompass an additional field of science: the science of human behavior. Activities inside parks, such as walking and resting under trees, are assumed to bring mental and physiological comfort to citizens. The creation of a hospitable park atmosphere is also mentioned as a crucial scheme of urban planning from the aesthetic and optical viewpoints.³⁸ For instance, the park organization states that appropriate lighting at night should be engineered in such a manner that park visitors do not feel fearful or tired. It is also suggested that the construction of large objects, such as high walls or shields, which tend to attract violence, must be avoided. In order to build a tranquil environment (*moḥīt-i ārām*), new techniques, such as planting flowers, installing attractive fountains, and changing the color of lighting from white to yellow, have been introduced and encouraged. These techniques to create a healthy park atmosphere are presented within a larger scheme that deals with the environment. These planning schemes thus illustrate the ways in which the environment, while incorporating more experts, knowledge, and institutions, has become a scientific object of research in Tehran.

Mirroring the efforts of the city, Tehrani citizens began to take up these discourses of the environment; my fieldwork shows that many urban Iranians, including park users, environmental

researchers and students, and environmental NGOs, are adopting a language of the environment, ecological science. For example, parks, especially those that create urban green space, are considered important in that they help soothe the stress experienced in a hectic city life and thereby improve health conditions. Interviews with park visitors reveal that parks provide them with an apt space (*fazā*) in which their spirit (*rūh*) experiences tranquility (*ārāmesh*). For instance, a 23-year-old male shared his view on parks and health as follows: “I come here [to the park] by myself, with friends, or my family... People can sit and feel comfortable for an hour in the park without the noises and smoke of cars in the city. With this environment, I am sure that your exhaustion will turn into tranquility.” Another informant, a 32-year-old female, expressed the positive role parks play in the midst of city life: “People get tired of city life, and they can help themselves with things that will make them feel delighted and tranquil. They escape city life and direct it into natural life and nature.... We can use nature in such a manner that we obtain tranquility and a good energy derived from it, which also brings delight to us.” With these kinds of ideas in mind, many Iranians spend evenings with their friends and family in the urban parks (Adelkhah 2000). Thus, urban parks are associated with a green environment, in relation to which what is healthy and unhealthy is defined and in relation to which social lives are organized and experienced.

Conclusion

The research discussed in this paper began by looking at modern Iran where scientific discourses and practices percolate throughout the society from politics and the economy, to mundane cultural practices of the citizens. Distinct sets of knowledge with the status of science provide much of the frameworks, vocabularies, and methodologies through which social and natural forms became managed.

The present work critically examined how science has been developed and practiced in the contexts of Iran. My argument is that management of differing objects—objects that state authorities desired to identify, organize, and manage—became possible through science and that this practicality has been essential in the development of discourses concerning science in the country. My analyses show that science was extensively utilized for the practices of governmentality, especially during the late Qajar and early Pahlavi periods when the population had not yet been fully investigated and identified as an object of science. Toward the end of the Pahlavi dynasty in the early 1970s, a new object of scientific research, the environment, emerged; the governance of this field has been viewed as increasingly crucial in recent years, as Iran saw itself facing environmental problems. The steady growth and burgeoning public recognition of this field is both a testimony and a contribution to the heightening status of science in the country.

While examinations of discontinuities after the Islamic Revolution remain mainstream in Iranian studies, the present genealogical study sheds light on continuities that have shaped current scientific discourses and practices in contemporary Iran. It helps us understand how Iranians have viewed and practiced science since before and after the revolution, thus providing insight into the continuously evolving relationship between Iranian governance and the practice of science.

Notes

¹ In its most recent five-year development program of 1390 (2011), the Supreme Office of the Cultural Revolution (*Dabīrkhānah-i Shurāy-i 'ālī-i Inqelāb-i Farhangī*) outlines its future prospects and directions concerning science and technology. From its standpoint, progress (*pīshraft*) in science and technology is one of the most important foundations for the development of the country in the cultural, social, and economic realms. There is a subtle discussion about the ways in which science is contingently received within Islamic communities. See Lotfalian (2004).

² I refer to the term, genealogy, to mean the critical history of the present. For further details of this concept, see Foucault (1984) and Dreyfus and Rabinow (1983).

³ I consider the definition of scientific management and rationality in the sense that Weber (1946) described it in *Science as a Vocation*.

⁴ Foucault (1994) elaborates on this relationship through the concept of governmentality.

⁵ Scholars, such as Algar (1969), Arjomand (1984), and Bayat (1982), discuss the relationship between the state and 'ulamā during the Qajar period. Neither the state nor the 'ulamā was able to claim control over each other. Lack of cohesion among the 'ulamā during the Qajar era is taken to be an indication of their inability to claim authority over Western medical knowledge (Ebrahaminejad 2002).

⁶ Iran conceded some part of its northwestern territories, what is now known to be Armenia, Azerbaijan, and Georgia.

⁷ Loss of territories, for Iranians, means more than a mere land deprivation. The Iranian land (*īrān zamīn*), represented as homeland (*vaṭan*) in the late nineteenth century, denotes the mystic inseparability of the land and the Iranians to which the land belongs. See Kashani-Sabet's (1999), Tavakoli-Targhi's (2001), and Najmabadi's (2005) discussions on *vaṭan* (homeland) in light of nationalist sentiments.

⁸ See Mitchell's (1988) work on the similar processes in Egypt.

⁹ See Arjomand (1997), Menashri (1982), and Ringer (2001) for detailed discussions about this point.

¹⁰ Messick (1993) provides meticulous accounts on the processes by which modern forms of power were introduced to Yemeni educational system.

¹¹ Weber (1946) discusses the various implications of educational certificates in modern society (199–200).

¹² Ebrahaminejad (2002) points to the Islamic Republic's recent attempts to revive some Islamic perspectives on medical fields. He argues that, despite these efforts, science is still a dominant mode of prescription in the medical field. Loeffler (2007) provides ethnographic accounts on how medicine is practiced in contemporary Iran.

¹³ See Foucault's idea of governmentality (1994).

¹⁴ In 1928, Reza Shah took full control over the quarantine system in the Persian Gulf from the British (Floor 2004, 211).

¹⁵ The loss of Iran's territories was at stake among Iranians, and scientific geography played an essential role not only in delineating the territories but also in encouraging a particular understanding of the ways in which geographical conditions were measured, assessed, and regulated (Kashani-Sabet 1999).

¹⁶ Matthee (1993) notes that more students were sent to Europe from 1921 through 1931. The state scholarship funds were available for the study of scientific disciplines, such as engineering and military affairs and security.

¹⁷ Polanyi's discussions (1944) on the market and rationality are suggestive in understanding the changes brought about by Iran's participation in the world economy.

¹⁸ Weber argues that disciplinary practices started in the military, followed by other organizations, such as factories. Spending the considerable portions of the state revenues on the military, Reza Shah and later Mohammad Reza Shah successfully expanded military, which also entailed discipline.

¹⁹ For further discussion on changing conceptions of time and modernity, see Koselleck (2004).

²⁰ Rezazadeh and Lotz (1950).

²¹ Ibid.

²² As will be shown shortly, these scientific discourses were rather elaborated through "Western" experts of the United States and its allies. Iran at this time was considered one of their most important allies in the region.

Consequently, a variety of technical assistance was prepared and provided by the United States, a trend that Lotfalian (2004) refers to as the “utilitarian” attitude.

²³ This book was translated into Persian and published as *Bahār-i Khāmūsh* in 1358 (1979) from the Ferdowsi University of Mashhad Press.

²⁴ For example, the University of the Environment (*Dāneshgāh-i Moḥīt-i Zīst*) was founded in 1972 for this purpose.

²⁵ They classified science into five categories: human sciences (*‘olūm-i insānī*), agriculture (*keshāvarzī*), engineering and technology (*mohandesī va teknuluzhī*), medicine (*pezeshkī*), and basic science (*‘olūm-i pāyeh*).

²⁶ See Khosrokhavar (2004b) for detailed debates.

²⁷ For further discussions on this topic, see Lotfalian (2004, 2009).

²⁸ Ayatollah Khamenei remarked in 2009 that many of the two million Iranian students who study the human sciences are based themselves on materialism and that this is resulting in their disbelief and doubts about the divine teachings and Islam.

²⁹ DOE webpage: <http://www.doe.ir/Portal/Home/Default.aspx?CategoryID=fb362077-4918-490b-806d-3851170a22eb>.

³⁰ She was (re)appointed as the head of the DOE under the Rouhani administration.

³¹ The recent Tehran housing projects draw attention from different political and environmental groups.

³² The Ministry of Housing and Urban Development was merged in 2011 into the Ministry of Road and Urban Development (*Vezārat-i Rāh’ va Shahrāsāzī-yi Īrān*). This can be read as an indication that the environmental schemes are further integrated into urban life of citizens.

³³ Latour (2004) critically examines the ways the field of “ecology” has become an object of science based on the particular western cultural traditions.

³⁴ *Ahamīyat-i Faẓā-yi Sabz va T’āṣīr-i Ān bar Ravān-i Insān* (The Importance of Green Space and the Mental Effect on the Human)

³⁵ Rabinow (1989) explores historical development of urbanism in France in light of governmentality.

³⁶ *Faẓā-yi Sabz va Trāfīk* (Green Space and Traffic)

³⁷ *Īmanī dar Pārkhā-yi Shahrī* (Security in City Parks)

³⁸ *Ahamīyat-i Faẓā-yi Sabz va T’āṣīr-i Ān bar Ravān-i Insān* (The Importance of Green Space and the Mental Effect on the Human)

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 Supreme Office of the Cultural Revolution (*Dabīrkhānah-i Shurāy-i ‘ālī-i Inqelāb-i Farhangī*)
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APPENDIX B**CONCEPTIONS OF NATURE IN IRAN:
SCIENCE, NATIONALISM, AND HETEROGLOSSIA**

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CONCEPTIONS OF NATURE IN IRAN Science, Nationalism, and Heteroglossia

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KEY WORDS: Iran, Environmental awareness, Conceptions of nature, Science, Nationhood, Heteroglossia, Ethnography

In the midst of mounting environmental problems in urban Iran, the status of science is becoming more prestigious among various segments of the population. Consequently, debates and discussions about the environment are increasingly taking place, especially among Iranian environmentalists. Are environmental problems in Iran addressed and understood synonymously as in the West, where scientific rationality is expected to provide objective explanations about environmental problems and their solutions? Viewing conceptions of nature as a key investigation site, this study explores distinctive manners in which discourses and practices of the environment unfold in Iran. I argue that, while the scientific-ecological conception of nature is the mainstream framework assumed in environment-related research and programs, another conception of nature—related to Iranian nationhood—also makes key contributions to the environmentalists’ understandings of recurring environmental problems. It is further argued that the concept of heteroglossia allows us to examine how these conceptions of nature dialogically appear and evolve in Iranian contexts.

IN THE PAST 30 YEARS, Iran has increasingly encountered environmental problems in its urban areas. In particular, rapid population growth, massive traffic jams, and unplanned urban expansion, especially in major cities, have all contributed to the deterioration of the environment (Madanipour 2006). The Iranian government has addressed these issues in its five-year national planning since the 1990s. Consequently, attention to the environment has been increasing among many segments of the population in Iran, from environmental experts to ordinary citizens. During an interview I conducted in 2009, a journalist, who is also an editor for the environmental section of the popular Tehrani newspaper *Hamshahri*, acknowledged the recent changes concerning public perceptions of the environment in Iran: “Due to people’s increasing environmental awareness, the newspaper decided to launch an environmental section once a week some years ago. For the same reason, every newspaper in Tehran now has some environment sections.” His comment reflects an important change concerning public consciousness about the environment (*mohit-e zist*)¹ and the circulation of environmental knowledge in Iran.

One of the implications of these developments is that scientific management of the environment, or scientific ecology,² initially developed in the West, has come

to be viewed and employed as an essential prescription to take on these issues. My fieldwork suggests that this working assumption of scientific ecology has become a basis of environmental schema not only among governmental institutions and local NGOs (Afrasiabi 2003; Fadaee 2011), but also among non-environmentalist citizens in Iran.³ But, does this mean that environmental awareness in Iran is identical to Western environmentalism, where nature is often seen to be knowable and objectifiable by instrumental rationality? Viewing conceptions of nature as an investigation site in which crucial cultural values are embedded, this article explores how this burgeoning environmental awareness unfolds uniquely in an Iranian context.

My findings suggest that the growing environmental discourses and practices in northern Tehran are deliberately modeled and organized based on scientific notions of nature, indicating that this scientific notion of nature is becoming the mainstream discourse.⁴ Yet, I argue, along with this scientific discourse of nature, another alternative discourse of nature—related to Iranian nationhood—makes a key contribution to the modes of Iranian environmentalism, especially among the environmentalists that I studied.⁵ Mikhail Bakhtin's (1981) concept of heteroglossia adeptly provides a useful conceptual framework for analyses of these multiple voices of nature.⁶ In order to demonstrate this point, the paper first presents the recent development of scientific research and environmental projects in Iran that reflect the dominant scientific discourse. The influence of nationhood on the uniquely Iranian concept of nature is then presented. The paper goes on to analyze an illustrative interview with environmentalists, during which both science- and nation-based discourses of nature emerged. This study provides and enriches ethnographic dimensions of Iranian environmentalism by showing that concepts of nature do not merely occur through the subject's rational comprehension, but that dialogical interactions in the field are key in eliciting multivocal discourses of nature.⁷

PARAMETERS OF THE RESEARCH

As I began investigating environmental practices and awareness in Iran in 2009, I was puzzled by the manner in which urban Iranian environmentalists discussed and understood their environmental activities. Since Iran is an Islamic republic, scholars, such as Dien (2000) and Foltz (2003), have recently explored the relationships between conceptions of the environment and Islam. Foltz argues that, given the predominance of Islam in official discourse since the revolution in 1978–1979, an Islamic scriptural understanding of nature is prominent and influential. In this tradition, nature signifies the totality of the universe of which humans are a part (Nasr 1996).⁸ Humans and nature are inseparable. The human, as the vicegerent of God, is given the role of gaining knowledge as to the order of things and ultimately God's will (Dien 2000). Damage in nature, then, is a reflection of the problematic inner state of humans (Nasr 1996).

I initially sought to understand how new environmental discourses and practices affect Iranians' daily lives through reflections about Islam, especially its

moral aspects (Adelkhah 2000; Fischer 2003). I anticipated that environmentalists' primary concerns would be how the inner moral state of humans is reflected in the outer environment (Beeman 1986; Nasr 1996). However, among the population I studied, I often encountered views that did not meet my expectation; many Iranians with whom I spoke expressed the view that religion is concerned with the moral conduct of everyday life, but not necessarily with environmental issues. It appears that new notions of nature are beginning to redefine this scriptural understanding of nature in northern Tehran.

If the environmentalists do not consider "religion" to be a major component that motivates their environmental activities, what is the key to understanding the implications of rising environmental awareness in Iran? Upon further inquiry and examination of environmental discourses and practices in Iran, one essential feature of environmentalists' analytical framework stood out: science. Although individual groups varied in their ability to carry out scientific projects, scientific schemes were almost always present in the discourses and practices of the environmental organizations that I studied. For example, a project coordinator for an environmental organization, who is also an environmental sciences doctoral student at the University of Tehran, introduced me to some of her organization's projects. These included research on the improvement of energy use in industrial sectors and assessments of environmental damage that might result from various industrial projects, such as building factories. During my visits to numerous environmental organizations in Tehran, scientific environmental projects emerged as a primary way of understanding nature, the environment, and the effects of human activities on the environment.

SOCIAL CONSTRUCTION OF CONCEPTIONS OF NATURE

Given that scientific research related to the environment is becoming widespread, how did this scientific conception of nature come to play such an important role in Iran? Scholarly research on the social construction of nature has explored the ways in which humans have established a particular relationship with what they perceive to be nature according to a particular social context and the logic of knowledge available in that context (Braun 2002; Kosek 2006; Merchant 1980; West 2006). By studying conceptions of nature, we can see the influence of particular social and cultural conditions on ideas about and roles of nature in a given society (Collingwood 1945; Rabinow 1996; Sahlins 1976, 2008; Williams 1980).

Evernden (1992), for example, describes a genealogy of concepts of nature in the West. He shows that in the Middle Ages nature was understood to be not only a physical entity but also a record of the will of God. During this period, humans attempted to acquire knowledge of God through symbols present in nature; these symbols were primarily used to explain a reality and a purpose beyond merely physical events. With the Renaissance, however, humans, who had once sought guidance in nature for the explication of physical and spiritual reality, now became revealers of nature. After the Renaissance, nature became a realm independent from that of humans, and humans sought to reveal the systematic,

underlying order that they supposed was governing nature. In short, nature became “objectifiable” and “knowable,” which is the basis upon which Western science was subsequently founded (Latour 1993, 2004).

Nature became a domain of science in the West; a scientific understanding of nature assumes that nature constitutes an independent, material object that obeys natural laws. Based on this distinctive assumption, science is expected to provide an objective account of nature. Scholars have studied the ways in which this understanding of nature has contributed to certain practices, discourses, and institutions that we observe in Western societies today (Oelschlaeger 1991; Worster 1977). Scientific ecology is one example: its advocates often hope for a harmonious, orderly relationship between humans and the separate, natural world and seek to establish that relationship (Cronon 1996). Its analyses especially focus first on the natural world that is affected by human activity, the realm that is generally referred to, in the West, as the environment, and second, on improving human environmental footprints. Furthermore, environmental norms are delineated through the particular presupposition of an ecosystem in which sustainability and diversity are key components (Evernden 1992). Based on these norms, environmentalists have implemented such scientific projects as environmental assessment and wildlife management and have attempted to restore or maintain a healthy, orderly ecosystem. Concerning an essential schema of environmentalists, Evernden points out that most environmentalists, whether their thematic emphasis is placed on the use value of nature to humans or on its “intrinsic” value (Fox 1990; Worster 1977; Zimmerman 1993), share the premise that “there *is* a [(n) independent, material, and law-bounded] thing called nature that needs our help” (Evernden 1992:101, emphasis in original).

It seems that this premise, a distinctive trait of the scientific understanding of nature, is being increasingly incorporated into the Iranian conception of nature via the environmental movement. Environmentalists in northern Tehran acquire and develop their understandings of ecological science by taking environment-related classes at Iranian universities or by being self-taught through Western scientific literature. From my experience, their training in this field is critically guided by the texts they use. Typically, these texts were originally published in the West and later translated into Persian, or they were built on Western ecological sciences literature. For example, *Environment Law (hoquq-e mohit-e zist)*, the required text for University of Tehran environment management courses, is a translation of the English-language text *Guide to International Environmental Law* by Alexandre Kiss and Dinah Shelton (Leiden: Martinus Nijhoff, 2007). Through such texts, the environmentalists told me, they become acquainted with conceptual tools to research and analyze environmental issues in Iran scientifically. Many Iranian environmentalists have begun to practice and gain a scientific understanding of nature through this Western scientific literature.

SCIENTIFIC DISCOURSES OF NATURE AND ENVIRONMENTAL AWARENESS IN IRAN

While in Tehran, I investigated the understandings of nature among northern residents of the city. I contend that environmental projects are one of the most important ways that scientific understandings of nature are being introduced to contemporary Iran, as a variety of evidence will show. With mounting environmental problems in Iran in general, Iranians' awareness of the environment has greatly increased, and science is generally viewed as the essential scheme for approaching such issues. In his recent interview in the *Hamshahri* newspaper, for example, Tehran governor Morteza Tammadon raises concerns regarding hazardous environmental wastes generated by "the non-scientific and inappropriate collection of sewage in the city."⁹ This negligence could contaminate underground water and eventually imperil public hygiene. Tammadon attributes this potential environmental problem to the lack of proper scientific practices. The interview thus implicitly reveals the importance of appropriate, scientific management in environmental projects; it shows how scientific discourses can be related and connected with environmental projects and even "good governance" more broadly in Iran (Agrawal 2005). This reflects a gradual transfer of morality from citizens to the scientifically knowledgeable administration.

A strong connection of environmental projects in Iran with science also became evident when I attended the Annual International Exhibition of the Environment held in Tehran in the summer of 2011; here, science served as an essential avenue through which environmental research and projects were explored. The event featured various exhibitions by organizations whose activities concentrated on the preservation of the environment. They displayed their noteworthy achievements and activities that were considered appropriate for the environment of Iran. The extensive range of subjects included car manufacturing, motorcycles, petrochemicals, gas, soil, water, cement, copper, and industrial equipment. Banners that reflected organizations' activities and views on the environment were ubiquitous, with lines such as the following: "The first active company in Iran and the Middle East with color-waste recycling and a danger-free car-production industry" (a purification company) and "You have the right to live in a city without infectious trash" (an industrial equipment company). Their research achievements were also printed on banners, usually with bullet points, as follows:

Projects of the Environment that have been achieved:

- Achievement of the 2-year research project to utilize the effluent consumed in green space for cultivation of rose gardens and farms.
- Elimination of 140 cubic meters of the effluent in the Zayande river and diversion of the water to create green space that eliminates the effects of the effluent.
- Expansion of green space from 25 hectares to 105 hectares, among others (Department of the Environment).

These few examples show the general stance of the exhibits and the moral rationales behind them, which seem to be shared by the government and corporations alike. Notably, the scheme of these projects is modeled on science, disclosing the degree to which scientific discourses and practices are integrated into environmental activities and projects in Iran. This integration of scientific discourses may become even greater in coming years, as more people begin to see the need for environmental policies and programs in Iran. In fact, this point was keenly brought to mind at the event; a friend of mine, who had come to the exhibition to assist the Department of the Environment (DOE),¹⁰ told me, “We have accomplished many things here, but there is more work to do ahead of us.”

The theme of the environment increasingly surfaces in public debates. These discourses about the environment, usually with scientific viewpoints, greatly contribute to the dissemination of scientific discourses of nature in Iran. Population growth is one of the most debated topics in Tehran city management of recent years (Madanipour 2006). It both directly and indirectly affects the living conditions of the citizens, as it concerns such issues as housing and water shortages and air pollution. For almost any city project, therefore, environmental issues are now being addressed. For instance, in 2011 President Ahmadinejad proposed a housing project in which each household will be given an opportunity to own one thousand square meters of land for private housing on the east side of Tehran. Because twenty million households exist in Iran, the plan will consume two million hectares of land. Reactions against this plan immediately arose in light of environmental concerns. The most notable response came from the supreme leader, Ayatollah Khamenei. His reaction to this housing project is quoted in *Hamshahri* as follows:

I give [my] full support concerning environmental issues. The problems of the environment are very important. The problems of natural resources are very important. Natural resources are the wealth of the nation. . . . Don't allow Tehran to get any bigger; don't allow the lands of Southern Elborz to erode that much. Let us prevent it. . . .¹¹

It is interesting to note that the supreme leader expressed skeptical views on the housing project primarily on the basis of environmental concerns, rather than economic or religious concerns, though the latter are of great importance in Iranian society. Ayatollah Khamenei's statement exemplifies the increasing status of the environment in public discourses in Iran.

Environmental experts also responded to this proposal by arguing:

When the expansion of Tehran and other big cities does not occur based on environmentally friendly models, there will be great difficulties in *harim* lands [private dwellings]. . . . Right now, drinking water in some parts of the cities, especially Tehran, due to the lack of dam water, depends on well water, which can possibly increase the danger of pollution. Given the lack of water sources and the dry years we have had, it is not certain how enough

water could be supplied for this housing project.¹²

Whether this project is feasible or not, the fact that environmental concerns are raised about a city project indicates how important environmental issues have become in urban parts of Iran.

PUBLIC TRANSPORTATION PROJECTS AND THE ENVIRONMENT

Another important venue through which scientific discourses of nature are ushered into Iran is the expansion of public transportation systems. These are viewed as a solution for overpopulation and air pollution in major cities and also play a crucial role in providing urban Iranians with scientific conceptions of nature. Tehran governor Morteza Tammadon considers public transportation a means of mitigating overpopulation in Tehran. The city was supposed to accommodate 8 million people, but the 2012 population is estimated at more than 12 or 13 million. Migration to the city continues, despite the government's evident support of rural areas. Tammadon believes that public transportation systems can serve to lessen the effects of overpopulation: "The expansion of public transportation must immediately occur in Tehran, and we must restrict the movement of migrants [to the city]. Attention and public awareness towards public transportation must be established quickly."¹³ His views reflect the principal ways city management models are being approached to alleviate overpopulation of the city, and they also reveal that a priority is being placed on environmental programs. Public transportation systems that are integrated with technologically based environmental programs thus help to circulate scientific discourses of nature in Iran.

Overpopulation also contributes considerably to another urgent problem in major cities of Iran: air pollution. The air quality of Tehran is considered very poor by international standards; in December 2010, all governmental institutions and schools were forced to close down for more than a week because of poor air quality. Environmental experts and government officials regard car traffic as the main cause of air pollution in the city. In an interview with IRNA (Islamic Republic News Agency), Sardar Hosein Rahimi, the head of traffic and driving guidance of Tehran, explains: "more than 80 percent of the pollution in the city comes from the traffic."¹⁴ Municipalities have attempted to manage air problems mainly by regulating city traffic and setting emission standards for new vehicles. The Iranian parliament has recently passed various traffic-related laws. For instance, it passed a traffic law called "the odd and even plan" (*tarh-e zouj o fard*) that was enforced in the fall of 2005 in order to reduce air pollution in central Tehran;¹⁵ this law regulates the flow of traffic in the city by assigning odd and even registration number plates to car owners and, based on these numbers, limiting their access to certain areas during high traffic hours. Sardar Hosein Rahimi remarked that this traffic law has been effective: "with this law, we have reduced more than 40 percent of the traffic in the capital."¹⁶

The expansion of public transportation is considered one of the most urgent priorities of city planning. Newly developed modes of public transportation, such

as the metro subways and Bus Rapid Transit (BRT), city buses that run along the major streets of the city, have been launched in order to limit the gas emissions of the many fuel-inefficient cars that fill the city. Ads posted throughout the city encourage citizens, in light of the need for environmental protection, to utilize public transportation. Several informants shared with me one of the slogans found in central parts of Tehran that promotes the use of public transportation: “A metro of seven coaches is the equivalent of 90 buses,” meaning that the carrying capacity of one subway train is the same as that of 90 buses. The informants gave me a further explanation of this slogan: “The carrying capacity of a single bus is the equivalent of five [fully-loaded] cars, and therefore up to 450 cars can be eliminated because of one metro [train]. . . . If we make more use of subways and buses, air pollution can be significantly reduced.” These examples illustrate that public discourse and projects concerning a healthy urban environment that have been organized and implemented have broadly disseminated scientific discourses of nature in Tehran.

In fact, the scientific view of nature now seems prevalent among urban Iranians. During my fieldwork, I conducted interviews in central and northern Tehran to examine how urban Iranians view and understand nature. Many urban Iranians, both environmentalists and non-environmentalists, often described nature (*tabi'at*) as an entity that operates by itself, usually absent of human forces, and the environment is generally referred to as the artificial (*masnui*) surroundings that humans have affected through their interactions with non-artificial nature. A middle-aged male in Tehran, for instance, described nature as “something that exists by itself regardless of human presence, whereas the environment is considered to be a site that humans, being a major agent on earth, have created and lived in.” In my experience, these themes resonate among urban Iranians, irrespective of gender and age, leading me to conclude that a scientific notion of nature is generally shared by Tehranis with whom I conversed.

NATURE AND IRANIAN NATIONHOOD

However, scientific ecology is not the only conceptual framework through which Iranians understand nature. Many Iranians also think about nature in terms of national roots.¹⁷ In this regard, *sizdah bedar* (“thirteen outdoors”), now also known as Nature Day (*ruz-e tabi'at*)¹⁸ in Iran, provides a suitable framework through which Iranians uniquely view nature. *Sizdah bedar* is the thirteenth (*sizdah*) day of the first month (*Farvardin*) in the Iranian calendar, which also marks the end of the Iranian New Year’s holidays (*nowruz*). The number thirteen is considered ominous in Iran, and, on this day, a majority of Iranians leave their houses to ward off bad luck. They go out to picnic and savor nature. This tradition is said to have been established during the Achaemenid period (ca. 404–358 BCE)¹⁹—a period that many Iranians identify with the height of the Persian civilization. From this perspective, Iranians are believed to intrinsically possess tender connections with nature, especially in light of their long-standing national heritage. In their views, nature, through the lens of historical consciousness, is profoundly tied to Iranian

nationhood. A twenty-nine-year-old female, for example, showed this disposition in her explanation of *sizdah bedar*: “There are historical roots on this day of nature. It means the return to thousands of years ago. . . . Thanks to the government’s increasing awareness of environmental preservation, some people have learned not to throw away garbage in nature on this day. . . . But, more importantly, this stance [towards nature] on this day is about going back to our culture that is thousands of years old.”

My findings suggest that this description accurately represents how urban Iranians, whether environmentalists or not, understand nature in general terms. This day is viewed and experienced as an occasion whereby the people are invited to celebrate nature, and by doing so, they remember and (re)appreciate their history-laden national heritage. Therefore, on the one hand, with the recent developments of environmental discourses and projects, the scientific discourse of nature increasingly prevails throughout Iranian society, as it occurs in the West. On the other hand, it appears that there is at least one alternate discourse of nature in Iran that is profoundly related to Iranian nationhood. I argue that the latter “Iranian nature” is what makes environmentalism in Iran unique and that these two differing discourses are perceived to be congruent among environmentalists.

HETEROGLOSSIA AND DIFFERING NARRATIVES ON NATURE

The way these two differing discourses are reconciled is aptly captured by Mikhail Bakhtin’s concept of heteroglossia, or multiplicity of voices. In conventional communications between individuals, any discourse is expected to be transparent and non-arbitrary, based on the individual autonomous and rational mind, especially in the public sphere (Connolly 1999; Habermas 1989). In this light, the presence of two differing discourses about the same subject is often deemed irrational or contradictory.²⁰ Contrary to this view, Bakhtin (1981) assumes that linguistic consciousness “comes upon ‘languages,’ and not a [singular] language. Consciousness finds itself inevitably facing the necessity of *having to choose a language*” (1981:295, emphasis in original). He explores the ways in which one dialogically comes to choose a particular language or voice in response to a particular social context. Thus, the differing voices do not collide with each another in one’s consciousness. Rather, as many scholars have shown (Hill 1995; Smith 2004; Strauss 1990), a multiplicity of voices appears dialogically and contextually. For Bakhtin, the unity of a language is not a unity of a single, closed language system; it is a unity of several languages that are connected to and mutually cognizant of each other (1981:295). In the context I have described, the increasingly influential scientific discourse of nature does not exist singularly. Other alternate discourses of nature, namely the one related to the Iranian nation, coexist with and are complementary to it. A theoretical implication of heteroglossia is that a dominant discourse is never singular or total by itself but rather is “continually renewed, recreated, defended, and modified” by the pressure of countering forces (Williams 1977:112–13).

From the viewpoint of heteroglossia, Bakhtin highlights the critical force of

dialogue that shapes the way differing discourses appear. He is highly critical of the supposition that interlocutors could communicate with one another through the exchange of words and objects whose meanings are predetermined and singular in any context, an idea notably pioneered by Saussure (1959). Bakhtin (1981) instead argues that the ways discourses are shaped are always contextual and dialogic:

No living word relates to its object in a *singular* way: between the word and its object, between the word and the speaking subject, there exists an elastic environment of other, alien words about the same object, the same theme It is precisely in the process of living interaction with this specific environment that the word may be individualized and given stylistic shape (1981:276, emphasis in original).

In other words, nature ought not to be regarded as an intrinsic concept that is unchanging and rationally contained within the psyche of the subject. Rather, the way the concept of nature appears and is discussed among subjects is critically contingent on how it occurs in the dialogue of a particular sociocultural context (Bauman and Briggs 1990). Any utterance is made as a response to what has already been said about a given topic, thus inevitably making that utterance dialogic and multivocal, not singular (Volosinov 1973).²¹ No matter how monovocal one's utterance might be or try to be, because utterances take place in particular interactions and in particular sociocultural contexts, the utterances are necessarily multivocal (Bakhtin 1986:92). Thus, the ethnographic interview that follows does not disclose a "true," "authentic" voice hidden in the asocial subject,²² which is often believed to become accessible through face-to-face communication (Briggs 2007); it captures and reflects dialogic characteristics of heteroglossia concerning discourses of nature in Iran. It not only presents urban Iranians' illustrative, alternate views on nature but also reveals the wider sociocultural contexts within which rigorous debates concerning recent environmental problems take place.

The interview with environmental NGO workers described below is divided into three distinctive narratives: one on the influential scientific discourse of nature; another on a nationalistic, Iranian discourse of nature; and a third that compatibly encompasses the first two. These narratives are shown here to demonstrate how nature appears contextually in the dialogue, thus revealing a unique way in which Iranian environmentalism unfolds.

SCIENTIFIC NARRATIVES ON NATURE IN IRAN

I visited an environmental NGO office in northern Tehran on a Thursday—a weekend day—in the summer of 2009. Upon my arrival, the NGO founder, Amir, and his wife, Zahra, the NGO executive assistant as well as a full-time environmental journalist, warmly welcomed my visit despite it being a holiday. Both looked to be in their late twenties. The interview was semi-structurally organized based on my prepared questionnaire and was intended to be open-ended.²³ They told me

that they had launched the NGO about five years before and that it has about a thousand members throughout the country. Amir described the general goals of the organization to be the improvement of the overall environment in Iran and the promotion of public environmental awareness and knowledge. His group is supportive of a variety of environmental policies and projects initiated by Tehran municipalities and the government, and if requested, the organization coordinates with other environmental NGOs and collaboratively participates in environment-related projects. At the personal level, Amir is energetically motivated by the challenging tasks he faces as an NGO head to preserve extant nature in Iran. In many ways, his background represents those of many other environmentalists with whom I spoke. Although some may view official environmental efforts to be insufficient or inefficient, the environmentalists generally incorporate into their activities the scientific ecological schemes practiced in official institutions, most notably the DOE. These environmentalists' interests in environmental protection, like Amir's, are also essentially driven by their genuine concerns with the rapidly deteriorating landscape of Iran.

The interview with Amir reveals that the scientific ecological view is a primary mode of understanding nature, that this scientific discourse is conceptually compatible with that of the DOE, and that this concept is transcending traditional conservation ecology and taking over its environmental discourse. This reflects the current increase in public scientific discourses and projects described above. I consider the DOE to be the official voice of environmental discourse in Iran, as many informants referred to the organization in such a manner.

Early in the interview I asked Amir to speak about goals of the NGO in concrete terms, and he answered as follows:

On top of collaboration with governmental authority, we ourselves try to monitor such occurrences as destruction (*takhrīb*) of the environment, natural resources (*manabeh-ye tabii*), and green space (*faza-ye sabz*) in the city or in parks. Also, we critically write and deliver articles about these incidents. By doing so, we attempt to exert pressure on those who engage in such activities and protest in order to stop these activities.

It seems from this comment that the efforts of the NGO, with the assumption of nature defined by a broad conception of scientific ecology, are aimed at dissecting and establishing proper relationships between humans and nature. This scientific discourse of nature is in accordance with the official discourse of the DOE. For example, the "principal obligations of the organization" listed on the DOE's website include "the preservation of natural ecosystems of the country and the remediation of past ill effects on the environment, the prevention of destruction and pollution of the environment, the examination of environmental tolerance capacity for plausible and continuous development of environmental resources, and continuous monitoring for the development of environmental resources."²⁴ The discourses of both Amir and the DOE share a working assumption with scientific ecology that nature is an objectifiable entity and that its preservation

critically depends on the ways in which humans interact with nature.

This approach leads to another illustrative discourse shared in the interview that reflects the dominant scientific discourse. Many environmentally concerned institutions and groups in Iran place a high priority on the assessment and management of objectified nature in their activity agenda.²⁵ Thus, when I asked Amir what kinds of activities the NGO carries out, he described their core activities as follows: “We consult and give advice to governmental authority. . . . If we think they do not plant proper trees or plants in the parks, we point out these issues to them. Or, if a municipality decided to construct a building in an inappropriate place in the city, we let them know our views.” The comment reflects their concerns for a proper assessment and management of humans’ use of nature. Not surprisingly, this scheme is also found in official discourses of the DOE. It, like this NGO, is concerned with the identification, assessment, and management of human activities that have certain effects on the environment. The DOE seeks to investigate “the elements of pollutants and damage to the environment as concerns water, air, and soil, as well as waste, pesticide, chemical fertilizers, noise, and monitoring of noise.”²⁶ This way of framing and addressing environmental problems assumes the body of nature to be analyzed and managed by humans who, as analyzers or scientists, are capable of stepping outside and comprehending the realm of nature (Latour 2004). In addressing the goals and activities of the organization, these conversations suggest that Amir incorporates into his environmental activity schemes a particular concept of nature, which is the scientific ecological notion of nature also practiced by official environmental institutions in Iran.

However, as Bakhtin (1981, 1986) notes, it is important to remember that these interactions took place in a particular sociocultural context and that Amir’s utterances were shaped by my own questions and the context in which the interview occurred. This portion of the interview was recorded at the very beginning, when our interactions were still somewhat formal; Amir answered my questions very cautiously and carefully. With frequent interjections (such as “*eeh*”), it seemed as if he was looking for pertinent, yet definite and exact, responses to my inquiries about his NGO and its environmental activities. It is in this particular context that the conversations about the scientific discourse of nature occurred. Several characteristics concerning the ways this discourse emerged can be compared and contrasted. Amir’s narratives on scientific nature tended to lack detailed accounts of nature in comparison with, as will be discussed later, those on the alternate discourse of nationalistic, Iranian nature. For example, the narratives usually did not include specific regions or events, but they often referred to relevant issues in general terms, such as municipalities, the government, and parks. The narratives often contained terms normally only associated with environmental discussions, such as “natural resources,” “green space,” and “environmental destruction.” Additionally, the narratives are stated from the point of view of the NGO as a group and are dissociated from his personal experiences.

Without heteroglot perspectives, it appears from this part of the interview that Amir’s NGO and other environmental NGOs that have adopted and practiced the

official scientific discourse in Iran are not significantly different from Western environmental organizations where scientific ecology is similarly viewed as the main prescription for environmental problems. However, Bakhtin's insight on heteroglot discourses is instructive for demonstrating some distinctive ways in which scientific discourse, particularly through environmentalism, develops in an Iranian context. The scientific discourse in Iran should not be viewed as the singular discourse that is at all times practiced by the environmentalists in Iran. It is rather a discourse of nature which is becoming dominant and which appears in a particular context through dialogues that include other discourses of nature. Iranian conceptions of nature are not singularly scientific or nationalistic; they are, rather, dialectically evolving. With this perspective in mind, I now examine how the alternate nationalistic Iranian discourse of nature surfaces in the interview, and I highlight the characteristics of this narrative in contrast to those of the scientific narratives.

NATIONHOOD NARRATIVES ON NATURE IN IRAN

The following stories illustrate that a second voice regarding nature appears in the process of dialogue and suggest that the nationhood narrative makes a key contribution to environmentalists' perceptions of the environment. When our conversation turned to personal motivations for environmental activities, Amir's narratives on nature began to shift. Amir began to speak about nature differently than previously described, more in relation to the Iranian nation and with detailed descriptions of what nature in Iran looks like. This Iranian nature described by Amir, and later by Zahra as well, is characteristically distinguished from the scientific nature about which he recounted NGO activities earlier in the interview. Asked about the ways in which he became interested in the subject of environmental protection, Amir responded, "Loving something is a trait of human beings. In my case, it is the nature of *our country*. It is the natural environment of *our country*. And, we have to look after these for the next generations, like our own children" (emphasis added). In the response, the reference to the Iranian nation, especially represented as "our country" (*keshvar-e mun*), is a noticeable shift in Amir's description of nature. While this theme was absent in the official scientific discourse of nature, as the interview proceeded, the motif of Iranian nationhood began to define the ways Amir narrated nature. The more Amir developed his ideas, the more clearly they contrasted with the scientific view of nature:

Have you ever been to the north of Iran? Did you see the forest there? Have you ever been to Shiraz or Isfahan? Did you see the nature there? In Iran, we have deserts, forests, seas, and mountains like Damavand. We have everything in Iran. Many countries only have one of them. For example, Saudi Arabia and Iraq do not have forests. . . . The nature of our country is superb and has diversity that many countries don't.

In contrast to the ways Amir previously discussed environmental issues from a

less personal standpoint as the NGO head, here this narrative is being addressed in relation to personal experiences. Nature in Iran is framed from the start in relation to whether I have visited natural sites in Iran. In his portrayal of nature, Amir then highlights the uniqueness of nature that is said to exist in Iran. Northern Iran, especially the coastal areas of the Caspian Sea, is well known among Iranians for its moderate weather that nurtures the forest (*jangal*). To the south are the vast heartland areas of deserts (*kavir*) and mountains (*kuh*) and, in the far south, the Persian Gulf (*khalij-e fars*). Thus, this discourse of nature is emphatically associated with the Iranian nation vis-à-vis the diverse resources of nature which are associated only with Iran, but not other countries. Many Iranians I met, both environmentalists and non-environmentalists, also articulated this Iranian discourse of nature. The seasonality of Iran, claimed to be nonexistent in neighboring Arab countries, is also considered a main facet that defines Iranian nature and therefore connects with Iranian nationhood.

Among my informants, wild animals are generally reckoned to be constituents of nature, and their diversity (*tanavoh*) is also seen as an essential component that uniquely characterizes nature in Iran. An environmentalist who is an active member of a wildlife conservation NGO, for example, described to me the animals residing within the borders of Iran as follows: “There is a great diversity of animals in Iran, some of which are only living in Iran . . . like some birds and fish. Because of the diverse habitats (*zistgah*) in Iran, there exists a good diversity in animals. From this perspective by itself, the protection of these animals is very important.” Here, the animals, like the geographical traits of Iran, are defined through his reference to a feature that is unique to Iranian national territory. Thus, animals as constituents of nature, especially the ones indigenous to Iran, embody the ways in which Iranians establish a connection between nature and Iran. There is a very strong identification with Iranian territory and the concept of the nation, given its more than 2,500-year-long history as a nation.

This feature of the Iranian discourse of nature became further palpable when Amir pulled out a few of the NGO’s publications that were stacked on the table. Pointing to a picture in the publication, he very passionately began to speak about some of the animals that exist only in Iran and revealed this alternate discourse of Iranian nature. These animals, Amir informed me, are acutely facing extinction owing to the environmental changes that are directly and indirectly caused by human activities, such as industrial pollutants and illegal hunting. While speaking to me, Amir and Zahra engaged in the following conversation:

Amir: This animal [the cheetah] exists only in Iran within Asia. The cheetah has survived only in Iran. No cheetahs exist in any other countries. . . . We must look after and preserve this animal, the cheetah, in our country. And, likewise, we must do the same for the rest of the animals that live only in Iran, like black bears.

Zahra: Black bears in southern Iran.

- A: In [the provinces of] Sistan and Balchestan . . . we also have Caspian Sea seals, turtles, and the habitats of *Siberian cranes* [spoken together, vigorously].
- A: And, we have some other animals in Iran. . . . We must look after these animals in nature, and for this reason, we are taking action.

In this segment of the conversation, Amir and Zahra enumerated animals that are believed to inhabit primarily, if not only, Iran in order to explain the uniqueness of nature in Iran. In contrast to the rather careful ways in which Amir explained his organization, his interactions with Zahra were spontaneous and emotional. Amir and Zahra explained these animals as precisely as possible to me, because I had little knowledge about wildlife in Iran. They started by talking about cheetahs, a nationally symbolic, endangered animal in Iran, and proceeded to speak spontaneously and in detail about other endangered animals and their geographical habitats. Amir's and Zahra's simultaneous utterance of "Siberian crane" in the interview reflects both their spontaneity and emotions and indicates their special attachment to animals unique to Iran. The detailed information contrasts with the information about Amir's NGO, the description of which generally lacked specific terms or places.

This conversation reveals another way that dialogue connects Iranian nature and nationhood. The ways the first-person plural subject "we" (*ma*)²⁷ and its adjective form "our" (*-im*) are used in the conversation indicate that Iranian nationhood has become a lens through which to view and address nature. Although Amir uses this pronoun and adjective in describing his NGO, the reference point of the same pronoun and adjective begins to shift to the Iranian nation as he starts narrating his personal discourse of Iranian nature. This trend becomes evident as Amir and Zahra converse about uniquely Iranian animals. After identifying the cheetah as an animal that has survived only in Iran, Amir mentions, "*We* must look after and preserve this animal, the cheetah, in *our country*. And, likewise, *we* must do the same for the rest of the animals that live *only in Iran*, like black bears" (emphasis added). These pronouns and adjectives are stated from the point of view of an Iranian, not just an NGO founder. They directly refer to Iranian nationhood, indicating that the nature being discussed here has a strong tie with the Iranian nation. Nature is thus not merely a nature that is scientifically analyzed and managed, it is also one that embodies some essence of the Iranian nation. It is from this sense that Amir states, "We must look after these animals in nature, and for this reason, we are taking action." The protection of the environment for Amir, Zahra, and many other Iranian environmentalists means more than the management of material nature and the environment for living beings. It also means the protection of the animals and nature that uniquely represent the Iranian nation.

This motif of Iranian nationhood took a different turn and revealed a distinct character concerning nature when I asked Amir and Zahra about *sizdah bedar*; the restoration of nature is symbolically associated with ancient Iranian heritage. As

in the narratives of distinctive Iranian animals, Amir, in an improvised tone, began to recount the significance of sizdah bedar from the Iranian point of view:

Sizdah bedar is one of the traditions from two thousand years ago when Cyrus the Great was a king in Iran and emperor of the world. From this period, our people were going out to nature on the thirteenth day of Farvardin, because the Iranian people innately love nature. Now, as a result of activities of environmental NGOs in Iran, people have come to learn not to throw away garbage into nature, not to start fire in the woods, not to cut tree branches on the day of sizdah bedar. . . .

In these passages, from the viewpoint of Iranians, the historically significant relationship between Iranians and nature is characterized and embodied through sizdah bedar. It is presented as an event that does not merely connect Iranians with nature, it also shares historical roots with the glorious, ancient Iranian nation—the nation that great kings, most notably Cyrus the Great, once ruled.²⁸ In light of Iranians' emphasis on the concept of uniqueness, it is plausible that these historical roots are of great importance for Amir as well as for many others. Many consider Cyrus the Great to be a symbolic authoritative figure worldwide, giving the Iranian nation a unique status. The Iranians who once belonged to this ancient nation have become the point of reference from which to define the innate character of Iranians now. The commencement of sizdah bedar during this ancient period is therefore understood to reflect Iranians' intrinsic connection with nature that still can be found today. It is from this perspective that Amir's and other environmental NGOs express their roles as guardians of nature on sizdah bedar. This relationship between Iranians and nature adds another layer of significance to the restoration of nature among the environmentalists. Nature not only represents the essence of the Iranian nation, which is endowed with authentic natural resources and animals, it also reifies the indispensable national, historical heritage that forms the norms of Iranians' attitudes and behaviors toward nature. The current deterioration of nature is understood to reflect the decline of this historical heritage, which must be restored.

From these accounts, I argue that while Amir's NGO and many other environmental organizations focus on conducting scientific projects and activities, they have an alternate working assumption that is ultimately linked to the Iranian nation. The voice of this alternate nature was critically shaped by the ways our dialogue transpired; this voice came to the surface while Amir and Zahra were attempting to respond to my particular questions about nature in Iran. Bakhtin explains how particular voices can come out during the dialogue between the speaker and listener:

[The speaker's] orientation toward the listener is an orientation toward a specific conceptual horizon, toward the specific world of the listener; it introduces totally new elements into his discourse; it is in this way, after

all, that various different points of view, conceptual horizons, systems for providing expressive accents, various social “languages” come to interact with one another (1981:282)

MIXED NARRATIVES ON NATURE IN IRAN

Amir’s concluding statement, below, about environmental NGOs in Iran is coherent, not inconsistent (Brown 2009), in light of the ways he describes and understands scientific and nationhood narratives of nature. Near the end of the interview, I added an unprepared question, asking about some Iranians’ insensitive attitudes toward the environment, such as the act of dumping one’s garbage on public streets. I had observed these acts and learned that many NGOs are concerned about humans’ proper behavior toward the external environment. Without hesitation, Amir felt compelled to answer this question from a perspective that encompassed both scientific and Iranian discourses of nature. He told me:

The [Iranian] people intrinsically love nature. But, perhaps, some of them don’t have knowledge about it and don’t understand that, if this garbage is left in the street, it takes hundreds of years for it to decompose and go back to nature. . . . If one of the obligations of environmental NGOs in Iran is fulfilled, such that people teach this [consequence] to school children and little children, then when they grow up, for people in our later generations, they’ll be more cautious and sensitive about this issue.

Notably, the conceptual schemes of environmental NGOs mentioned here are laid out through the dominant scientific discourse; the discussion about garbage occurs with respect to nature that is to be assessed and managed. This portion of the conversation, however, proceeds in interaction with the nationalistic, Iranian discourse of nature. The rest of the narrative is addressed and framed in reference to the Iranian nation or its people. The first utterance about Iranians’ intrinsic fondness for nature can be drawn from the narrative of *sizdah bedar*. The nationhood discourse of nature is thematized through Amir’s reference to the lineage of the Iranians as a collective. Nature is presented as an entity that has a special meaning and significance in the Iranian nation, as it has been since the inception of *sizdah bedar* and will be for countless generations to come. The use of the first person plural subject is a good indication that attests to this collectivity. From the way Amir spontaneously responded to my question, these two differing discourses of nature are viewed as compatible by Amir. Moreover, both discourses of nature are indispensable in his vision of environmentalism in Iran. Therefore, these narratives on proper scientific management, Iranians’ ancient and innate affinity for nature, and general schemas of environmental NGOs in Iran should be considered dialogically constructed narratives that are uniquely Iranian and that have resulted from the particular dialogic interactions during which two differing discourses on nature distinctively emerged.

CONCLUSION

Drawing on the materials gathered during my fieldwork, this article has attempted to uncover environment-related cultural dimensions of contemporary Iran. My contention is that Iranians' growing awareness of environmental problems plays a crucial role in increasing the prominence of science. There is a proliferation of scientific discourses, research, and environmental practices in Iran, especially in major cities, such as Tehran. The international exhibition that I attended and the expansion of public transportation systems demonstrate this trend.

This environmentalism, however, takes place in an Iranian context, which leads me to inquire about similarities or differences with environmentalism in the West, where science is also highly valued. Conceptions of nature provide a key to investigate this question; they allow us to link and analyze critically the relationships between environmentalism, science, and the Iranian nation through which Iranian conceptions of nature are keenly expressed. The concept of nature does not appear in a singular manner; it takes diverse forms, depending on how the dialogue about nature unfolds.

On the one hand, with the recent development of scientific research and programs concerning the environment, my fieldwork suggests that a scientific view of nature has become very influential in the framework of environmental activities. On the other hand, an alternate discourse of nature appears through Iranians' reference to Iranian nationhood and constitutes an essential part of environmental schemas in Iran. For the environmentalists and many Iranians with whom I became acquainted, nature is defined through natural resources and animals that are thought to exist only in Iran. Thus, nature is perceived to be more than the objectifiable material environment that should be scientifically dissected and managed. Nature is understood to embody and represent the unique characteristics and history of the Iranian nation, the preservation of which is therefore rendered more meaningful and particularly urgent for the environmentalists. Using Mikhail Bakhtin's concept of heteroglossia, I demonstrated how these conceptions of nature are dialogically constructed; the detailed analyses of an interview with environmental NGO workers suggest that these discourses, instead of being compartmentalized, are perceived to be compatible by the environmentalists. My conclusion is that, along with increasing scientific research and programs in Iran, the Iranian nationalistic discourse of nature makes key contributions to the growing awareness of the environment among the people I studied.

In the midst of the globalization of the political economy and genuine global environmental problems, concerns for the environment have become heightened throughout the world (Adger et al. 2001; Dove 2006; Saniotis 2011). Scientific ecology is widely employed to confront environmental problems (Clapp and Dauvergne 2005), thus contributing to the widespread scientific understanding of the material environment in various parts of the world. Global, scientific nature has increasingly gained importance at various levels of discourse and practices in different cultural settings. Yet, environmental problems are neither understood nor addressed in a homogeneous manner everywhere; these issues

are, rather, perceived and formulated through culturally specific concerns that critically involve alternative conceptions of nature. In this regard, ethnographic research that heeds cultural configurations of discourses and practices of nature, such as the present work, contributes to a better understanding of how scientific environmentalism might be unfolding in different cultural settings.

NOTES

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1. Many informants told me that the term *mohit-e zist* (being of the surrounding environment, i.e., the environment) has scientific connotations. The growing use of the term in recent years is a sign of the increasing influence of science on the Iranian public.

2. Max Oelschlaeger (1991) examines various philosophical orientations of environmental ecology; for example, these orientations may be human-centered or ecosystem-centered. For the sake of discussion here, unless otherwise specified, I use the term “environmental ecology” in a general sense to indicate a field of study that investigates the relations between human/nonhuman beings and the material environment.

3. The analyses in this article are based on two recent trips to Tehran from April 2009 through March 2010 and June through August 2011. My findings are based on both formal and informal interviews and participant observations that took place mainly in central and northern Tehran. I conducted interviews with about 135 men and women whose professions range from university students (mostly with a full-time status), researchers, environmental NGO workers and volunteers, and journalists to citizens who are not environmentalists. I became acquainted with my informants, aged from 18 to 65, through colleagues and friends. The breakdown of my informants is 15 university students (11%), 15 environment researchers and journalists (11%), 35 environmental NGO workers and volunteers (26%), and 70 citizens who were not environmentalists (52%).

4. In regard to the ways Tehranis view the environment, there seems to be a difference of attitude in the north and south of the city. Generally, northern Tehranis are more affluent than southern Tehranis. In my experience, attention to the environment, relative to subsistent economic needs, is higher among northern Tehranis than among southern Tehranis.

5. I visited 17 environmental NGOs in Iran and conducted interviews with about 35 NGO workers and volunteers, whom I refer to as Iranian environmentalists in this paper. Although general arguments in this article are based mainly on interviews with the broader population described in note 3, I particularly draw from interviews with the environmentalists here. In-depth interviews with the environmentalists more explicitly reveal the more specific ways in which the Iranian environmentalists I interviewed tend to view and address environmental issues.

6. I use this term in the sense Holquist explains it: “Heteroglossia is a situation, the situation of a subject surrounded by the myriad responses he or she might make at any

particular point, but any one of which must be framed in a specific discourse selected from the teeming thousands available” (1990:69).

7. By stressing the roles of dialogue of which both the author and his informants are part, the present work intends to contribute to the literature in “the poetics and politics of ethnography” (Clifford 1986).

8. See also *Encyclopaedia of Islam*, s.v. “Tabi’a” (Nature); assessed online at <http://www.brill.com/publications/online-resources/encyclopaedia-islam-online>.

9. *Hamshahri*, August 2, 2011 (Mordad 11, 1390). Henceforth, translations in the article are mine.

10. The DOE is the official environmental institution in Iran.

11. *Hamshahri*, July 3, 2011 (Tir 12, 1390).

12. *Ibid.*

13. *Hamshahri*, August 2, 2011.

14. *Hamshahri*, December 5, 2010 (Azar 14, 1389).

15. *Mehr News*, January 28, 2009 (Bahman 9, 1387).

16. *Hamshahri*, December 5, 2010.

17. A number of scholars have studied various historical contexts in which conceptions of nature were developed in ways that bolster the image of nationhood. For example, Frykman and Lofgren (1986) and Runte (1997) examine the roles of landscape in serving as a symbolic significance of national identity in Denmark and the U.S., respectively. Nash’s case study (1996) demonstrates how a particular notion of nature was evoked by an influential nationalist writer to define ideal Irish men in the age of modernity. See also Cederlöf and Sivaramakrishnan (2006) and Olsen (1999).

18. This name change can be explained partially by the government’s efforts to incorporate pre-Islamic Nowruz traditions into the mainstream rhetoric (*Encyclopaedia Iranica*, s.v. “Nowruz II: In the Islamic Period”; accessed online at <http://www.iranicaonline.org/>). This day provides the media with an additional occasion to widely promote environmental awareness in Iran

19. *Encyclopaedia Iranica*, s.v. “Nowruz I: In the Pre-Islamic Period.”

20. Brown (2009) discusses how the notion of critique, especially through Marx, has been developed in such a way that rationality and science are empowered to provide objective explanations for the religious, the ideal, and the unreal.

21. My analyses are not concerned with, to use Bourdieu’s words, the “surplus of meaning which gives it [discourse] its ‘illocutionary force’” (1991:109) that might arise in certain language interactions. Unlike Bourdieu’s, my work focuses less on the power relations of speakers than on the multivocality that emerges through the dialogic interactions of speakers.

22. The speaking subject, “I,” is only possible if it is experienced by contrast. See Benveniste (1971) for further discussions on subjectivity in language.

23. Beeman (1986) discusses the cultural dimensions of language interactions in Iran and argues that hierarchy and the level of intimacy perceived by speakers are defining characteristics of conversational interactions in Iran. However, analyzing the actual interview content is of more importance here than understanding these Iranian cultural characteristics. Amir and Zahra, as the NGO representatives, intended to convey to me the voice of their NGO, and they had concerns that I understand their comments clearly. Owing to the concern and sincerity they expressed, I felt that the interview genuinely reflected their intent and required little reading into cultural interactional nuances. They used the formal “you” in addressing me; I took this to signal their understanding that we were engaged in a professional exchange. This was further suggested by the fact that they

asked me to show my research permission document. No other interviewees requested this.

24. <http://doe.ir/Portal/Home/Default.aspx?CategoryID=042f86ab-589e-4d39-9ba6-96c21f49cb1c>

25. For example, the Graduate Faculty of the Environment at the University of Tehran offers environment-related courses such as environmental assessment and environmental planning. The faculty usually accepts 10–15 students to the master's program and 2–5 students to the PhD program each year (personal communication from a University of Tehran graduate student, May 2012).

26. See note 24.

27. The first person plural pronoun, *ma*, is also conventionally used to indicate humility (Beeman 1986). In this case, the speakers are distancing themselves both to convey humility and to communicate that they were formally representing the organization. See also note 23.

28. Scholars such as Alonso (1988) and Ozyurek (2006) explore the ways in which popular social memories take particular forms in relation to state authority. Although the state plays some role in generating particular social memories regarding *sizdah bedar*, my concerns here are focused on how Amir's description of the event reveals a certain discourse of nature through dialogue processes.

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APPENDIX C**IRANIAN ENVIRONMENTALISM:
NATIONHOOD, ALTERNATIVE NATURES, AND THE MATERIALITY OF OBJECTS**

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Iranian Environmentalism: Nationhood, Alternative Natures, and the Materiality of Objects

Satoshi Abe



ABSTRACT

In addressing mounting environmental problems in recent years, many Iranian environmentalists have increasingly adapted discourses and implemented programs that are modeled on scientific ecology. Does this mean the verbatim transfer of Western scientific modernity in Iran? My analyses suggest otherwise. This article explores the unique ways in which a burgeoning environmental awareness unfolds in Iranian contexts by investigating how conceptions of “nature” shape the environmentalists’ discourses and practices. It appears that an ecological scientific conception of nature is becoming an important frame of reference among such environmentalists. However, another conception of nature—one framed in relation to Iranian nationhood—makes a key contribution to environmentalism in Iran. Drawing on fieldwork conducted in 2009–2011 in Tehran, this study demonstrates how “Iranian nature” is delineated and practiced through the environmentalists’ (re)engagements with certain objects—maps, posters, and photographs—in relation to which local ways of conceptualizing nature are elaborated.

KEYWORDS

conceptions of nature, environmentalism, ethnography, Iran, materiality, nationalism, social memory



Introduction

In the last 30 years, Iran has encountered mounting environmental challenges, such as air and water pollution, especially in city areas. Iranian environmental institutions have vigorously advocated and deployed scientific ecology, initially modeled in the “West,” as the main prescription to deal with these issues.¹ Consequently, the conceptual scheme of science has increasingly become prominent in various segments of society (Abe 2012). But, does this mean that “environmentalism” in Iran is interchangeable with Western environmentalism, in



which the instrumental rationality of science reigns and disenchanting indigenous cultural traditions? This article investigates how a burgeoning environmentalism unfolds in an Iranian context at a time when the reputation of science is markedly on the rise in the country; it regards conceptions of “nature” as an apt investigation site for addressing and analyzing the cultural implications of recent environmental awareness in Iran.

Cross-culturally, conceptions of nature take different forms, providing humans with points of reference that help to frame their worldviews and practices. These conceptions are fruitful investigation sites for studying how ideas of nature have been developed, internalized, and incorporated into particular cultural traditions (Collingwood 1945; Cronon 1996; Sahlins 1976, 2008; Williams 1980). Western scientific ecology is an example; it is a field that is founded on a particular understanding of nature (Latour 2004; Oelschlaeger 1991). In this field, nature is understood to be “objectifiable” and viewed as a human-free realm for which purportedly objective scientific explanations are to be provided (Evernden 1992). My recent fieldwork² suggests that this scientific notion of nature has become an increasingly relevant way to comprehend the material environment for many middle- and upper-class Iranians in Tehran.³ Yet this does not simply mean the verbatim translation of Western modernity in Iran. My findings suggest that another conception of nature, in parallel to the scientific one, can be found in Iranian environmentalism. This conception sheds light on an important characteristic of this burgeoning environmental awareness, especially among Iranian environmentalists.⁴ I argue that the concept of nationhood provides them with a pivotal framework through which their scientific activities are organized and implemented, indicating that these two differing discourses of nature coexist.

Drawing on two representative ethnographic encounters with Iranian environmental groups during my fieldwork, this article identifies this Iranian conception of nature to be a distinguishing trait of environmentalism in Iran and explores how this notion comes to be understood as such by some Iranian environmentalists. In many ways, these encounters in the field helped to shape my understandings about environmental awareness in Iran. In particular, I examine the ways in which objects play a critical role in how Iranian environmentalists conjure up and develop a conception of Iranian nature. I noticed during my fieldwork that the environmentalists often incorporated objects in discussing environmental issues in Iran. There were more roles in which objects contributed to the environmentalists’ understandings



than were conventionally predicated within social scientific traditions. In many studies, objects are relegated to a realm of projected representations of society based on the dichotomy of subject and object (Miller 2005: 12). This approach significantly limits the scope of ethnographic studies and experiences in the field by presuming a predetermined role and function for subjects and objects. In this light, the present study makes an important contribution to an ethnography whose thick description is not reduced to the dichotomy of subject and object (Geertz 1973) by investigating how certain environmentalists use objects to define, discuss, and practice nature in their environmental activities. In particular, a map, a poster, and a photograph will be analyzed as essential objects that exemplify the ways in which unique features of Iranian environmentalism are divulged.

Being attentive to the point that objects ought not to be reduced to mental or even cultural representations of the subject, this article inquires how an “Iranian nature” that is not simply reduced to the material environment takes concrete forms in such a way that the schemes of environmental activities are profoundly tied to Iranian nationhood. I argue that this Iranian nature is a key feature that transforms the environmentalism in Iran into a uniquely Iranian one; nationhood is an alternative frame of reference in which nature is imagined and defined to be compatible with growing Western scientific and ecological discourses of nature in Iran.

Turning to Environmentalism in Iran

Iran began to experience heightened environmental problems in the 1980s. In its efforts to rebuild the country after the 1979–1987 war, Iran increasingly invested in industrial sectors as the main venue to boost its economy (Keddie 2006). These activities required bulldozing vast areas of land for the construction of infrastructure and public roads in various parts of Iran. In search of employment, millions of Iranians migrated into cities that were consequently filled with thousands of fuel-inefficient motor vehicles (Arjomand 2009; Madanipour 2006). In addition, increasing population growth contributed to the deteriorating climate, especially in the already-crowded cities (Madanipour 2006). In December 2010, the air quality in the Iranian capital and other major cities became so detrimental that the government was forced to close all governmental institutions and schools for almost a week. At the national level, the government has attempted to

address environmental problems in the country's five-year development plans since the 1990s through a variety of research and projects concerning energy conservation and efficiency (Riazi and Hosseyni 2011). The recent economic situation in Iran has also led to a decision to increase energy prices. As a result, ordinary citizens' attention has been directed toward environmental issues.⁵ Under these circumstances, experts on "the environment" (*mohit-e zist*) and the knowledge they employ are gradually gaining prestige not only from the government, researchers, and NGOs (Afrasiabi 2003; Fadaee 2011) but also from the general population.⁶

Conceptions of nature do not disclose the transhistorical accounts for how the world itself is, but rather reflect the contingent historical conditions in which humans have established and lived through particular relationships with their surrounding material environment (Collingwood 1945; Williams 1980). Science, especially in the West, is a prominent example of how particular understandings of nature are drawn and reified to explicate the external material environment (Latour 2004). In Western history, nature gradually became an object of scientific inquiries, being increasingly viewed as "objectifiable" and "knowable." According to this notion, humans, being situated outside of nature, are understood to be the revealers of nature (Evernden 1992). To this end, science has become the main conceptual tool to provide universal accounts of nature or the material environment (Latour 1993, 2004).

The field of environmental ecology is founded on this scientific notion of nature. Oelschlaeger (1991) provides genealogical accounts as to how humans historically viewed and related themselves to nature, and how the field of ecology came to be established. Whether these accounts are human-centered or eco-centered, they define humans in stark contrast to nature, a realm that is believed to exist and operate by itself, independent of human forces. One of the recent analytical frameworks adopted based on this ecological thought is reified and practiced in sustainable development programs, contributing to the worldwide proliferation of the scientific conception of nature (Clapp and Dauvergne 2005). In fact, these programs are found more and more in urban Iran;⁷ sustainable development, known as *towse'h-e paydar*, appears to have become prominent in a variety of environmental research and projects in recent years (Abe 2012). Thus, the course of these events indicates that conceptions of nature are a corollary of historical conditions that have significant effects on human practices. It is from this perspective that my article turns to con-



ceptions of nature to examine the recent development of Iranians' increasing awareness and particular conceptions of the environment.

Works on "Nature"

Recently, topics relating to nature have attracted serious attention from scholars, not only ecologists but also historians and anthropologists. These scholars are keenly cognizant of the idea that this ecological nature is historically and culturally constituted. Nature is considered an important site where essential cultural values are embedded, thus crucially shaping the ways humans tend to think and act. With this in mind, scholars have scrutinized the manifold effects of the discourses and practices of nature. Scholars from a variety of countries demonstrated that policies that sought to "manage" or "govern" nature (often under the name of "conservation") resulted in particular knowledge production with regard to the environment and the formation of new kinds of subject-nature relationships (Agrawal 2005; Braun 2002; Kosek 2006; West 2006). It has been suggested that the cultural implications of the powerful and authoritative status that nature invokes have served as a decisive criterion around which norms of morality are established in society (Cronon 1996; Rabinow 1996; Sahlins 1976, 2008).

Agentive Objects

In the reevaluation of the ideas and roles of objects, Hamilton and Placas (2011) note that more anthropologists are becoming attentive to the ways in which the ontological distinction between subject and object is made and, often uncritically, incorporated in conventional anthropological studies. In this approach, agency is primarily attributed to subjects; the status of subjects as interpreters or observers is usually distinguished from that of objects that "wait" to be interpreted or observed by the subjects (Latour 1993). This often leads to diminishing ethnographical dimensions of the fieldwork. For example, lively interactions or dialogues that occurred in the field might be constricted in the process of writing to the realm of mere subjects' interpretations (Clifford 1986; Marcus and Cushman 1982). The contexts, including objects, that help make up the atmosphere of an interaction are minimized in favor of a subject's ability to apprehend the interaction (Keane

2005). In short, anthropological concerns are diverted to the ways in which agentive, human subjects confer meanings on and act upon nonagentive, nonhuman objects, thereby reinforcing the ontological distinctions between subject and object (Miller 2005). However, material forms can have agency that crucially influences human practices and their subsequent effects (Haraway 2008; Kosek 2010; Mitchell 2002). A key objective in this approach is, as Miller (2005: 38) aptly states, “to show how the things that people make, make people.” The materiality perspectives that do not equate objects merely with subjects’ cultural interpretations have increasingly become a key venue for anthropologists to better fathom the complexities of everyday practices in a given cultural tradition (Appadurai 1986; Bennett 2010; Bourdieu 1977; Keane 2005; Kopytoff 1986; Miller 2005; Mitchell 2002).

It is against this background that this article turns to exploring the roles of objects—a map, a poster, and a photograph—in how humans, not *independent* of context, but in *relation* to it, apprehend everyday experience and the material environment. In doing so, it also contributes to the enrichment of ethnographical studies that carefully heed the ways the subject-object relationships unfold.

Concerns of Environmentalists in Northern Tehran and My Research Interests

The activity schemes of the NGO described in detail below are fundamentally very similar to those found in many other environmental NGOs that I visited. Most commonly, these NGOs consider grassroots-based education to be key to increasing environmental awareness in Iran. For example, the founder of a mountain-climbing NGO that promotes “serenity and harmony of the environment” described the NGO’s primary activity thus: “Among many activities, we go to mountains on such occasions as Earth Day and World Mountain-Climbing Day and initiate face-to-face dialogues with people in order to keep the mountains as intact as possible. To this end, it is imperative that we educate the people about the principles of mountain climbing or tourists’ responsibilities toward the mountains.” Among these principles, as described to me, is the need to avoid littering while climbing. Many environmental NGOs suggested that a majority of ordinary citizens seem to be uneducated about what led to the current critical environmental situation in Iran. They feel that the NGOs



themselves, to promote environmental protection, can be most efficient by establishing hospitable connections with ordinary citizens and educating them in this regard.

In the fall of 2009, I conducted an interview with environmental NGO workers in their office in northern Tehran. Upon my arrival at the office, the NGO director, Mohammad, and an executive assistant, Ali, pleasantly welcomed me at the entrance door. As I was ushered to a conference table for an interview, everyone stood up (a sign to show one's respect for others) and warmly welcomed my presence. The interview was centered on my prepared questions and was intended to be semistructured and open-ended. Mohammad and Ali informed me that the organization had been established 13 years ago and is made up of about 100 members based in Tehran. Their main goal is to spread a general environmental awareness among ordinary Iranians. The kinds of activities they have accomplished include lessons on environmental issues at local schools for students and, occasionally, housewives; publications on environmental pollution; and a project called a "material consumption project" in which they invited ordinary citizens to the office and taught them energy-efficient ways of consuming home products, among others.

Mohammad and Ali noted that, although perceptions are still inadequate, urban Iranians' awareness of the environment has steadily improved. Mohammad stated, "I can tell the changes regarding people's awareness because of the changes happening around us lately. Previously, if people saw the trees being cut or damaged in the streets, they used to let that go. But, nowadays, they would respond to this situation by contacting a municipality and even inquiring about what had happened. Also, they would contact a municipality if water was not sufficiently supplied to the streets' trees." While nodding, Ali expressed agreement with Mohammad's view on urban Iranians' growing environmental awareness. In the first 20 minutes of the interview, I did not particularly notice anything that epitomized Iranian ways of practicing environmentalism. In fact, many environmentalists I interviewed alluded to an international current of environmentalism; Iran's approach to environmental problems often seemed to be no different from that of other countries. For instance, the international environment conventions, such as the ones held in Rio de Janeiro and Copenhagen, and internationally renowned environmental works, notably *Silent Spring*⁸ by Rachel Carson, were often mentioned with reference to the environmentalists' own practice and perception of the environment. After all, the stories shared by Mohammad and Ali were not un-

like environmental narratives I encountered while growing up in Japan and studying in the United States.

In an attempt to investigate possible changes in urban Iranians' worldviews in light of recent environmental awareness, we discussed their definitions of nature. Mohammad shared that "nature is our surrounding environment that is intact and that is not affected by human forces, [such as] mountains, rivers, deserts, and forests." I turned to Ali, who, with a smile, stated, "My definition of nature is new. [laughter] Nature means the earth. The less damage that is caused by humans, the more we find nature. For example, this is the case when we see less number of houses or cars." These definitions of nature turned out to be fairly similar to those found in the West, where nature is understood in contrast to the artificial human world.

From many such interviews and participant observations, I came to see that many Iranian environmentalists, while implementing various environment-related projects, essentially shared the discourses and practices based on scientific, ecological analytical frameworks (Abe 2012). Some environmental NGOs are pursuing purely scientific research and projects to a greater degree than others. Such NGOs often invite university professors or graduate students to participate in their public events or publications in order to further public environmental awareness. I was slightly taken aback to find that the founder of an NGO that specializes in mountain research even criticized other mountain-related NGOs for not being scientific enough. With his fluent English, the language that he claimed one must be acquainted with to be up-to-date with the cutting-edge trend of environmentalism, he told me that the collecting of litter in the mountains that is practiced by other NGOs is not good enough for mountain preservation. Rather, he emphasized that this issue must be approached with a scientific scheme that involves the studies of agriculture, regional knowledge, and sources of degradation, among others. Is the environmental movement in Iran basically indistinguishable from that in the West? Are its frameworks and working assumptions the same? In this context I turned to inquire about other ways in which Iranian environmentalism might be unfolding.

Map, Territory, and the Nation

After the recorded interview in the NGO office, which consisted of more or less formal interaction, I spoke with Mohammad and Ali about



the subject matter in a much more relaxed atmosphere. This allowed for much more flexibility of gestures, comfortable postures, facial expressions, and involvement with other informants (Riggins 1990). As Goffman (1974) points out, nonlinguistic elements in linguistic interactions greatly influence how one interacts with another. Perhaps, partially for this reason, these informal conversations took an unexpected turn in ways that shed new light on my understandings of Iranian environmentalism.

I noticed, although retrospectively, something in our conversation that I had not noticed during the recorded interview. The informants narrated the stories of nature in Iran by emphasizing biological and geographical diversity; the concept of diversity appears to be key in defining nature, particularly in relation to the Iranian nation. While we conversed about environmental situations in other regions of Iran, another informant, Reza, pointed to a map hanging on the wall and in an excited tone said, "Look at this map!" In the map,⁹ the territory of Iran is discernable from that of other neighboring countries because of its color. Different colors—earth color, light yellow, light green, or light blue, depending on the geographical features—are used to depict the Iranian territory, whereas territories of other neighboring countries are shown only in white, with their names. The Caspian Sea, located in the north of Iran, and the Persian Gulf, in the south of Iran, are both depicted in blue. The map also includes the names of major cities and provinces. The red lines that connect cities show the major paved roads in Iran and also indicate the distribution of human and nonhuman habitats.

Maintaining the passionate tone, Reza continued, "This is a map of Iran!" Encircling the entire country with his right hand, he explained to me, "As you can see, Iran has a variety of geographical features that other countries don't, for example: mountains, seas, deserts, plains, and forests from the north to the south." He then went on to explain the details of these geographical features: "In the north, we have the Caspian Sea. There are vast areas of forests there, and they are green and very beautiful. Have you ever been there before? That is where you can find nature. Ultimately, it is this nature in Iran that we environmentalists strive to protect and conserve." His enthusiastic explanations about Iranian nature with reference to the map occurred spontaneously, in sharp contrast with the interview, where the informants' interactions and responses were rather carefully thought out and chosen.

Here, the map served as a medium through which Iranian nature was critically imbued with the images of the Iranian nation, thereby

displaying how the materiality of an object crucially shapes the ways subjects conceptualize the surrounding environment (Miller 2005; Keane 2005). How is this connection between nature and nation established? In the revised edition of *Imagined Communities*, Benedict Anderson (1991) reassesses his original contention as to how nationalism became widespread in Asia and Africa after World War II. His early assumption was that the nationalist movements essentially evolved from the nations' ingenuous adaptation of the nineteenth-century nation-building policies of Europe. Retrospectively, however, Anderson considers this assumption "hasty and superficial" and then identifies a map as one of three institutions that profoundly influenced the ways the nation was effectively objectified as such (Anderson 1991: 163–164).

Maps played and, I argue, continue to play a significant role in the objectification of the Iranian nation and in the ways the environmentalists relate themselves to the nation. Historically, the introduction of cartography to Iran began with Iran's efforts to defend cultural myths about "homeland" (*vatan*)¹⁰ and actual territorial threats from Russia, Britain, and, to a lesser extent, the Ottoman Empire in the late nineteenth century (Kashani-Sabet 1999). The term *vatan* implies Iranians' inalienable, intimate sense of connection to their homeland and nation. Although the concept of *vatan* was deliberately used for political gain by Nasr al-Din Shah at one point in the nineteenth century, *vatan* has also provided a lasting cultural framework that crucially shapes Iranians' understanding of themselves as a collective. *Vatan* is imagined as both a "territorial and aterritorial originary home," whose shared origin is traced back as far as 6,000 years (Tavakoli-Targhi 2001: 113).¹¹ Kashani-Sabet (1999: 51) recounts historic impacts that this connection created in Iran as follows: "*Vatan* provided a milieu in which people could define themselves through their most immediate experiences as individuals, since nothing was more viscerally felt than one's birthplace, which was invariably tied to land." This intimate sense of connection to the homeland conditioned by *vatan* is, as I encountered in the field, still observed in Iran today. The sense of comradeship that is bonded by fidelity to a nation is strongly implied in the usages of *vatan*-related terms. For example, Iranians utilize the term *ham-vatan* (same-*vatan*) to describe the citizens of the same country to which they belong collectively. The homeland is viscerally felt, shared, and embraced between what are viewed as comrades. A profound connection between the demarcation of the territory on maps and the Iranian nation was made historically. That connection affects



the ways Iranian environmentalists regard themselves with respect to the Iranian nation today. It is through this background, I contend, that the link between the map, the nation, and nature is formed in ways that are unique to an Iranian context.

Maps of Iran show its rigid boundaries with neighboring countries; they clearly mark the territory of the nation and provide a context in which represented nature is understood to be an inalienable, valuable belonging of the nation. Against this background, I argue, the map was employed by Reza to delineate Iranian nature. The map facilitated establishing the connection between nature and nation in such a way that this nature is perceived to be congruous with the scientific framework of their projects. While working on their scientific scheme-based projects, the environmentalists orient themselves through this alternative framework of the conception of nature.

With reference to the map, Reza understands Iran to be a unique country that is awash with natural resources such as mountains, seas, and deserts, among other features, that other countries do not possess. The Caspian Sea and the Persian Gulf represent such diverse natural resources of Iran. The charged denomination of the Persian Gulf, if not political, perhaps reflects the Iranian viewpoint that regards the diverse natural resources of the gulf as the nation's intrinsic possessions. In Reza's description of nature, the image of the Iranian nation also clearly stood out. He stressed and spoke of a unique Iranian nature in contrastive terms with other nations. Many of my informants, whether or not they were environmentalists, also identified Iran to be a distinctive country in that it has four seasons, contrasting with what they see as its essentially seasonless neighboring (Arab) countries to the south and west. Reza's view on nature well represents Iranian nature as described to me by many other informants. The characteristics that Reza considers to crucially define Iranian nature are clearly laid out in relation to the Iranian nation. The map adeptly embodied these geographical features and helped Reza to describe Iranian nature. The conversations demonstrate that Reza and the map both shape and participate in the conceptualization of Iranian nature. It is not that Reza merely provides his culturally filtered views of the map that exists independently from him, but rather that the map about which he gave explanations helped to define nature in a way that is uniquely Iranian. This is a *sui generis* feature of the environmentalists' perception that mingles with Western scientific research and projects. A map therefore is one of the emerging objects used in the discussion of environmental issues in Iran that has prompted some environmental-

ists and other Iranians to understand nature in relation to the Iranian nation.

Poster, Social Memory, and the Nation

From the conversations that transpired in the NGO office, I also came to recognize another unique way in which an object, specifically, a poster, crucially shaped subjects' understandings of nature. My informants revealed a perspective of a contiguous relationship of nature and the nation. Yet, through their social memories of the ancient Iranian nation, their environmental schemes are seen not only as the improvement of physical conditions of nature, but also as a way to return to the "height of civilization" that they claim ancient Iranians enjoyed. Here, a social memory of the past, through a poster, invoked a nostalgic feeling among the informants, and this social remembering fundamentally configured their mental dispositions for environmental activities.

Having overheard Reza's demonstration of the map, Ali interjected and pointed to a poster hanging next to the map. With the poster, he was trying to tell me what he regarded as the fundamental backbone around which their environmental activities are fleshed out. He tried to direct my attention to the poster, nudging and uttering to me, "Look at this poster! This is Iran. Iran has beautiful nature in the mountains." The poster is an image of one of the most famous mountains in Iran, Damavand. It stands out against the background of the blue sky and a few scattered clouds, the very central portion showing the top of the mountain, which is mostly covered with snow. At the foot of the mountain, dozens of red flowers are blooming on a wide, light green grassy area. The color contrast of the image, blue sky, white, light green, and red, seemingly represents the richness of nature that exists in Iran. White, green, and red are also the colors of the Iranian national flag.

"But," he continued, "this is now being endangered and destroyed by the rapid, ruthless expansion of industries. We have to stop this and find ways to protect this nature." Mohammad then added, pointing to the poster, "This mountain, Damavand, has existed since the ancient time when Iran was at the height of our history. The Iranians used to respect nature back then, but the people now have forgotten about the importance of it. It is important that we remember and restore their living principles that imbued the ancient Iranian civiliza-



tion." Nodding lightly, Reza commented in a conclusive tone, "In this light, our current environmental activities are fundamentally striving to awaken people's awareness of the environment, because we know that we used to have great respect for nature, through which the height of our civilization was made possible and maintained. This is a slow, but certain path to accomplish our goals."

Objects invoke particular memories among the environmentalists and these objects crucially define their conceptions of nature in regard to nationhood. According to Halbwachs (1992), memories are not entirely reducible to an individual psyche, but rather are wrought always in relation to the collective, group prospects born in the social milieu: "Individual memory is ... a part or an aspect of group memory, since each impression and each fact, even if it apparently concerns a particular person exclusively, leaves a lasting memory ... *One cannot in fact think about the events of one's past without discoursing upon them*" (Halbwachs 1992: 53, emphasis added). Therefore, memories, far from being a spontaneous individual act, are inescapably shaped by the discursive social norms of what to remember, or to forget. It is from this perspective that the conversations about Damavand and its historical significance mentioned above can be regarded more as discourses that embody social memory than as those of individual views free of society.

Objects play a critical role in the installment of social memory among targeted populations. Nora (1989), for example, enumerates a network of objects that are often being employed to create and preserve particular kinds of social memory in the contemporary era—museums, monuments, and visual images whose materials and meanings, he claimed, had been purposefully sorted out in advance. Conerton (1989) and Zerubavel (2003) also stress the roles objects play in disseminating certain images and even sounds of the past, which then guides the subject to form particular understandings and inculcate particular memories. Moreover, the significance of objects with respect to social memory lies in their ability to elicit memories within the subjects; the subjects along with, not independent of, the objects then begin to develop their worldviews and practices (Turkle 2007; Warin and Dennis 2005). This dialectic relationship between objects and social memory aptly captures the interactions that my informants engaged in with reference to the Damavand poster.

The poster, becoming a site of social memory and a symbol of the nation, cued Reza and Ali to discuss Iranian nature and their environmental projects in ways that are nostalgically tied to the ancient Iran-

ian nation. Damavand is one of the most well-known mountains in Iran, not only because it is the highest mountain, but also because it is reckoned a national symbol of Iran. It is depicted in the epic *Shah-nameh* by Ferdowsi, with which few Iranians are unacquainted. Therefore, Damavand is understood to have symbolic, historical significance to the Iranian nation, and it is in this context that Iranian nature, being reified in Damavand, is juxtaposed with what is interpreted to be a prominent period in Iranian history. Damavand becomes familiar to Iranians, especially in Tehran, through such social memories and is a place that is imbued with significance and experienced meaningfully (Basso 1996; Casey 1996).

Zerubavel scrutinizes a variety of ways in which social groups attempt to “transform essentially unstructured series of events into seemingly coherent *historical narratives*” (2003: 13, emphasis in original). How do Iranian historical narratives influence social memory? Zerubavel’s insight on historical narratives of decline is instructive here. He claims that those who mostly feature decline in their outlook on history tend to organize memory in such a way that they “remember [their] ancestors as larger-than-life, almost superhuman figures” (2003: 17). Although “superhuman” is a hyperbolizing term in an Iranian context, Reza and Ali shared this tendency of organizing memory in the way Zerubavel describes. With the Damavand poster, they referred to ancient Iran as a period in which people lived with higher living principles with respect to nature, and mentioned that this period embodied an ideal model of society and civilization toward which their environmental efforts were directed. They considered that these living principles were the driving forces that kept the height of civilization intact. Their ancestors were remembered as the representative figures of Iran from which they drew inspiration for their activities and through which fundamental solutions to environmental problems were filtered and invoked. Many Iranians with whom I conversed shared this propensity of remembering this period, often in a nostalgic tone, as being the highest time of Iranian history that, they said, must be brought back and restored in contemporary settings. This may help explain why many environmentalists see education as a key prescription to furthering environmental awareness in Iran. They believe that it is not the Iranians who are to be blamed for environmental problems, but rather their lack of education. They argue that Iranians used to treat nature with respect and in ways that allowed the ancient civilization to prosper, so through proper education, this type of respect can be restored.



This historical narrative is intricately embedded in objects, and dialectically the objects enrich the historical narrative in new manners (Bourdieu 1977). In the first place, the environmentalists put the poster and the map in the office for a reason; these objects must have represented and embodied the values associated with their environmental activities. At the same time, the meanings of the poster and map are constantly yet contingently deepened as the environmentalists talk about and use them on different occasions. Sartre (1965) describes this dialectical process, in which objects reveal certain affective qualities to subjects:

When knowledge and feeling are oriented toward something real, actually perceived, the thing, like a reflector, returns the light it has received from it. As a result of this continual interaction, meaning is continually enriched at the same time as the object soaks up affective qualities. The object thus obtains its own particular depth and richness. (Cited in Basso 1996: 108)

Thus, the Damavand poster is not just an object that is waiting to be interpreted by the environmentalists. Rather, the poster, through which the nostalgic emotions of the environmentalists are evoked, participates in and is a part of the processes by which Iranian nature is being delineated and practiced. The poster effectively links their nostalgic historical sense with their environmental projects. While scientific, ecological discourses of nature have increasingly become prevalent, this Iranian nature that is emotionally tied to ancient Iran is, I argue, a key component of the growing environmental awareness in Iran.

This Iranian nature, buttressed through the environmentalists' involvements with the map and the Damavand poster—the nature that is claimed to encompass distinctively diverse natural resources and that is historically rooted—has significant effects on the ways the environmentalists perceive the current environmental challenges they face. My analyses suggest that the loss of nature is viewed as the loss of the nation, and therefore they are even more driven to protect nature in Iran.

Photograph, Personal Intimacy, and the Nation's Endangered Animals

Having recognized the emerging link between nature and the nation in the field, I decided to visit environmental NGOs whose activities are primarily focused on the protection of wildlife (*hayat-e vahshi*) in

Iran, as many of my informants frequently mentioned to me the significance of these NGOs' activities, from their environmental perspectives. Why is wildlife considered to be so important among the environmentalists?

I learned from numerous conversations with environmentalists in Iran that cheetahs, particularly Asiatic cheetahs (*yuz-e asiati*), are given special importance. The Asiatic cheetah is listed as a critically endangered species by the International Union for Conservation of Nature (IUCN), a leading international organization for conservation of wildlife and the environment, whose affiliations to Iranian NGOs were frequently mentioned. There are two types of cheetah in the world: the African cheetah and the Asiatic cheetah. While the habitats of the former are somewhat limited in the African continent, the latter can now be found nowhere but Iran. The Asiatic cheetahs once had habitation from the shores of the Mediterranean in the west to India in the east. However, the combination of extensive hunting and the depletion of the wild prey base is said to have contributed to the extinction of Asiatic cheetahs in these habitats, save for Iran (Mallon 2007). It is from this standpoint that cheetahs have come to be viewed as a symbolic animal and that the connection between cheetahs and environmentalism in Iran is made.

For example, during the formal interview, Hadi, a cofounder of an environmental NGO, passionately spoke about the importance of the Asiatic cheetahs for his organization as well as for Iran:

The cheetahs are extinct from Asia and now remain only in Iran. Unfortunately, in the past, perhaps 50 to 70 years ago, some species such as the Caspian tiger and the Siberian crane went extinct in Iran. We do not want this to happen to cheetahs. They remain only in Iran. They are like the symbol of the wild animal in Iran. In this light, it is very important that we conserve the symbol of our country.

Cheetahs are said to show the authentic (*asli*) quality of a mammal and therefore represent the profusion of wildlife found in Iran. This view reveals how Iranian environmentalists uniquely understand the relationships between endangered animals and nation.

Asli crucially delineates the degree of what is considered authentic and worthy, and what is not. For example, original electronic and fabric products¹² are deemed prominent and invaluable, given that fabricated products (*taqallobi*) are widespread and are often viewed with a sense of distrust. The sense of qualification evoked through *asli* is in tandem with what Adelkhah (2000) identifies as the competitive character of Iranian society, in ways that heighten Iranians' sense of



national pride via endangered animals. According to Adelkhah, becoming “number one” is a surging concern among the people in various fields, such as sports and knowledge. The logic of authenticity is not limited to these fields, but extends to the ways that nations are compared and contrasted. From this perspective, the endangered animals that have remained only in Iran are viewed to possess an authentic quality, thereby exceptionally increasing the status of the Iranian nation in comparison with other nations in which no such animals are thought to exist. This interview demonstrates that the uniqueness of animal species with authentic qualities is what essentially defines the characteristics of nature in Iran. How, then, is this example different from the previous cases wherein Iranian nature is discussed and defined somewhat similarly through the map and the poster?

I noticed that the photographs of cheetahs displayed in an environmental NGO office greatly encouraged the workers there to discuss nature in particular manners. Yet the ways nationhood is linked with nature are different in this case from the ways it occurred above; personal intimacy, rather than social memories, is what essentially conditioned these environmentalists to delineate and discuss Iranian nature. Informal, casual conversations after the interview once again helped to create a friendly atmosphere in which our interactions were not restricted to face-to-face, essentially questionnaire-driven, conversations, but encompassed other contextual elements that sparked our conversations in other ways (Briggs 2007). It led us into exuberant conversations where personal life stories, emotional experiences, and even heated debates almost automatically occurred, involving differing kinds of objects in the room. These settings greatly helped me to see how personal intimacy, and not only historical, nostalgic meanings, was pivotal to the environmentalists’ understanding of Iranian nature.

After the recorded interview, I waited in the office for a friend, Hossein, also a friend of Hadi. Upon Hossein’s arrival, I asked the two of them if I could take a picture of three photographs that were displayed in the office so that I would better remember the context of my visit. Noticeably, one of those photos showed a cheetah against a background of trees with the sun shining sporadically through the branches. On the bottom of the photograph,¹³ from left to right, there are 11 images of the animals that are believed to reside in the region, including a jackal (*shoghal*), a wolf (*gorg*), a cheetah (*yuz-e palang*), and a leopard (*palang*). On the far right of this row, there is a map that shows the location of this region. Below these images on the left, five

logos of conservation project sponsors are shown. These include major environmental organizations in Iran, most notably the Department of the Environment and the UNDP (United Nations Development Programme). A line next to these logos reads as follows:

Asiatic cheetah is one of the species that is seriously facing extinction and whose lineage has been limited to Iran. Therefore, the conservation of these rare kinds and their habitats has a special importance. The conservation project of Asiatic cheetahs since the year 1380 (2001) has been required, and we have found remarkable success in these projects. One of our most important obligations is to raise recognition of the sensitive habitats of these valuable animals. One of the most important habitats of cheetahs in Iran is Kavir National Park, which can be firmly named as one of the most original and least hostile habitats ...¹⁴

While taking pictures, I initiated conversations with Hossein and Hadi. Looking at these pictures, Hossein began to tell me about his personal encounter and experience with wildlife as follows: “You know, I like to travel everywhere in Iran and other parts of the world. Especially, I like to visit the places where I can be immersed in wildlife. I often go visit these places with friends and spend time in the middle of nature.” With a few nods, Hadi also mentioned, “Actually, I just got back from an ecotour a few days ago. I wish you’d known about it, so that you could have joined us! We spent the entire time in nature. We saw various kinds of wildlife, like birds, in that area, and the trip was refreshing in many respects.” Hadi continued, “Some animals are found only in Iran, and they are so precious not only for the environmentalists but also for Iranians. That is why they are carefully conserved at national parks.” Pointing to the cheetah in the photograph and then putting his right hand to his heart (a sign of intimacy), Hossein smiled at me and said, “Yes! Indeed, this picture was taken at a national park. Cheetahs are so dear to me. I mean it, and feel it by heart because I have been closely watching and sometimes directly interacting with wildlife. I feel obliged, as an Iranian, to protect these animals from possible dangers, such as environmental destruction. That is why I am trying as much as possible to engage in environmental activities.”

In these interactions, the photograph functioned as a key medium around which conversations about wildlife in Iran, nature, and the nation revolved. The conversations initially started with the implicit reference to the photograph I was holding, and the contents of our conversations were dictated by the ways photographic messages are revealed to my informants. Regarding photographic presentations in



the modern era, Barthes points out an essential characteristic in that “the literal message appears as the *support* of the ‘symbolic’ message” (1977: 37, emphasis in original). Following Barthes, I consider that the description of the Asiatic cheetah in the photograph supplements the symbolic messages instantaneously emanating from the image.

The measure of our conversations was laid out by photographic messages in this example. The visual image of the cheetah in the national park formed an emphatic symbolic message. This reveals the linkage between cheetahs as an endangered species, nature, and the Iranian nation. The literal text, along with the smaller images of other animal species in the habitat, only serves to reinforce this symbolic message; it describes the importance of cheetahs from both national and international perspectives and calls attention to the sense of duty to protect the cheetahs that is felt by Iranians. Other images of animals present the diversity of living species in the habitat, yet their main roles in this photograph seem to be those of supplementing the image of the cheetah. These themes are what crucially framed the conversations of my informants. Both Hadi and Hossein, with their personal experiences, refer to the prominent status of cheetahs in Iran as a way to describe the unique importance of nature in Iran and its intimate relationship to the nation. The conversations thus show how the photograph and the contexts in which it was presented greatly helped the environmentalists to explain, speak about, and configure nature (Edwards 2001).

Furthermore, what is striking in the conversations is the extent of emotion expressed; this lies in stark contrast with the ways the environmentalists described, in a relatively monotone way, their activities and related issues during the interview. With regard to the ways emotion is invoked, I follow Lutz’s (1988) contention that emotion cannot be reduced to be a universal, merely biological realm upon which cultural variables are mechanically being reflected or added. Rather, emotion must be understood against the background of a moral topography over which a set of problems of social relationships is mapped by the constituting members of society (Lutz and White 1986).

It must be emphasized that the photograph of the cheetah played a central role in the way emotion, especially personal intimacy, surged from the informants. Barthes discusses the unprecedented character of photographs in the following way: “The type of consciousness the photograph involves is indeed truly unprecedented, since it establishes not a consciousness of the *being-there* of the thing ... but an awareness of its *having-been-there*” (1977: 44, emphasis in original).

It is this “having-been-there” sense that I turn to, in order to highlight the ways in which the relationships between cheetahs, nature, and the nation are expressed and delineated.

In the statement above, Barthes points out a general “having-been-there” sense that can be experienced through photographic images. Yet, my examples reveal that the extent of that quality can vary even further, depending on whether one has actual experiences with the objects of the images. The Damavand poster, for example, did provide the environmentalists with this “having-been-there” sense, considering that the object, Damavand, evoked in them nostalgic feelings toward a glorious past and urged them to talk about nature in particular manners. However, the conversations of Hadi and Hossein are grounded in personal, intimate experiences of the object, thus relating the “having-been-there” sense more closely with themselves. They both mentioned in a lively fashion that they had had a direct interaction with wildlife, revealing how their close relationships with wildlife were developed. It is from the stance of this actual experience that the connection between cheetahs, nature, and the nation is being established in this example. Cheetahs are not perceived to be an animal that once lived in the past, the restoration of which would symbolize the Iranian nation and its glamorous identity. Rather, they are understood to be a wildlife species that is, despite its scarcity, presently alive “here-now” (Barthes 1977: 44) in the lands of the Iranian nation. The conservation of cheetahs and other species of wildlife means to these environmentalists the protection of nature that belongs to the nation, particularly the unique, “here-now” living beings of Iran that can be personally and dearly embraced.

This example illuminates how some features of Iranian nature take form through the interactions in which both subjects, Hadi and Hossein, and objects, photographs of the cheetah, participate in the discourses of environmental issues. Hadi and Hossein did not merely provide an account of the photographs of cheetahs that are sitting outside of the human realm; rather, the photographs aroused their emotions and became part of the ways their conceptions of nature are being defined and practiced.

Conclusion

Drawing upon ethnographical materials recently gathered in Iran, this article examined the growing environmental awareness among middle-



and upper-class residents of Tehran. Regarding nature as a site through which essential cultural discourses and practices are embodied, it attempted to demonstrate how conceptions of nature could be aptly used to explain some unique features of Iranian environmentalism. The scientific conception of nature, often through ecological research and projects, is increasingly becoming prevalent and prominent in Iranian society (Abe 2012). However, my analyses show that another conception of nature—one being framed in relation to the Iranian nation—also makes a key contribution to the ways that environmental awareness unfolds in Iran. It is from this perspective that the present article turned to investigate this Iranian conception of nature, paying particular attention to the roles that objects played for environmentalists.

During my fieldwork, I became cognizant of the ways in which my informants exuberantly associated themselves with certain objects in explaining their environmental activities and the nature that they were attempting to conserve. Objects are part of, not separate from, the processes by which Iranian nature is delineated and practiced. In this light, I considered the materiality of objects, which cannot be merely reduced to the realm of subjects' interpretations or purportedly objective accounts, to be a central conceptual scheme; objects affected the ways in which the environmentalists conceptualized some of nature as unique to Iranian contexts.

In these circumstances, three objects—a map, a poster, and a photograph—emerged as the objects that crucially cued the environmentalists to define Iranian conceptions of nature. These interactions emotionally involved the environmentalists, thus disclosing the often-overlooked agentic dimensions of objects in conventional studies. My analyses reveal that these objects, along with emotional ties to the homeland (*vatan*), social memories of the rich, glorious Iranian past, and personal intimacy with the authentic wildlife in Iran, essentially molded their idea of Iranian nature. From these examples, I draw the conclusion that these themes were ultimately drawn from an alternative frame of reference other than ecological science: Iranian nationalism. However, these objects enabled them to profoundly link the conceptions of nature to the Iranian nation in ways that do not contradict scientific ecological discourses of nature. I argue that, ultimately, while scientific research and programs are increasingly encouraged and implemented, this dual character is what largely defines Iranian environmentalism today.

Moreover, the examinations above demonstrate that subject-object relationships are, far from being fixed, configured with histor-

ical contingency; objects are defined and practiced by subjects whose conceptual frameworks both shape and are shaped by the given circumstances in a particular place and time. This indicates that such relationships are inherently processual, and it is here that a semiotic-materiality approach greatly contributes to investigating the subtle, continually changing subject-object relationships that I hope to have demonstrated here.

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Notes

1. *Tarh-e zoux o fard* (odd- and even-number plan) is illustrative of this. It is a traffic plan in Tehran that has been enforced since the fall of 2005 to attenuate the detrimental effects of air pollution. The plan regulates the flow of traffic in the city based on car registration numbers. Personal vehicles with even- and odd-numbered license plates are allowed into the city center on alternate days, thus restricting traffic flow. The authority sees automobile traffic as the primary cause of air pollution and has attempted to solve this problem through scientific research and management.

2. The analyses of this research are based on the two phases of my recent trips to Iran that took place from April 2009 through March 2010 and June through August 2011. During these periods, I conducted formal and informal interviews and participant observations mostly in central and northern Tehran with approximately 100 men and women whose professions included environmental NGO (paid) workers and vol-



unteers, researchers, university students, journalists, and ordinary citizens. My informants' ages ranged from 18 to 65.

3. Hereafter, unless specifically mentioned, the interviewees referred to in this article are generally middle- and upper-class residents of Tehran.

4. I visited 17 environmental NGOs during my fieldwork and conducted interviews with about 35 NGO workers and volunteers, whom I refer to as Iranian environmentalists in this article. The argument made here is essentially drawn from and based on the analyses of these visits.

5. In December 2010, the government put into effect a new law called *hadaf-mandi yaranehha*, whereby cash subsidies are allocated to citizens in order to compensate for government's previous subsidies of everyday items, such as gasoline. Concerning the implementation of this new law, it is generally understood that the government was "motivated less by a sudden conversion to economic liberalization than by the urgent need to reduce imports at a time of international sanctions" (*The Economist*, January 2011, 15).

6. The drying of Orumie Lake is a recent environmental issue about which lively discussions take place from scientific ecological perspectives. The state media, such as ILNA (Iranian Labour News Agency), frequently provide accounts on this issue from the viewpoints of the government and local groups. Similarly, the project of water transport from the Caspian Sea to the central (dry) region of Iran has also recently aroused public environmental awareness, especially with reference to scientific ecology.

7. Courses on sustainable development are mainly offered to graduate and some undergraduate students enrolled in environmental engineering or other environment-related programs in Iranian universities (Moghaddam et al., 2007, 2008). For example, the Graduate Faculty of the Environment at the University of Tehran currently has 33 faculty members and offers related courses such as environmental planning and environmental assessment. The faculty usually accepts 10 to 15 students to the master's program and 2 to 5 students to the PhD program each year (personal communication, May 2012).

8. This book is widely credited with the dawn of environmental movements in the 1960s.

9. Although the original map is unavailable to me, the analyses are made based on a map that has the same features as those depicted in the original, except that the colors are more saturated in the original. The map I describe here is published by Gityashenasi Geographical & Cartographic Institute of Iran, and was accessed in September 2010.

10. *Vatan* is spelled in the same way as *watan* in Arabic. *Watan*, which also means "homeland," indicates somewhat religious connotations in modern thoughts, as the Prophet Muhammad is credited with the saying, "Love of the homeland is a sign of belief" (Encyclopaedia of Islam, s.v. "Watan").

11. This dimension of *vatan* can explain why a fairly large number of Iranian immigrants, who might be politically dissociated from the current Iranian regime, do not pose fundamental challenges to a *vatan* tradition.

12. There are electronic and fabric stores, such as Sony and Nike, in Tehran. However, as many of my informants told me, the status of the products sold at these stores are not "authentic" unless these products are actually imported from Western-related countries.

13. The photograph displayed on the wall in an environmental NGO office was documented in July 2011.
14. Translation is mine.

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