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“IT WAS MY JOB TO KEEP MY CHILDREN SAFE”: SANDRA STEINGRABER AND THE
PARENTAL RHETORIC OF PRECAUTION

By

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Bachelor of Arts, University of Montana, Missoula, Montana, 2012

Thesis

presented in partial fulfillment of the requirements
for the degree of

Master of Arts
in Communication Studies, Rhetoric and Public Discourse

The University of Montana
Missoula, MT

May 2014

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“It Was My Job to Keep My Children Safe”: Sandra Steingraber and the Parental Rhetoric of Precaution

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Advancing the environmental movement requires overcoming a number of rhetorical challenges. Rhetors must negotiate the significant dichotomies of environmental rhetoric including human/nature, public/private, and science/experience. Moreover, they face the challenge of educating and mobilizing uninformed citizens to take action. This analysis focuses on how Sandra Steingraber, an ecologist, writer, and environmental activist, negotiates these challenges. I argue that Steingraber negotiates these challenges by turning to three interrelated rhetorical strategies: the feminine style, autobiography, and synecdoche. I illustrate this through an analysis of two texts Steingraber wrote after becoming a mother: *Having Faith: An Ecologist's Journey to Motherhood*, and *Raising Elijah: Protecting Our Children in an Age of Environmental Crisis*. I argue that Steingraber's rhetoric aids her in overcoming a dichotomous approach to environmental issues, and that *Raising Elijah* is especially effective in positioning her target audience of parents to take action on the individual, collective, and political levels.

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Introduction

Communicating complex scientific processes to an often times uninformed society is no easy task. The environmental movement is in desperate need of experts who can craft messages in a way that establishes a sense of urgency in the minds of the public. Sandra Steingraber, Ph.D. joins a history of female environmental activists including Rachel Carson and Lois Gibbs in the fight against environmental toxins and their threat to human and planetary health. The biologist, “poet laureate,” cancer survivor, and mother of two is an internationally recognized expert on environmental links to cancer (Porter, 2013). She is a sought-after lecturer, distinguished scholar in residence at Ithaca College, contributor to the Huffington Post Blog, and the author of four published books. Steingraber’s first book, *Living Downstream: An Ecologist’s Personal Investigation of Cancer and the Environment* (1997/2010), is now the subject of a feature-length documentary.

The success of Steingraber’s books including *Living Downstream* (1997/2010), *Having Faith: An Ecologist’s Journey to Motherhood* (2003), and her latest release, *Raising Elijah: Protecting Our Children in an Age of Environmental Crisis* (2011), suggests that her work is a rich site for rhetorical analysis. Critics have compared Steingraber’s rhetorical strategies to those of Rachel Carson, a comparison that reflects Steingraber’s powerful ability to raise awareness of environmental issues. Like Carson, Steingraber appeals to both intellect and emotions to promote action and critical thinking. However, Steingraber’s strategy is different from Carson’s in that she focuses primarily on the effects of toxins on human health, rather than their impact on the environment. Buell (2004) compares Steingraber’s focus in *Living Downstream* to that of Carson’s *Silent Spring*: “This change in emphasis indicates Steingraber’s perception of how much worse things have become since Carson’s classic” (p. 115). Whereas Carson focused

primarily on DDT in *Silent Spring*, Steingraber's rhetoric addresses a variety of disturbing environmental issues including everything from toxins in breast milk to the fracking of the Marcellus Shale.

In order to link together numerous environmental threats to human and planetary health, Steingraber advocates action on multiple levels, and elevates the Precautionary Principle as a strategy for approaching potentially harmful situations at large. Guidotti (2012) provides a detailed definition of the Precautionary Principle:

The precautionary principle is the notion that if an activity or innovation presents a risk of harm to the environment or to human beings, conservative measures such as delaying or impeding the introduction of a new action or steps to mitigate damage should be taken, even if cause and effect have not been firmly established and the risk cannot be fully characterized by scientific studies. (p. 63)

Steingraber urges applying the Precautionary Principle to chemicals and assuming no product is safe until it is rigorously tested and proven harmless. An adoption of this approach would require companies to prove their product is safe instead of requiring citizens to prove it is dangerous. The Precautionary Principle rejects the notion that indisputable evidence of product harm is necessary to take action to ban the sale and use of potentially harmful chemicals.

Throughout both *Having Faith* and *Raising Elijah*, Steingraber advocates the Precautionary Principle as both a way of thinking and a realistic solution to the problem of toxins in human bodies and the outside environment.

Steingraber wrote *Living Downstream* before becoming a parent to her two children, Faith and Elijah. Consequently, the book does not have a strong emphasis on children and parenting. In contrast, Steingraber's rhetoric in *Having Faith* and *Raising Elijah* involves a clear

focus on how parents, children, and pregnancy are connected to larger environmental issues. In *Having Faith* and *Raising Elijah*, Steingraber targets parents as mediators of change.

Steingraber's perspectives including scientist, mother, and cancer survivor combine to inform her understanding of toxins, human health, and the environment. Appealing to personal experience while also trying to maintain credibility as a scientist creates unique challenges and opportunities for Steingraber, making her rhetoric a particularly useful site for exploring the tensions between science and experience. Moreover, the challenges of environmental discourse including the human/nature and public/private dichotomies present challenges to activists at large, including Steingraber. In her attempt to raise awareness among ordinary citizens and mobilize them as activists, Steingraber turns to several interrelated rhetorical strategies including the feminine style, synecdoche, and careful movement between autobiography and science. An exploration of Steingraber's rhetorical efforts to educate and mobilize parents holds important implications for the future of environmental rhetoric.

Steingraber's multiple identities create a rhetorical style unique from other influential environmental activists. Steingraber's rhetoric raises two important questions: How does Steingraber's rhetoric in *Having Faith* and *Raising Elijah* negotiate the significant dichotomies of environmental rhetoric including human/nature, public/private, and science/experience? To what extent does Steingraber's rhetorical approach aid her in constituting audiences and positioning them to take action? To answer these questions, I offer an analysis of Steingraber's rhetoric that focuses on her unique approach to the challenges facing the environmental movement.

Central to this study is literature on the feminine style, autobiography, and synecdoche in social movement discourse, particularly in areas of environmental and women's activism. The

feminine style is a rhetorical approach marked by a peer-like tone, evidence based in experience and anecdotes, and invitations for audience participation (Hayden, 2003). Related to the feminine style is autobiography, a rhetorical tool utilized by numerous social movement activists (Benson, 1974; Bryson, 2001; Hope, 2004; Rosteck & Frenztz, 2009). Autobiography involves intersecting stories of personal and social change, allowing rhetors to connect personal behavior to a larger social movement (Hope, 2004). Synecdoche, an important rhetorical tool in social movement discourse, signifies a relationship between two closely related things (Burke, 1969). Burke (1969) describes synecdoche as a form of representation in which the whole can represent the part, or vice versa. Steingraber uses the feminine style, autobiography, and synecdoche together in an attempt to engage and mobilize her audience to become involved in environmental awareness and action.

Bryson (2001) describes *Living Downstream* as a mixture of science and autobiography, but he does not discuss Steingraber's use of the feminine style, synecdoche, or other rhetorical strategies. In *Having Faith* and *Raising Elijah*, Steingraber repeatedly uses personal experiences of pregnancy and motherhood as a way to connect with her audience, provide experiential evidence for her claims, and offer her readers a model for how to respond to a toxic environment. Additionally, Steingraber exhibits a personal tone and strives to create a peer-like relationship with her audience while also maintaining her credibility as a scientist. In *Having Faith* and *Raising Elijah*, Steingraber's use of feminine style and autobiography are inextricably linked. Related to Steingraber's use of autobiography and the feminine style is her use of synecdoche. In *Having Faith* specifically, Steingraber portrays the health of fetuses, mother's wombs, and children as representative of the health of the world's environment. While synecdoche has been shown to oversimplify environmental controversy (Moore, 1993), it can be a powerful rhetorical

device and serve to focus complex discourse (Moore, 2003; Moore, 2009). Because of its various implications, Steingraber's use of synecdoche is of unique interest.

In *Having Faith* and *Raising Elijah*, the feminine style, autobiography, and synecdoche function together to create Steingraber's unique rhetorical style. An understanding of these devices is critical for understanding how Steingraber's rhetoric functions. In the following chapter, I first provide an overview of the environmental movement with specific attention to anti-toxics activism. I then review challenges faced by environmentalists including raising awareness and mobilizing citizens to take interest and act on the imposing dangers of the environmental crisis. Next, in an attempt to link together environmental challenges and rhetoric that attempts to address them, I review literature surrounding the feminine style, autobiography, and synecdoche. I then offer a critical analysis of each text, beginning with *Having Faith*, and, finally, conclude by drawing comparisons between the *Having Faith* and *Raising Elijah* and discussing this study's contributions to theory and practice.

Chapter One

Environmentalism and the Anti-Toxics Movement

Early environmentalism in the United States, dating back to the turn of the 20th century, focused primarily on conservation and preservation of pristine wildlife and wilderness (Szasz, 1994). This contrasts with the focus of modern day activists of the anti-toxics movement, a branch of environmentalism that focuses on environmental threats to human health. Szasz (1994) writes, "Unlike the earlier movement, the modern environmentalism that arose in the 1960s emphasized, instead, that industrial activity pollutes the 'ordinary' environment everywhere and, in the process, threatens people's quality of life, even their very health" (p. 38). Twentieth century anti-toxics activists pushed for an inclusion of human places and spaces in the

definition of environment. Whereas Szasz (1994) highlights the importance of Rachel Carson's 1962 book *Silent Spring* and the events at Love Canal as pivotal points in the anti-toxics movement, Gottlieb (1993) digs even deeper to provide an account of earlier anti-toxics activism in his text, *Forcing the Spring: The Transformation of the American Environmental Movement*.

Early activism. Gottlieb (1993) describes the activism of settlement workers in the early 1900s and notes their roles in organizing and advocating for safe working conditions. Of prominent concern to these activists was establishing a connection between environmental issues and problems of the workplace, with specific attention to women and children (Gottlieb, 1993). For example, a stockyards community near the University of Chicago, known as "Packingtown," contained a dangerous mix of environmental hazards. Gottlieb (1993) states, "Without paved streets, without trees, grass, or shrubbery, with no sewer connections or regular trash pickup, and with its densely polluted air and powerful odors, Packingtown had become an urban catastrophe by the turn of the century" (p. 64-65). The disastrous state of the community inspired settlement worker Mary McDowell, a former kindergarten teacher who became well known for her efforts to mobilize neighborhood organizations and women's clubs, to become a prominent supporter and activist in stockyards strike of 1904 over union recognition (Gottlieb, 1993).

Dowie (1997) also notes the work of early activists including Alice Hamilton in his book, *Losing Ground: American Environmentalism at the Close of the Twentieth Century*. Dowie (1997) speaks to Gottlieb's (1993) review of settlement workers and describes the work of Hamilton. Hamilton, a social reformer, became active in the Hull House settlement in Chicago after preparing for medical studies in Michigan in the late 1880s. Dowie (1997) states, "Hamilton shifted her efforts from medicine to a crusade for occupational health and safety" (p. 21). In 1919, Hamilton was appointed a position as assistant professor at Harvard University.

She became a critic of leaded gasoline and was recognized as an expert in urban environmental health. Dowie (1997) notes that Hamilton was not appreciated in her time. It was long after she died that her views became part of American environmentalism and she received recognition for her work. An analysis of early twentieth century activism demonstrates that instances of anti-toxics environmental activism took place long before Carson's *Silent Spring* and the events at Love Canal. Nonetheless, the work of early activists did not have an immediate, lasting impact on the movement, as did *Silent Spring* or the highly publicized events at Love Canal.

Carson's *Silent Spring*. Rachel Carson's 1962 book *Silent Spring* was a turning point for the environmental movement. Carson emphasized concern over pesticides such as DDT, and drew attention to the relationship between the environment and human health. Gottlieb (1993) argues that Carson wrote *Silent Spring* not simply to present information, but to convince her readers that the situation was of great concern. Noting the long-lasting impact of *Silent Spring*, he states:

The book resonates with the continuing debates about pesticides still relevant today and reflects on issues currently facing the environmental movement. In a period when the question of pollution had just begun, Carson argued that public health and the environment, human and natural environments, were inseparable. (Gottlieb, 1993, p. 84)

This passage highlights an ongoing tension in environmental discourse: breaking the dichotomy of human/nature. In breaking this tension, *Silent Spring* had a profound impact on the environmental movement.

Numerous scholars have analyzed the impact and effectiveness of Carson's writing with specific attention to *Silent Spring* (Corbett, 2000; Gartner, 2000). In his analysis of Carson's rhetoric, Corbett (2000) states, "As we know from subsequent history, Rachel Carson succeeded

in raising the consciousness of a large segment of the American public about the dangers of fouling our own nest: her arguments have been effective” (p. 73). Carson’s rhetorical strategy for communicating complex science to a public audience involved careful attention to creating language that was both accessible and powerful. Gartner (2000) offers a summary of Carson’s strategy in *Silent Spring*: “Give people knowledge in a form they can understand, and they will act on it; show people how we are destroying our earth, and they will move to curb the destruction” (p. 103). Carson made complex information accessible to a lay audience in an attempt to raise consciousness and mobilize citizens to take action. *Silent Spring* sparked a widespread interest in the relationship between toxins and human health, and the legacy of the text still resonates in the work of contemporary activists. Although *Silent Spring* had a profound impact on the environmental movement, it wasn’t until the events at Love Canal that the “toxic waste” became a household phrase (Szasz, 1994).

Love Canal. In 1978 in Buffalo, New York, the community of Love Canal complained about ooze seeping through basement walls, lawns that burned children’s feet, and an overrepresentation of headaches, miscarriages, and serious illnesses (Dowie, 1997). Their complaints went ignored by city officials, who were well aware that the suburb had been built on a landfill operated by Hooker Chemical Company (Dowie, 1997). Lois Gibbs, a housewife and mother living in Love Canal, organized the Love Canal Homeowners Association after her son became ill and she discovered that her community suffered unusually high rates of illness. State epidemiologists visited Love Canal to discover extraordinarily high rates of birth defects, miscarriage, epilepsy, liver abnormality, rectal bleeding, and headaches (Dowie, 1997). Although the New York State Health Commissioner declared that the landfill was a serious threat to the health and safety of residents, the state and federal government were slow to take

action (Dowie, 1997). Dowie (1997) provides an overview of the events that resulted in a clean up of Love Canal:

Finally, in August 1980, when two EPA inspectors arrived to inspect the area, Gibbs and other residents held them “hostage” for several hours, demanding a commitment of action. Two days later President Jimmy Carter arrived and declared Love Canal a national disaster area. He agreed to federal purchase of all homes in the contaminated area and relocation of residents to safer neighborhoods. (p. 128)

Instead of returning to Love Canal after the cleanup, Gibbs moved to Virginia and started the Citizen’s Clearinghouse for Hazardous Wastes (CCHW). CCHW became a national organization and Gibbs rapidly became a prominent voice in the anti-toxics movement.

Dowie (1997) argues that the events at Love Canal changed the environmental movement. He states, “A new class of activist—the angry mother—had been created. She was not angry only at the polluters in her community but, as often as not, at the mainstream environmental operatives in Washington” (Dowie, 1997, p. 129). Similarly, Gottlieb (1993) highlights the actions of Penny Newman, an anti-toxics organizer working around the same time as Gibbs who spent ten years of her life working on the environmental contamination of the Springfellow Acid Pits, a Superfund hazardous waste site. Newman moved into Springfellow when she was 19-years-old and pregnant and soon became concerned with the contamination of the community. A nearby industrial dump contained millions of gallons of hazardous wastes that placed the community in great danger when heavy rains caused the toxins to spill from the site. Newman’s story mirrors that of Gibbs: her son became ill, and the inaction of agencies motivated Newman to lead a community organization.

Dowie (1997) notes that although the disaster received national attention, the events at Love Canal were not isolated. He highlights the fact that Love Canal was a middle-class, white, all-American neighborhood, which significantly influenced public perception of the events (Dowie, 1997). Dowie (1997) describes numerous environmental disasters that took place around the same time as Love Canal. He states:

By 1978 the public had already witnessed dozens of environmental and public health disasters: a fire on the surface of the Cuyahoga River in Ohio, an enormous oil spill in Santa Barbara, the Kepone-poisoning of the well of Hopewell, Virginia, the inadvertent mixture of a cancer-causing fire retardant with cattle feed in Michigan, the 17,000 containers of hazardous chemicals found in the “valley of the drums” near Louisville, the release of a dioxin cloud over Seveso, Italy, and a massive cluster of birth defects among infants in a Woburn, Massachusetts, neighborhood. (p. 128)

At the same time as Love Canal, communities throughout the United States faced environmental threats to health and safety. Drawing attention to environmental problems comes with a number of unique challenges and, unfortunately, many tragedies do not receive sufficient recognition. How rhetors negotiate rhetorical tensions has significant implications for environmental movement building.

Tensions in the Environmental Movement

Environmental contamination warrants discourse from scientists as well as those who have suffered from contamination. Rhetorical tensions in the environmental movement often exist around dichotomous thinking patterns of public/private, human/nature, and science/experience (DiChiro, 1997; Fischer, 2000; Hayden, 1997; Peeples & DeLuca, 2006).

Because environmental problems are closely linked to science, they often involve a conflict between politics and science (Fischer, 2000). Fischer (2000) states:

Whereas social problems typically draw much of their rhetorical power from moral discourse, environmental problems turn much more on arguments about ‘facts.’

Problems such as global warming, while morally charged, tend to be more directly tied to scientific findings and claims. Although they are generally traceable to human agents, environmental problems have an imposing physicality compared to other social problems. (p. 90)

Although every movement for social justice comes with unique challenges and struggles, the environmental movement necessitates scientific expertise as well as citizen activism. Fischer (2000) overviews the development of the environmental movement over the 1970’s and 80’s: “Once established on the political agendas, the struggle over environmental policy shifted from the public arenas of protest to the institutional arenas of expertise, in particular to government administrative arenas” (p. 94). Although “leaving science to the scientists” may seem like a clear solution to environmental problems, experienced-based knowledge warrants public activism. Relying primarily on scientists and government officials to take care of environmental issues is an insufficient strategy to addressing and solving such large-scale problems. In Fischer’s (2000) view, this is not just a numbers game, but rather is a matter of whose voices and which frames of evidence should shape environmental policy. Fischer (2000) writes, “The call for increased participation involves more than just getting larger numbers of people to come to meetings. It also involves bringing another kind of rationality to bear on the decision-making process” (p. 142). Voices of both scientific experts and citizens are critical to advancing the environmental movement.

Environmental justice activists have challenged the notion that experts should have the most authority in defining environmental problems. Because scientists, citizens, parents, and policy makers acquire knowledge in unique ways, the question of who should speak on these issues is inextricably linked to the question of how environmental problems are understood. Di Chiro (1995; 1997) states that the effort to advance experience-based knowledge claims places environmental justice activists against experts who may claim that an area or policy is safe. She states, “grassroots activists question yet another division that is embodied in most environmental discourses and institutions, that is, the different valuation and knowledge possessed by local communities versus those held by environmental scientists” (Di Chiro, 1997, p. 204). Because grassroots level activists do not have traditional “expert” knowledge, they must rely on their experiences to inform them of environmental hazards. In the case of environmental risk narratives, sharing personal experiences can be critically important in creating awareness and precaution.

Beyond the tension between science and experience, the environmental movement faces the challenge of motivating others to get involved and care about these issues. Di Chiro (1997) explains how environmental justice activists argue that the health of humans and the environment are linked. She states, “This is an argument that forcefully challenges many traditional theories and methods for identifying and solving environmental problems that *separate* issues of human health and environmental degradation” (Di Chiro, 1997, p. 203, emphasis in original). Because of the tendency to see humans as separate from nature, contamination of the natural world is not thought to result in contamination of humans. Di Chiro’s work highlights how the human/nature dichotomy relates to action. She asks, “how do people mobilize through action in order to sustain or transform certain relationships with ‘nature’

and their environment?” (Di Chiro, 1995, p. 299-300). This is a question of utmost importance to building the environmental movement. Di Chiro (1995) argues that articulating these problems in a way that highlights collective experience is a strategy used to mobilize citizens. She states, “the framing of a collective experience of alienation and oppression often works to mobilize community activism” (1995, p. 313). When activists articulate common experiences, community members are able to see how personal, private problems are often times political and structural in nature. This serves to mobilize citizens to take action. However, in order to articulate the ways in which private issues reflect public problems, activists face additional challenges.

An additional dichotomy of environmental rhetoric is that of public/private. This relates to motherhood appeals, as motherhood is traditionally viewed by society as a private act. Peeples and DeLuca (2006) explain how mothers of the environmental justice movement face a difficult rhetorical situation when their children become ill from environmental contamination. They state:

The extraordinary characteristics of the situation demand extraordinary responses from the audience: private acts of mothering will not protect their children. This knowledge, in turn, is used to empower mothers to leave routines that may be comfortable for them, where they feel as though they are knowledgeable and competent, and to turn their attention to the elusive public agents that are acting upon them. (Peeples & DeLuca, 2006, p. 71)

To protect their children, mothers seeking environmental justice must violate the norm of what is appropriate for women: they must speak out on a “private” matter in the public sphere. Peeples

and DeLuca (2006) argue that the feminine style is a fitting rhetorical tool for mothers in this situation.

The Feminine Style

Experience-based knowledge expressed through a personal, peer-like tone is often recognized as the feminine style. According to Hayden (2003), “Feminine style entails the use of a personal tone, evidence based in personal examples, experiences and anecdotes, inductive reasoning, the establishment of peer-like relationships with audience members, and invitations for audience participation” (p. 203). Further, the feminine style is also described as an interaction between powerlessness and gender (Hayden, 2003). Rhetors often choose the feminine style when they face an audience more powerful than themselves. Rather than presenting claims in an absolute, objective fashion, they employ a tentative tone. Hayden (2003) writes, “A rhetor utilizing feminine style neither demands nor insists but instead she suggests, invites, and requests. As a form of public address, feminine style is well suited to rhetors who perceive themselves or are perceived by others as wielding little power” (p. 89). Although there is nothing inherently female about the feminine style, it is a common choice for female rhetors seeking to persuade an audience who might otherwise view themselves as powerless (Parry-Giles & Parry-Giles, 1996; Hayden, 2003). Because of her scientific expertise, Steingraber’s use of the feminine style is of particular interest. Although Steingraber employs a peer-like style and includes experiential evidence for her claims, as a scientist, she speaks from a powerful position.

In her analysis of the Boston Women’s Health Book Collective (BWHBC), Hayden (1997) analyzes an example of an epistemology that privileges personal experience. She argues that an epistemology privileging personal experience allows for participation in knowledge claims which “more accurately characterize issues of women’s health and well-being than those

generated from traditional intellectual frameworks” (Hayden, 1997, p. 139). The BWHBC offers an example in which personal experience overpowers scientific knowledge. Hayden (1997) notes of the authors, “Rather than arguing ‘I think, therefore I am,’ this feminist epistemology suggests ‘I experience, therefore I know’” (p. 141). Hayden (1997) argues that although the authors do not reject scientific knowledge, “when there is a dispute between ‘medical explanations’ or facts that have been ‘scientifically proven’ and women’s experiences, their underlying epistemology leads them to privilege the experience of women” (p. 139). Hayden’s argument highlights how the feminine style is inextricably linked to knowledge claims; a rhetor’s tentative, personal tone is reflective of an underlying epistemology. Moreover, this passage demonstrates that scientific and experiential knowledge claims are sometimes at odds with one another. In the case of the BWHBC, experiences, rather than science, are the primary bases for knowledge claims.

A reliance on experience provides an opening for audiences to participate in generating knowledge. The BWHBC authors invite readers to actively participate in the meaning-making process and discover their own “truths.” Hayden (1997) states, “Also helping the establishment of a peer relationship between the authors and the readers is the authors’ discussion of their learning process” (p. 144). The rhetors empower audience members by encouraging them to pay careful attention to their bodily experiences and discover their own truths. Instead of offering readers a set of “facts,” the BWHBC authors encourage open communication with family and friends about bodily knowledge and experiences (Hayden, 1997). Additionally, they discuss group formation in an open-ended fashion. Hayden (1997) states:

Further, when they discuss forming groups, rather than telling their readers *how* this should be done, the authors offer a list of questions that encourage readers to decide for

themselves how to form a group to best meet their perceptions and needs. (p. 156-157, emphasis in original)

The authors not only encourage readers to discover their own truths, but also offer questions to help them get started in this process. The authors' invitations to contribute to the meaning-making process and the list of questions they offer as encouragement provides a compelling example of how rhetors can utilize rhetorical strategies in order to empower audience members. Hayden's (1997) analysis provides a particularly useful lens for analyzing Steingraber's invitations for audience participation and how she strives to empower and mobilize her target audience of parents.

As demonstrated in the BWHBC, use of the feminine style frequently involves an understanding of "truth" as based in personal experience. In their analysis of motherhood and environmental justice, Peebles and DeLuca (2006) examine *Empowering Ourselves: Women and Toxics Organizing*, a text authored by the Citizen's Clearinghouse for Hazardous Wastes, to assess effects of the feminine style and how individuals come to know a collective "truth" through shared location and experiences. Their analysis provides a useful lens for examining Steingraber's peer-like relationship with her audience and construction of herself and other parents as knowers of truth. Peebles and DeLuca (2006) examine how working-class women and women of color employ the feminine style to rhetorically construct "truth" about toxic hazards in their communities. Women from these communities used their shared experience as mothers and community members to rhetorically construct a truth based in shared personal experience (Peebles & DeLuca, 2006).

Although scientific evidence is always helpful, it may not be enough to make the case that a problem exists. In her analysis of the environmental risk of breast cancer, Potts (2004) writes:

Many activists within the breast cancer/environmental movement are seeking to establish the validation of a more radical approach to the epidemiology of breast cancer, which legitimizes “lay” experts in terms of the different epistemological basis for the knowledge claims they make. (p. 140)

Epistemology that values personal experience is unique from traditional “fact” based claims. Potts (2004) continues, “The epistemological premise here is that the personal, the subjective and the partial count” (p. 141). Experiential knowledge claims do not necessarily devalue science, but instead suggest that full scientific evidence is not necessary in order to take action. In the case of environmental risks, Steingraber, as well as many other activists, argue that human health, rather than chemicals and contaminants, should be given the benefit of the doubt. Moreover, Steingraber and other activists push to deconstruct the privileging of scientific knowledge claims in order to place more value on experiential knowledge.

Motherhood is a common theme in environmental justice narratives as it is often mothers who first notice children’s ailments and make connections between illness and industry (Peeples & DeLuca, 2006). When environmental toxins are present and threaten the health of children, parents are robbed of their ability to protect their children. Peeples and DeLuca (2006) state, “References to motherhood are used to mark women’s role in giving and maintaining life and to draw attention to the unnatural condition of its antithesis: the illness and death of children” (p. 69). The women of *Empowering Ourselves* (including Lois Gibbs) felt that their parental duties

were being undermined, and they discussed personal, everyday experiences to encourage audience members to explore their own daily experiences as mothers and community members.

Empowering Ourselves contributes a compelling example of how mothers enter the public sphere to protect their children, bridging the gap between private and public. Moving personal struggles to the public sphere is critical to environmental movement building, as the magnitude of the problem requires extraordinary collective action. Peebles and DeLuca (2006) state, “Because the circumstances are environmental and therefore communal, individual action will not suffice to solve the problem” (p. 68). Collective action is necessary to combat large-scale environmental crises. Peebles and DeLuca (2006) continue, “Private acts of mothering will not protect their children. This knowledge, in turn, is used to empower mothers to leave routines that may be uncomfortable for them” (p. 71). The feminine style fosters a connection between rhetor and audience to create a collective understanding of truth. This collective understanding of truth supports the belief that collective action is necessary to combat large-scale environmental issues. In *Raising Elijah*, Steingraber argues that the environmental crisis is a parenting crisis and uses this claim to urge collective, parental action. Steingraber also advocates for both individual and collective action, but continually states that structural change is critical in order to prevent the contamination of humans and the environment. Because of these links, Peebles and DeLuca’s (2006) analysis of *Empowering Ourselves* is a particularly useful lens for exploring Steingraber’s use of the feminine style.

Environmental justice advocates face a unique rhetorical situation in which there is a strong scientific component of the imposing dangers. Whereas the BWHBC authors encouraged women to seek a more individual understanding of truth, for the women of *Empowering Ourselves*, scientific uncertainty must be countered with overwhelming experiential evidence

(Peeples & DeLuca, 2006). Experiential knowledge claims may be perceived as more subjective than those derived from traditional means, but their tentative nature can serve to make them stronger. In her discussion of the BWHBC, Hayden (1997) writes, “Also contributing to the development of a personal and tentative tone is the authors’ willingness to admit to those issues about which they are unsure” (p. 147). Rather than compete with scientific claims, experience-based epistemology values honesty in acknowledging uncertainty surrounding health issues, encouraging readers to find out their own bodily truths for themselves. While this is the case in Hayden’s analysis of the BWHBC, uncertainty may be viewed differently when it comes to environmental issues. Peeples and DeLuca (2006) state:

Environmental Justice rhetors encourage audience members to trust in their skills and knowledge they already inherently possess to fight the battle for their children.

Additionally, because of the difficult rhetorical situation, Environmental Justice advocates must also present their case with such unquestionable support that their claims will be seen as ‘true’ even though they may not be backed by objective, scientifically verifiable ‘fact.’” (p. 74-75)

Although the BWHBC and *Empowering Ourselves* differ in their methods for encouraging action, they are in agreement in claiming that “truth” is not based in science alone. This tension between science and experience is relevant to Steingraber, as Steingraber’s rhetoric is informed by her personal experiences as a mother as well as her scientific training.

Limits and Strengths of the Feminine Style

Limits. Although there is power in employing the feminine style to legitimize experiential knowledge claims, the strategy comes with inevitable limitations. In her analysis of ecofeminism and the maternal archetype, Stearney (1994) explores the consequences of

rhetorical devices that place mothers as closely linked to nature and the environment. Stearney (1994) states, “The celebration of motherhood as the source of women’s attunement to nature and as a feminine universal also overemphasizes the place of motherhood in women’s lives, and splits off women who are not mothers into a theoretical cul-de-sac” (p. 155). Although the maternal archetype is certainly not a universal trait of the feminine style, Stearney’s (1994) observation highlights the inherent risks of motherhood-based rhetoric. Rhetorical strategies targeting mothers excludes those who are childless, which can be potentially dangerous. Stearney (1994) states, “Our best hope for environmental recovery is to obtain the commitment and the skills of as many people as possible” (p. 156). Peeples and DeLuca (2006) similarly highlight this limitation of the feminine style. They state, “‘Motherhood’ may be more effective in gaining support from those who believe they share the same situation than in convincing others that the situation exists” (Peeples & DeLuca, 2006, p. 82). It may be wise to target mothers, but this choice has unintended limitations and risks, particularly in terms of audience.

Strengths. While many scholars fairly point out limits of the feminine style, others have argued that in specific cases, voices of motherhood and use of the feminine style can have powerful, positive effects (Fabj, 1993; Hayden, 2003). In her analysis of the rhetoric of Latin American mothers whose children disappeared under military dictatorship from 1976 to 1983, Fabj (1993) writes:

They use the arguments with which they are most familiar and the role for which they are most respected and with which they most identify, their identity as mothers, as a stronghold from which to speak out against the crimes committed in their country. (p. 1)

Fabj (1993) notes that although the mothers had no choice but to use their identity as parents to demand information on their missing children, they used their identity as mothers strategically,

allowing them to make use of “avenues of discourse unavailable to men” (p. 7). Hayden’s (2003) analysis of the Million Mom March, a rally in which over 750,000 people came to listen to mothers speak out against gun violence, also highlights a case in which maternal, feminine appeals are both powerful and positive. While she recognizes criticisms of the feminine style, Hayden (2003) ultimately argues that the Million Mom March promotes a collective identity amongst mothers, parents, and community members at large. She states, “When participants gather together as mothers, they transform maternity from an individual experience and a private relationship into a public performance based in a set of shared values and enlarged responsibilities” (Hayden, 2003, p. 204). This statement connects to Peebles and DeLuca’s (2006) analysis of *Empowering Ourselves*; mothers leave the private sphere to speak on behalf of their children by appealing to shared values and experiences.

Although the feminine style is in many ways limited, it serves to empower audiences who may otherwise view themselves as powerless and, moreover, can promote a sense of community. This demonstrates that, when used strategically, the feminine style is powerful and effective. The feminine style and experience-based epistemology help feminist and environmental advocates to organize and construct a collective identity of motivated, empowered citizens. The feminine style relates to an additional rhetorical strategy also employed by Steingraber: autobiography.

Autobiography

Because of their central role in understanding social movements, autobiographies have proved a valuable site for rhetorical study (Benson, 1974; Bryson, 2001; Hope, 2004; Rosteck & Frentz, 2009). In her analysis of the autobiographies of Lois Gibbs’ *Love Canal: My Story* and Sandra Steingraber’s *Living Downstream: An Ecologist’s Personal Investigation of Cancer and*

the Environment, Hope (2004) writes, “In movements for equality and human rights especially, the autobiographical voice has been a major source of rhetorical power” (p. 79). Specifically, movement autobiography offers examples of how individual action fosters social change. Hope (2004) continues, “Movement autobiography is further distinguished by the intersecting stories of personal change and social change, especially when movement figures chronicle their own transformations in tandem with historical events” (p. 79). This unique connection between social movement and personal behavior in autobiography echoes the second-wave feminist mantra that the personal is political. Autobiography offers writers the opportunity to tell the story of their own development as an advocate of social change. Hope (2004) continues, “Gibbs and Steingraber each use personal history to write herself as an evidentiary character in support of citizen action and environmental policy reform” (p. 82). Although personal stories are a powerful way to convey support for a movement or policy, they come with a number of challenges and constraints.

Hope (2004) describes how unlike much of women’s rights discourse, the relationship between health and environment is often informed by scientific debate. She argues that this leads to two problems for both Gibbs and Steingraber. She writes, “First is the severe constraint against recasting the personal experience of private lives as evidence in the public discourse of science” (Hope, 2004, p. 82). Bryson (2001) also notes the constraints of writing personal experience into scientific debate. When autobiography is combined with argumentation, especially when empirical data are involved, the writing becomes complex and even risky (Bryson, 2001). According to Bryson (2001), the supposed objectivity of science mixed with the subjectivity of personal experience creates a tension for Steingraber in *Living Downstream*.

Bryson (2001) argues that Steingraber is ultimately successful in weaving autobiography into scientific argument in *Living Downstream*. He states:

Though science is the heart of *Living Downstream*, (and makes up nine-tenths of the book's content), the author's personal approach keeps us intellectually grounded and oriented as we sometimes struggle with complex ecological concepts, and ultimately reinforces her ethical argument that we must take action even without the benefit of full and perfect knowledge. (Bryson, 2001, p. 174)

According to Bryson's (2001) analysis, Steingraber is successful in overcoming the challenges that come with combining argument and autobiography. By creatively using a personal approach to keep her audience grounded, Steingraber makes complex science more accessible.

In addition to facing the constraint of framing personal experience as evidence in scientific debate, both Steingraber and Gibbs work against "the gendered construction of what constitutes an environment worthy of public policy" (Hope, 2004, p. 82). Although both write powerful autobiographies, Gibbs and Steingraber approach their writing from very different backgrounds. Gibbs, a housewife turned environmental activist, had no scientific knowledge before her family became sick from the contamination of Love Canal and she sought out scientific evidence on her own. In contrast, Steingraber authors *Living Downstream* with a Ph.D. in biology and supplements her scientific knowledge by sharing her personal experience with cancer. Hope (2004) writes:

Steingraber's story is told as a mystery in which she is both victim and scientific investigator. In this dual role, she challenged the confining demands of scientific impersonality, and framed her cancer narrative in a voice enlarged by her individual history and by her extraordinary knowledge of place. Unlike Gibbs, Steingraber's public

voice was not constrained by the traditional female role, but as a scientist she confronted a strong tradition of professional silence about personal experience—a tradition determined to break open. (p. 90)

Steingraber breaks silence about personal experience in *Living Downstream*, a strategy not utilized by Rachel Carson in *Silent Spring*. Hope (2004) states, “Steingraber then, takes the opposite tack from Carson’s silence and refuses to present herself as a scientific voice without a body or past” (p. 91). Carson died of breast cancer eighteen months after the publication of *Silent Spring*, but kept her experience private in fear of dismantling her credibility as a scientist. Bryson (2001) describes Steingraber’s sharing of experiences, friendships, and place: “Steingraber thus ventures into territory where Carson did not take us—that personal space where the author confronts disease and comes to terms with the tangled ecological roots of her childhood home” (p. 173). Steingraber refuses to separate experience from science; her rhetoric demonstrates that personal places and spaces indeed constitute an environment worthy of public policy (Bryson, 2001).

Although it is a useful component to scientific arguments, autobiography offers a complement to traditional arguments within various social movements. In her analysis of the autobiographies of woman suffrage leaders Elizabeth Cady Stanton and Anna Howard Shaw, Solomon (1991) highlights the powerful perspective autobiography has to offer: “I suggest that autobiographies complement and supplement formal arguments by offering sustained, personal examples of a particular ideology enacted in real life” (p. 355). Personal experiences allow writers to better relate with their readers, fostering a relationship between rhetor and reader. Solomon (1991) writes:

If the leader of a social movement writes the story of his or her life, the narrative quite naturally will serve as an inspirational model for followers and as a tool for recruiting new members. Within these works, the author not only will recount the details of a life but also may suggest the roots of his or her commitment to the cause and the value of dedicating one's life to working for the advancement of the ideal. (p. 355)

According to Solomon, autobiographies of social movement leaders naturally inspire and empower those who read them. This serves to demonstrate to readers how leaders became devoted to a cause and spent their life acting on behalf of social justice. Solomon continues to describe how the autobiographies of Stanton and Shaw served to empower readers. She writes, "Both women are careful to reveal themselves as *ordinary* women who are sometimes discouraged and dismayed in their experiences" (Solomon, 1991, p. 364, emphasis in original). Solomon (1991) argues that Stanton and Shaw provided readers with images of women they could become. She states, "Because this image was concrete, developed through the relating of real personal experiences, it was forceful and persuasive" (Solomon, 1991, p. 365). Solomon's (1991) argument demonstrates how autobiography can be a powerful form of social movement persuasion by providing concrete examples of how audiences can realistically participate in social change.

While revealing oneself as an ordinary woman may be perceived as undermining an author's credibility, a more personal, peer-like approach helps readers to visualize how they may become involved in social movement. This rhetorical method creates an interpersonal dynamic between author and reader. Solomon (1991) states, "for readers open to the messages of an autobiography, the intimate experience of reading and the narrator's voice may produce a kind of personal relationship difficult to duplicate in public meetings or other printed matter" (p. 366).

By speaking to their readers as peers and positioning themselves as ordinary women, Stanton and Shaw provide a more personal experience. When used strategically, autobiography is a powerful and useful tool for rhetors. However, this rhetorical strategy involves inevitable challenges.

Movement autobiography is a challenging genre, requiring the fulfillment of multiple goals in order to be successful. According to Griffin (2000), social movement autobiographies serve two general purposes: “to tell the story of a life devoted to a cause and to tell the story of a cause worthy of such devotion” (p. 148). This creates a tension for rhetors such as Steingraber, who chronicles her professional and personal motivation for her activism while simultaneously elevating the significance of the catastrophic state of the environment. To highlight the challenges that come with this tension, Griffin (2000) asks, “How can the dual rhetorical functions of movement autobiography be accommodated within the formal limitation of single narrative?” (p. 149). Griffin (2000) argues that effective movement autobiographies provide a form that allows self-definition and social advocacy to reinforce on another. He writes, “the movement’s ‘story’ provides a background in relation to which the author can achieve a meaningful form of self-definition while the author’s life story demonstrates the plausibility of enacting the movement’s ideology at the level of the individual life” (Griffin, 2000, p. 149). Although challenging and risky, social movement autobiography enables readers to understand how personal experiences are intimately connected to broader social events. Articulating this connection is particularly important for environmental advocates who strive to help audiences understand connections between private and public spheres.

Rosteck and Frenzt’s (2009) analysis of Al Gore’s *An Inconvenient Truth* (AIT) provides an additional example of science and autobiography working together. They argue that *AIT* can be read in multiple ways, one of which is autobiography. They write, “With so much personal

narrative, *AIT* certainly invites a reading that highlights the story of Al Gore” (Rosteck & Frentz, 2009, p. 3). Throughout *AIT*, Gore continually incorporates his own experiences into his discussion of climate change. Additionally, like the autobiographies of Stanton and Shaw (Solomon, 1991) and the writings of the BWHBC (Hayden, 1997), Rosteck and Frentz (2009) argue that *AIT* invites viewers to participate in the movement to address the problem of climate change. They state, “In terms of Gore himself, *AIT* shows his evolution from interested observer to committed activist, and, to the extent that we, the viewers, follow him on his quest, the film invites our own journey of transformation as well” (Rosteck & Frentz, 2009, p. 5). *AIT* fulfills the goal described by Griffin (2000) of telling the story of a life devoted to a cause as well as the story of a cause worth such devotion, which persuades viewers to become inspired and involved.

Beyond the autobiographical interpretation of *AIT* are two additional and separate readings of the documentary: political jeremiad and documentary of scientific evidence (Rosteck & Frentz, 2009). Rosteck and Frentz (2009) argue that these multiple readings are bounded, and reviewers tend to interpret *AIT* in only one of the three ways. They note the problem that comes with interpreting the film narrowly:

We are convinced that these readings offer rich, but at best partial, accounts of the film.

Few readers see any connections among these genres; none suggest how the meaning of the film might indeed be part and parcel of the interaction of the environmental jeremiad, personal narrative, and science documentary. (Rosteck & Frentz, 2009, p. 4)

When science and experience are mixed in one rhetorical text, interpretation is complex.

However, it is these complexities that can serve to make an artifact particularly powerful.

Rosteck and Frentz (2009) write of *AIT*, “Its success might come out of its complex way of intertextually addressing mythic, personal-biographical, scientific, and political reading

positions” (p. 14). Rosteck and Frentz’s (2009) argument highlights the importance of analyzing a rhetorical text through the interaction of multiple rhetorical strategies in that text. In the case of Steingraber, autobiography works alongside both the feminine style and synecdoche to create a unique rhetorical style.

Synecdoche in Social Movement Discourse

Moore (1993; 2003; 2009) has explored several instances in which synecdoche has played a role in environmental discourse. Synecdoche is a form of representation in which “either the whole can represent the part or the part can represent the whole” (Burke, 1969, p. 508). Synecdoche therefore signifies a relationship or connection between two closely related things (Burke, 1969). The use of synecdoche in social movement discourse can function positively or negatively. In his study of the spotted owl as a representation of the economy/ecology debate, Moore (1993) writes, “Representational ideographs can hold meaning for society at large, but they can also limit discourse to a part of the problem that does not resolve the conflict” (p. 260). As a form of representation, synecdoche is risky in that it may oversimplify complex environmental problems (Moore, 1993). The environmental movement requires rhetors to come up with strategies to help audience members understand and make sense of complex issues.

Although synecdoche can function to limit discourse, it can also provide focus. In his essay on synecdoche and salmon, Moore (2003) writes, “Environmental discourse can agitate, divide and polarize, but it can also connect people to problems and issues by establishing integral relationships between the parts that contribute to the whole of a resource crisis” (p. 75). Highlighting relationships within an environmental crisis demonstrates the interdependence of living things. In his discussion of the salmon crisis, Moore (2003) explores how salmon can be

viewed in synecdochic terms to represent life as a whole. If salmon are in a state of crisis and salmon represent life, the rhetorical implication is that all forms of life are in a state of crisis (Moore, 2003). Although salmon are uniquely connected to life as a whole, the connection between salmon and life is not universally believed or accepted (Moore, 2003). Thus, synecdoche becomes an important trope to analyze in environmental rhetoric.

One concern that arises with use of synecdoche is whether or not the part is truly a representation of the whole. Moore (2003) states, “a critic can ask in a given case whether the part in question actually does represent the whole, and vice versa” (p. 76). In the part/whole relationship between salmon and life, one can ask, does salmon represent life, and, if the answer is yes, is this connection readily apparent? This question is critically important, especially in the case of environmental and social justice rhetoric.

In addition to environmental discourse, synecdoche is a prominent component of discourse in women’s movements (Foss & Domenici, 2001; Gaard, 2012). In her essay on the rhetoric of choice, Gaard (2012) argues that the health of a mother’s body links together environmental justice, feminism, and environmental health. This suggests a synecdochal relationship in which the part (a mother’s body) represents the whole (social and environmental justice). Protecting women and reproductive rights means protecting the outside world. Gaard (2012) reviews Katsi Cook’s insight that a woman’s body is the first environment and argues that “choice” needs to be more inclusive of environmental factors. The health of the womb and choice surrounding reproduction represents the health of society and their access to reproductive choice. In *Having Faith* specifically, Steingraber portrays the health of mother’s bodies, fetuses, and children as representative of the health of the outside environment. Steingraber also quotes Katsi Cook’s statement that the mother’s body is the first environment and follows to argue, “If

the world's environment is contaminated, so too is the ecosystem of a mother's body. If a mother's body is contaminated, so too is the child who inhabits it" (p. x). Although synecdoche is a powerful rhetorical tool, it can problematically simplify complex environmental issues. Understanding the limits and strengths that come with this strategy is critical in order to effectively analyze Steingraber's rhetoric.

Conclusions

Steingraber uses the feminine style, autobiography, and synecdoche as rhetorical strategies to address the challenges facing the environmental movement and motivate her audiences to take interest and act on these issues. Together, these strategies connect in multiple ways to offer a lens for analyzing Steingraber's rhetoric. Steingraber writes with careful attention to audience, and her roles as both parent and scientist inform her knowledge base, creating a unique and complex epistemology. Both the feminine style and autobiography create a personal, peer-like relationship with audience members, and an analysis of these tools illustrates how Steingraber connects with her target audience of parents. Moreover, because of its recurring role in social movement discourse, literature on synecdoche informs an understanding of Steingraber's environmental representations.

An analysis of Steingraber's use of the feminine style, autobiography, and synecdoche as rhetorical strategies for environmental movement building is different in *Having Faith* and *Raising Elijah*. In the following chapters, I examine Steingraber's use of these rhetorical strategies. I begin with an analysis of Steingraber's rhetoric in *Having Faith*. Once again, I approach these texts asking, how does Steingraber's rhetoric negotiate the significant dichotomies of environmental rhetoric including human/nature, public/private, and

science/experience? To what extent does Steingraber's rhetorical approach aid her in constituting audiences and positioning them to take action?

Chapter Two: *Having Faith*

An Overview of *Having Faith*

Steingraber's (2003) book *Having Faith: An Ecologist's Journey to Motherhood* is a deeply personal and compelling narrative in which Steingraber chronicles her pregnancy and early experiences nurturing and breastfeeding her daughter, Faith. Scientific information and personal narratives play key roles in the text, which Steingraber organizes into two main parts. First, Steingraber chronicles her pregnancy, beginning with her taking a test to find she is pregnant for the first time. After discovering she is pregnant, she explores the process of fetal development as she goes through her own pregnancy, examining everything from morning sickness to the birth process itself. She discusses scientific processes, studies, and tragedies of the past while periodically bringing the story back to her own intimate experience with pregnancy. In the second part of *Having Faith*, Steingraber shares her experience as a new, breastfeeding mother, and examines how human breast milk, an irreplaceable food source for infants, is now being compromised by the presence of toxic chemicals in the human food chain. Before beginning the first chapter of *Having Faith*, Steingraber provides a simple and powerful take-home message to her readers:

All this research, however, can really be summed up in a few simple sentences. In the words of Katsi Cook, a Native American midwife, a woman's body is the first environment. If the world's environment is contaminated, so too is the ecosystem of a mother's body. If a mother's body is contaminated, so too is the child who inhabits it.

These truths should inspire us all—mothers, fathers, grandparents, doctors, midwives, and everyone concerned about future generations—to action. (p. x)

Steingraber demonstrates how the contamination of the outside world indicates contamination of women's bodies, and argues that this linkage should be of concern to everyone.

Steingraber's argument that a mother's body is the first environment positions readers to care about the health of pregnant women and fetuses. In *Having Faith*, Steingraber places her own pregnancy at the center of her investigation of the relationship between the inside and outside environments. Steingraber uses the feminine style, synecdoche, and autobiography as rhetorical strategies to aid her in promoting environmental consciousness as well as to gain support for political, precautionary action. In the following chapter, I argue that Steingraber's use of synecdoche allows her to break the dichotomies of human/nature and public/private. Further, I argue that Steingraber's use of autobiography and a peer-like, feminine style aid her in connecting with her audience and bridging the science/experience dichotomy, but the strategies fall short in supporting her end goal of political, structural action. Although Steingraber argues that the truths she discovers should motivate everyone concerned about future generations to take action, I argue that the book speaks primarily to mothers and mothers-to-be. This is important, because Steingraber chronicles only her individual, private action and her political action in exclusive environments available to her as a researcher. Once again, Steingraber's rhetoric is not fully feminine, as she speaks from a powerful position as a scientist. She does not offer her readers a mode of *political* action available to mothers and expectant mothers. In the following chapter, I first explain how Steingraber's intended audience (all concerned about future generations) differs from the actual audience that *Having Faith* primarily speaks to: mothers and mothers-to-be. I then offer a more detailed analysis of Steingraber's rhetoric and explain how

she uses synecdoche to overcome the constraints of writing environmental discourse. Finally, I critique her use of autobiography with special attention to how this strategy functions in terms of Steingraber's audience.

The Audience of *Having Faith*: Mothers and Experiential "Truth"

Steingraber's discourse in *Having Faith* is both different from and similar to the women's rhetoric in *Empowering Ourselves* (Peeples & DeLuca, 2006). Like the women of *Empowering Ourselves*, Steingraber's parental duties are challenged by the presence of environmental toxins. As Fischer (2000) describes, however, the physical nature of environmental problems creates the need for informed scientific arguments. Being a scientist lends Steingraber credibility as she explores the relationship between toxins and fetal development, yet it is her identity as a mother that fosters a connection between herself and her audience, and creates what Solomon (1991) describes as an interpersonal relationship between rhetor and reader. This peer-like connection is made possible through Steingraber's use of both autobiography and the feminine style. Steingraber's voice as an expectant mother reflects an experiential knowledge of "truth" that she comes to know through her pregnancy, and her rhetorical style suggests an audience of peers.

Although she is a qualified researcher, Steingraber writes about her experience researching the process of pregnancy *primarily* as a pregnant woman, rather than as a scientist. Steingraber's research style throughout the text takes the reader with her in her exploration of pregnancy and toxins. This strategy deconstructs a hierarchy between herself and the audience. Steingraber may hold a Ph.D., but she explores her own pregnancy as a newcomer to the experience. In the preface of *Having Faith*, Steingraber poses questions regarding the ability of toxic chemicals to cross the placenta and enter fetuses and breast milk. She follows to state: "The answers to these questions seemed essential to my new responsibilities as an expectant

mother. And they all pointed to a simple truth: protecting the ecosystem inside my body required protecting the world outside” (p. ix). This passage links together both synecdoche and a maternal understanding of “truth.” Unlike the women of *Empowering Ourselves*, Steingraber is both a scientist and a mother. She describes how her perspective has changed since becoming pregnant: “The pregnancy seems unreal. I still look the same, feel the same, eat, sleep, and think the same... Except that I am overcome with a new sense of urgency” (p. 11). This reveals how Steingraber’s knowledge of her pregnancy has influenced her perceptions. She shares her exploration of both embryology texts and popular guidebooks on pregnancy, which serves to invite the reader with her on her research journey. In doing this, Steingraber becomes peer-like. With her scientific understandings already in mind, Steingraber seeks “truth” through a maternal lens.

Steingraber’s rhetorical approach in *Having Faith* suggests that her target audience is mothers and mothers-to-be. Although she weaves science and experience, her conversational style is often peer-like. For instance, in her discussion of prenatal tests that seek to detect chromosomal abnormalities, she comments, “But ask if your amniotic fluid contains pesticides, and if, so, how this contamination may affect the development of your baby, and you are likely to be met with blank stares” (p. 78). Steingraber’s use of the word “your” suggests that she is speaking to mothers who have engaged or will engage in doctor-patient conversations of similar nature. She speaks to her readers not as a scientist, but as a pregnant woman exploring the relationship between expectant mothers and obstetricians. This persona again suggests a specific audience.

While Steingraber’s rhetoric is peer-like, it is also scientific. Steingraber compares her previous and current perspectives on the environment, noting how they have changed since

becoming pregnant. After briefly discussing her doctoral dissertation on herbicides, she revisits her own thoughts:

Now, rereading my own words, I have different concerns. I wonder how much dioxin remained in the soil and leaf litter after the spraying was finished. How much was still there when I began tramping around a dozen years later, the egg that became my daughter tucked neatly in my ovary? How much ran into nearby lakes, whose fish I have eaten? What happened to the helicopter pilot who broadcast Agent Orange over the Minnesota biological station during the tourist off-season? And what of his children? (p. 98)

This passage reflects Peeples and DeLuca's (2006) description of a maternal understanding of "truth." Steingraber's perspective is informed by both her scientific and experiential knowledge. In this passage specifically, Steingraber's experience as a pregnant woman informs her perspective on what questions scientific research might attempt to answer. Through the lens of motherhood, her research poses much more personal questions. Women's bodies and children become central to environmental, scientific questions. Her rhetoric speaks not to scientists interested in herbicides and their effects on the outside environment, but to *mothers*, whose bodies have been placed in harm's way. Again, Steingraber's style suggests an audience of peers in situations similar to those she chronicles in her own life.

Throughout *Having Faith*, Steingraber suggests that mothers specifically are in a position to take action and fight against environmental threats to pregnancy and breast milk. After discussing contamination of fish, Steingraber imagines trying to explain memories of fishing to her daughter in a time when it is no longer safe to consume many types of fish. She states, "I imagine other public scenes. I imagine, for example, thousands of pregnant women marching on Washington, demanding policies that are protective of fetal brain development" (p. 132). The

vision Steingraber offers in this passage suggests that she is speaking to pregnant women specifically, urging and inspiring them to take action to protect their bodies. This passage is more implicit than Steingraber's call to action in the afterword of *Having Faith*. At the end of the text, Steingraber implies a maternal understanding of "truth," and urges women to take political action in the fight against environmental threats to pregnant women. Steingraber urges an implementation of the Precautionary Principle, and suggests that mothers already understanding the thinking that goes with this approach. She states:

Precaution requires setting firm goals and then figuring out the steps required for achieving them. Again, this is something that mothers have long experience with. If the goal is to teach a child how to cross a street safely, the first step might be to demonstrate how to stop and look both ways... Suppose our goal is that every child should be born free of toxic chemicals. How do we get there?" (p. 286-287)

Steingraber's use of "our" and "we" suggests a peer-like relationship with her audience. She writes to mothers, as a mother. Moreover, this passage implies a maternal understanding of "truth." Because it is a critical component of parental duties, mothers already understand the Precautionary Principle. Steingraber suggests that it is up to mothers to make sure that this way of thinking is implemented on a systemic level to stop the trespass of toxic chemicals into women's wombs.

As Steingraber concludes *Having Faith*, it becomes even clearer that her audience is mothers and pregnant women. Again, Steingraber employs peer-like language by using the word "our" and suggesting that she is speaking first and foremost as a mother to an audience of her peers. She states, "It is time for mothers around the world to join the campaign for precaution, which is fundamental to our daily lives as parents or expectant parents and about which we are

all experts” (p. 286). This passage conveys a maternal understanding of “truth” and, once again, suggests that mothers and mothers-to-be are in a position to take action to protect their children. Steingraber describes how parental precaution needs to be extended from the private sphere to the public realm. She continues, “Precaution lies at the heart of our own private decision-making, in which we engage every day in our unrelenting efforts to keep our children safe from harm. We need to ensure that it is enacted in political decision-making as well” (p. 286). In order for mothers to fulfill basic parental duties and keep their children safe, they must engage in precaution in both the private and public spheres.

Even though Steingraber notes that chemical threats to fetuses and women’s health should motivate all individuals to take action, her rhetorical style implicates her target audience as composed of mothers and expectant mothers. Understanding the relationship Steingraber constructs between herself and her readers is important in order to analyze her use of the feminine style, autobiography, and synecdoche. I now turn to a discussion of Steingraber’s use of scientific and experiential knowledge claims. Steingraber’s unique use of the feminine style allows her to balance scientific and experiential knowledge claims. Moreover, she notes how perspectives of mothers and biologists are, in many ways, similar.

Science, Experience, and the Feminine Style

In many respects, Steingraber’s rhetoric is reflective of Hayden’s (2003) definition of the feminine style. Steingraber employs a personal tone, inductive reasoning, and offers experiential evidence to create a peer-like relationship with her audience. Although Steingraber writes with a scientific background, her personal experience as an expectant mother informs her perspectives on pregnancy. Steingraber describes the intertwining of her identity as a scientist with her identity as an expectant mother. She chronicles her own research in which she explores the

relationship between toxins and fetal development. Before delving into the disturbing topic of birth defects, she comments:

I am a pregnant biologist searching for the voices of mothers and scientists. I want to hear the warnings both heeded and unheeded. I want to know about the lives blasted and the battles fought. I want to find the treasures that prevail. So I open the books and dive in. (p. 39)

Both her background as a biologist and her pregnancy apparently motivate Steingraber to engage in personal research. She is peer-like in her status as a pregnant woman, but her motivation to research birth defects is, unsurprisingly, influenced by the fact that she does research for a living.

As Hope (2004) recognized, Steingraber refuses to present herself as a scientific voice without a body or past. This is apparent throughout *Having Faith*. Following her discussion of the devastating effects of rubella, Minamata disease, thalidomide, and diethylstilbestrol, she states:

How can I reconcile my old identity as a biologist with my new one as an expectant mother? Mothers always want to know what they can do to protect their babies. I certainly do. Biologists are always calling for more research. I do this, too. However self-serving, the biologists' appeal for further study is a truthful acknowledgment of how little we really know about living systems. (p. 54)

Steingraber positions herself as a biologist with respect to research, but also positions herself as a caring mother, experiencing the lived reality of biological processes firsthand. Her two identities cannot be separated. This passage demonstrates the similarities between the viewpoints of scientists and mothers. As Hope (2004) noted in her analysis of Steingraber's autobiographical position in *Living Downstream*, Steingraber reveals herself as an ordinary woman. Yet, her

scientific understanding allows her to position herself as someone who respects knowledge of mothers and researchers. As her quote demonstrates, the two perspectives are not so different, as both scientists and mothers have a motivation to investigate further. That is, the fact that so little is known about living systems should push both mothers and scientists to research. Steingraber reconciles the tension between her statuses as both expectant mother and scientist by noting how the two perspectives are similar.

As in Hope's (2004) discussion of Steingraber's role in *Living Downstream*, Steingraber also plays a dual role in *Having Faith*. Whereas in *Living Downstream*, Steingraber acted as both personal investigator and cancer survivor, in *Having Faith* she is both personal investigator and expectant mother. Steingraber uses both of these identities to her advantage. With a strong understanding of biology in mind, Steingraber turns to pregnancy books in order to investigate her experience with morning sickness. Books on pregnancy reassure her that women with morning sickness have fewer miscarriages and birthing complications. She responds, "I am reassured—even though I am bothered by the mystery surrounding the ailment. Why should something experienced by the majority of the world's women be impervious to medical explanation?" (p. 20) Research and public discourse on pregnancy take on a new meaning now that Steingraber is experiencing pregnancy firsthand. Because both science and experience inform her knowledge, she cannot separate her identity as a scientist from her identity as a woman and expectant mother. As an expectant mother, Steingraber still recognizes the importance of scientific questions, but her pregnancy adds a new layer to her understanding. While Steingraber's status as an expectant mother allows her to connect with her audience on a peer-like level, her scientific expertise lends her credibility and informs much of her discourse.

Steingraber's choice to speak to her audience as peers allows her to break a traditional, dichotomous approach to knowledge as based in *either* science or experience.

Although Steingraber strives to relate with her audience on a personal level, her status as a Ph.D. makes her use of the feminine style unique. She does not fit Hayden's (2003) description of the feminine style as an interaction between powerlessness and gender, nor does she likely perceive her audience to be more powerful than herself. Although Steingraber's rhetoric is largely peer-like and personal, her style is not fully "feminine." Her privileged position as a scientist creates a hierarchy between herself and her audience. Yet, she strives to deconstruct this by making her language accessible and relevant to a specific audience of mothers and expectant mothers. Her dual identities create a tension in her rhetoric, placing her at risk of separating herself from her audience. Steingraber reconciles this tension by employing a peer-like tone, translating science to make it accessible, and by describing how mothers and scientists have similar perspectives. Incorporating scientific and experiential knowledge is one of several constraints Steingraber faces as a rhetor of the environmental movement. Steingraber's synecdochal approach aids her in negotiating the dichotomies in environmental rhetoric including public/private and human/nature.

Synecdoche: Breaking the Dichotomies of Environmental Rhetoric

Throughout *Having Faith*, Steingraber demonstrates how humans are inextricably linked to the outside environment. Steingraber's synecdochal approach aids her in overcoming the dichotomies of humans/nature and public/private. In the preface, she states, "When I became pregnant at age thirty-eight, I realized, with amazement, that I myself had become a habitat. My womb was an inland ocean with a population of one" (p. ix). Steingraber's pregnancy lends her new insight on the intimate relationship between the inside and outside world. Although she is a

scientist, the links between the private and public spheres become personal now that her body is a habitat. Steingraber continues:

So I turned my scientist's eye inward and began to study in earnest the biological drama of new life being knit from molecules of air, food, and water flowing into a woman's body from the outside environment. I looked also at the environmental threats to the bodies of pregnant and breastfeeding mothers. How do toxic chemicals cross the touch sponge of the placenta? How do they find their way into amniotic fluid? ... The answers to these questions seemed essential to my new responsibilities as an expectant mother. And they all pointed to a simple truth: protecting the ecosystem inside my body required protecting the one outside. (p. ix)

Steingraber's synecdochal approach helps her to negotiate the boundary between private and public. Moreover, Steingraber's synecdochal approach aids her in revealing how humans are a part of nature. Because the inside world represents the outside environment and vice versa, the linkages between humans and nature and the private and public spheres become clear. The two spheres are not only connected, but, through use of synecdoche, they can represent one another.

As Steingraber chronicles her experience undergoing amniocentesis, she again uses synecdoche to break the dichotomy of private and public spheres, and also unravels the human/nature dichotomy that is ubiquitous in mainstream environmental rhetoric. To enforce the relationship between private and public spheres and demonstrate how the outside environment influences a mother's private womb, Steingraber uses synecdoche to explain how amniotic fluid is representative of the larger environment. She states:

Before it is baby pee, amniotic fluid is water... Before it is drinking water, amniotic fluid is the creeks and rivers that fill reservoirs. It is the underground water that fills wells.

And before it is creeks and rivers and groundwater, amniotic fluid is rain. When I hold in my hands a tube of my own amniotic fluid, I am holding a tube full of raindrops. (p. 67)

In this passage, the part (amniotic fluid) represents the whole (the environment). As Steingraber distracts herself from the procedure by concentrating on hummingbirds, she states, “Whatever is inside hummingbird eggs is also inside my womb. Whatever is in the world’s water is here in my hands” (p. 67). Not only does the part represent the whole, but the whole also represents the part. Hummingbirds and their eggs, part of the outside environment, represent a mother’s womb. The inside and outside environments are not separate, but are intimately connected. Steingraber uses synecdoche to break the boundary between the outside, public sphere and the inside, private sphere. Building on this, her synecdochal representation discredits the notion that humans are separate from nature, and serves to break this dichotomous approach to thinking. This is consistent with her message at the start of *Having Faith*, in which she shares Katsi Cook’s statement that a mother’s body is the first environment. If the outside world is contaminated, toxins exist within mother’s wombs, breast milk, and, thus, in children. Steingraber demonstrates how a woman’s body, a private, sacred place, does not exist outside of the public realm.

Steingraber uses historical examples to highlight the relationship between private and public issues. She reviews science and historical tragedies related to the myth of the “impermeable placenta,” the belief that the placenta keeps fetuses safe from outside harm. Thalidomide, a prescription pill given to pregnant women in the 1950’s to quell morning sickness, resulted in children with short or missing limbs. The case of thalidomide offers a concrete example of how a public tragedy can have devastating effects on the private sphere. Steingraber builds on this example by discussing more public tragedies that have harmed fetuses

and pregnant women. From 1932 to 1968 Chisso, a chemical manufacturing facility in Japan, released methylmercury into a local fishing bay. The fish, a food source for local residents, became highly toxic as methylmercury bioaccumulated to levels high enough to result in severe mercury poisoning in those who ate it. Without clear evidence, the government could not force Chisso to change their practices, and the contamination of Minamata Bay continued for many years after the first diagnosis of Minamata disease. Steingraber extracts a key lesson from the tragedy: “*Unintended consequences are not always unpredictable consequences*” (p. 48). Although the contamination of Minamata Bay was not intentional, bioaccumulation of methylmercury is a process that had been well understood long before Chisso’s practices. Steingraber builds off of scientific evidence to make her case that fetuses are the most vulnerable populations to the effects of environmental contamination, allowing her to connect private and public issues. She writes, “*Of all members of the human population, fetuses are most vulnerable to toxic harm*” (p. 48). A scientific study of umbilical cords showed that children exposed to low levels of methylmercury from Minamata in the womb suffered from mental retardation, showing evidence of harm even without a Minamata disease diagnosis. Steingraber sums up the message of this finding: “In other words, even far below the threshold level needed to cause the constellation of symptoms we label as a known disorder, brain damage still occurred” (p. 50). Because fetuses are the most vulnerable to toxic harm, protecting them inherently protects all members of the human population. This passage revisits Steingraber’s argument that taking care of pregnant women requires taking care of the outside world. In order to protect fetuses, Minamata Bay and its fish must be kept safe. The inside and outside worlds are inseparable, and this example breaks the barrier between humans and nature. Steingraber’s discussion of the

Minamata Bay tragedy makes the synecdochal relationship between the private and public spheres clear.

Steingraber openly expresses her struggle to make sense of other tragedies connected to fetal development including Minamata, thalidomide, diethylstilbestrol, and rubella.

Steingraber's epistemological claims are rooted in her knowledge of biological and social history, yet she revisits her own position on public issues in her experience as a pregnant woman. She asks, "Now that I've explored the wreckages of pregnancies past, where do I want to locate myself along the line between knowledge and action? What are my sacred obligations?" (p. 55). The audience must consider scientific evidence and failings of the past while also considering what this means for future activism and protection of fetuses and pregnant women. In this passage, Steingraber conveys a relationship between the private experience of motherhood and contamination from the outside environment. The outside environment threatens a mother's womb, once again linking the private and public spheres. Steingraber's synecdochal approach to fetuses, pregnant women, and the outside environment allows her to break the barrier between private/public as well as that between humans and nature.

In the second part of *Having Faith*, Steingraber chronicles her experience as a breastfeeding mother and continues to use synecdoche to break the private/public boundary. After making a strong case for choosing breast over bottles, Steingraber moves to describe environmental threats to nursing. Because of biomagnification, breastfeeding infants, highest on the food chain, get the strongest dose of environmental toxins of anything on the food chain. Steingraber states:

The hard fact of biomagnification means that breastfed babies have greater dietary exposures to toxic chemicals than their parents. On average, in industrialized countries,

breasted infants ingest each day fifty times more PCBs per pound of body weight than do their parents. (p. 251)

Environmental hazards such as polychlorinated biphenyl (PCBs) and persistent organic pollutants (POPs) biomagnify, meaning they become more concentrated as they move up the food chain. Breastfed infants receive the highest doses of these toxins. Once again, the synecdochal relationship between the private (breastfeeding) and public (environment) is important. PCBs and POPs contaminate the outside world and enter mothers' bodies, breaking the boundary between private and public.

After describing both the benefits of breast milk and the toxic chemicals that threaten it, Steingraber discusses a speech she gave about POPs in Geneva. She states, "I know that I want to speak as a nursing mother. I know also that I want to speak dispassionately, as an ecologist, about the evidence. But how to strike the right balance between the intimate and the empirical?" (p. 261) Interestingly, Steingraber makes the choice to show a bottle of her own breast milk to those attending the conference. Her breast milk synecdochally represents the contamination of the outside environment. Because they are inextricably linked, private and public spheres cannot be separated: POPs in the outside environment are also present in breast milk, and so a discussion of POPs cannot center on the outside environment only. This breaks the human/nature dichotomy as well as the dichotomy of private/public. POPs are in the bodies of mothers, fetuses, and children. Because of the relationship between toxins and breast milk, a discussion of environmental contamination must include both the intimate and the empirical. Steingraber breaks the boundary between private and public through her use of synecdoche. POPs and PCBs threaten both spheres.

Like the women of the BWHBC (Hayden, 1997), Steingraber asks questions that rhetorically function to get her readers started in the thinking process. She states, “The question is not whether we should feed our babies chemically contaminated, yet clearly superior, breast milk or chemical uncontaminated, yet clearly inferior, formula” (p. 276). Like the authors of the BWHBC (Hayden, 1997), who acknowledged uncertainty and complexity surrounding medical issues, Steingraber rejects the notion that mothers should have to choose between two evils. She asks, “The question is, what do we need to do to get chemical contaminants out of clearly superior breast milk?” (p. 276) Breast milk is superior to formula, yet toxins in the environment threaten its benefits. The relationship between a mother’s body and the outside world cannot be denied. Feeding infants formula ignores the problem of toxins in breast milk and, moreover, exposes infants to toxins in plastic and drinking water.

Synecdoche: Enhancing or Oversimplifying Environmental Issues?

Because synecdoche is a strong theme throughout *Having Faith*, the various effects of synecdoche are of special interest. As noted, synecdoche can oversimplify complex environmental problems and limit discourse to a part of the problem that does not resolve the conflict (Moore, 1993). However, synecdoche can also be effective in connecting the parts that contribute to the whole of the environmental crisis (Moore, 2003). Whereas Moore (2003) discussed salmon’s synecdochal representation of life, Steingraber portrays the health of fetuses and breast milk as representative of the outside environment. Because of her scientific expertise, Steingraber is able to carefully describe how the private and public spheres are linked to one another. She establishes a strong, clear connection between breast milk and fetuses and the health of the outside environment. Indeed, what is in the outside environment is present in mothers’ bodies; what is present in nature is present in humans.

Steingraber's synecdochal approach can potentially be seen as limiting. By placing the health of women and children at the center of her discourse, Steingraber's rhetoric risks portraying humans as the most important component of the environment as a whole. However, Moore (2003) argues that, especially in the case of the environmental crisis, synecdoche can establish strong relationships between the parts that contribute to problem. Steingraber is clear in explaining how humans, specifically those in certain industries, are responsible for the environmental crisis and, thus, the demise of all humans as well as the planet. In the case of Minamata Bay, it was humans who contaminated the bay, fish, and, consequently, humans. Whereas the Minamata disaster is a specific instance of human contamination of the environment, Steingraber looks at human attitudes toward pregnancy and the outside environment more broadly throughout *Having Faith*. She reviews a pregnancy guidebook that tells women concerned with hazardous chemicals not to worry. The authors of the book argue that although it is commendable to try and avoid hazards in food, it is not worth making life stressful in order to do so. She responds, "Of course, the don't-worry-be-happy approach does not apply to smoking and drinking; the authors take a very stern, absolutist position on these topics" (p. 106). The guidebooks tell women "in ignorance, abstain." In a personal narrative, Steingraber asks her husband why this principle does not apply equally to industry or agriculture. Her husband argues that women are not seen as part of the public world. Steingraber revisits the guidebooks and offers her response: "When it comes to fetal neurotoxicants, instead of following the admonition 'In ignorance, abstain,' we adhere to the principle, 'In ignorance and disregarding emerging science, proceed recklessly'" (p. 112-113). The burden of worrying about environmental toxins is placed not on industry, but instead on parents and families in the private sphere.

Humans, specifically those in agriculture and industry, are responsible for contaminating public and private environments. By establishing a synecdochal relationship between fetuses and breast milk and the outside environment, Steingraber puts humans at the center of the environmental crisis. Although this could be interpreted as limiting, I argue that ultimately, it is effective in making clear how humans are responsible for the contamination of their own bodies and, consequently, the bodies of their children. People cannot contaminate the outside world without also contaminating themselves. In his discussion of the spotted owl controversy, Moore (1993) argues that representational ideographs can limit discourse to a part of the problem that does not aid in resolving the conflict. In *Having Faith*, Steingraber focuses her synecdochal representation on the one part that is both responsible for the problem and has the power to resolve it. Her use of synecdoche is powerful, and aids a constructive conversation about the connections between industry, human health, and environmental contamination.

Having Faith as Social Movement Autobiography

Hope (2004) notes that social movement autobiographies are sometimes characterized by an interaction between personal and social change. In *Having Faith*, Steingraber chronicles her personal journey becoming a mother and weaves this story with discussions of environmental threats to pregnancy, instances of citizen action, and examples of professional research. Steingraber fulfills the purposes of social movement autobiography described by Griffin (2000): she tells the story of a life devoted to a cause and tells the story of a cause worthy of her devotion. Steingraber's status as an expectant mother investigating the relationship between pregnancy and environmental toxins is a strong component of her autobiographical voice. She takes the reader with her on her exploration of toxic threats to fetuses and breast milk and demonstrates the importance of knowledge about environmental threats to pregnancy.

Steingraber describes personal changes she has made after becoming more knowledgeable about the experience of pregnancy. She chronicles her struggle with morning sickness that causes her to throw up every day. She has trouble holding food down, and can only eat foods with specific appearances, flavors, and smells. As stated previously, Steingraber highlights how research does not have a good explanation for why morning sickness occurs, and questions why something that affects so many women has not received more in-depth attention from researchers. Her description of this experience goes beyond her epistemological claims by highlighting the importance of researching the experiences of pregnant women. She states:

In short, no one knows the cause of morning sickness because few have looked, and those who have looked have lifted their hands in surrender pretty swiftly when the answer proved elusive. I am therefore happy to discover two woman researchers who are working on the question, from two very different ends of it. (p. 22)

Steingraber takes her readers with her as she digs into existing research. Moreover, she highlights the hard work of two female researchers: Miriam Erick, a dietician, and Margie Profet, an evolutionary biologist. Steingraber's discussion demonstrates how the research of others has helped her to make personal change. This serves to reinforce the importance of knowledge about environmental threats to pregnancy. She states, "Erick has documented one other intriguing pattern: nausea in pregnancy is triggered more often by smell than by taste. This probably explains why I can eat refrigerated bananas but not the more aromatic ones from the fruit bowl" (p. 23). Steingraber then moves back to her own experience. She states:

As for me, the world has indeed become a very smelly place. I've always wondered about animals whose senses are keener than ours. Now I've become one. This is not necessarily a pleasure. Most of the human world smells downright nasty... Finally, I

learn to eat dinner in the bedroom, the least smelly room of the house, and the number of meals lost to the bathroom sink declines. Jeff, the short-order cook, breathes a sigh of relief. (p. 23)

Because of the work of researchers, Steingraber is able to make personal changes. This instance of personal change allows Steingraber to connect with her audience of mothers and mothers-to-be and demonstrate increased understanding of pregnancy can improve the experiences of expectant mothers. Moreover, this passage demonstrates an interaction between Steingraber's personal change and broader efforts to better understand morning sickness.

In her investigation of birth defects, Steingraber researches the tragedy of thalidomide. Rather than ignoring tragedies of the past, Steingraber digs into them and asks difficult questions about why they occurred and what sort of action took place to end these problems. Thanks to Frances Kelsey, an FDA physician, thalidomide was never distributed to pregnant women in the United States. Steingraber states, "Approval was expected to be swift. But in the data provided her by the manufacturer, Kelsey saw warning signs. She slowed down the application process by asking hard questions" (p. 41). Following this statement, Steingraber notes that Kelsey remembered the story of rubella and took precaution based on knowledge of past events. Steingraber states that thousands of middle-aged Americans owe their limbs to Frances Kelsey. Steingraber's choice to face disturbing truths instead of looking away from them demonstrates the importance of paying attention to difficult issues. Moreover, she offers Kelsey as an example of how the Precautionary Principle has protected mothers and babies. After discussing Kelsey and thalidomide, Steingraber moves to chronicle a personal interaction with her husband:

"What do you remember about thalidomide?" I ask Jeff.

“Thalidomide babies ... babies with flippers. I remember seeing their photographs when I was a kid.”

“According to this survey I found, two thirds of those under forty-five years old don’t recognize the word.” (p. 43).

Steingraber’s conversation with her husband demonstrates the significance of remembering tragic events. Understanding pregnancy and the outside environment is essential to protecting fetuses. Bryson (2001) argues that the objectivity of science mixed with the subjectivity of personal experience creates a tension for Steingraber in *Living Downstream*. Although the majority *Having Faith* is dedicated to scientific information, Steingraber’s personal approach keeps the reader grounded in the midst of dense information, allowing her to resolve the tension described by Bryson (2001). Moreover, Bryson (2001) argues that Steingraber’s incorporation of personal narrative “reinforces her ethical argument that we must take action even without the benefit of full and perfect knowledge” (p. 174). Steingraber’s personal approach allows her to emphasize the importance of political, precautionary action.

After discussing tragedies related to birth defects, Steingraber asks a question that is worth repeating in terms of its relation to autobiography, “Now that I’ve explored the wreckage of pregnancies past, where do I want to locate myself along the line between knowledge and action? What are my sacred obligations?” (p. 55) This passage reflects Solomon’s (1991) argument that in social movement autobiographies, authors may emphasize the value of dedicating one’s life to advancing the goals of the movement. Steingraber notes that she is personally obligated to do something with the knowledge she has gained through her informal research. Interestingly, Steingraber does not answer the question she poses. Instead, it serves as a rhetorical statement to her readers. As in the case of thalidomide, Steingraber’s rhetoric pushes

reader to become more knowledgeable about environmental threats to pregnancy. After asking this question, Steingraber visits a tree grove. She states:

In this protected grove, where I once awoke to biology, I am reminded that the open doorway between the outside world and the womb is a wondrous and mysterious threshold. It should not enter our awareness only when poisons flow through it. (p. 55)

Instead of answering her own question, Steingraber's short narrative demonstrates the importance of knowledge and awareness about the relationship between the environment and pregnancy. The inside and outside environments are similar, and Steingraber uses narratives to demonstrate this and connect with her readers.

As Steingraber approaches the birth of her daughter, she begins researching and comparing natural childbirth and childbirth with medical intervention. Steingraber chronicles her experience at a child birthing class, noting especially the normalization of medical intervention. She states:

I say as calmly as I can that I hope to have a natural childbirth. There is a moment of silence—no nodding of heads—and then the mother next to me clears her throat, states her first name, and says she has a really low tolerance for pain. (p. 154)

Steingraber highlights the disconnection she feels with her birthing classmates, and follows to move into a discussion of the growing medicalization of childbirth. Again, Steingraber is an investigator searching for answers. In her informal research, she finds that nearly a third of women questioned remember labor pain as a positive experience. She states:

I feel I have stumbled onto the missing piece of the jigsaw puzzle. Trained to treat trauma and disease, physicians tend to see pain as a problem to be fixed and the refusal to accept analgesics as an exercise in masochism. (p. 165)

After describing her own exploration of the relationship between pregnant women and the medical industry, Steingraber makes the decision to have a midwife attend the birth of her daughter. Furthermore, she gets in touch with an obstetrical nurse who is skilled in natural childbirth methods. After describing her personal choices, her husband asks her whether or not she is scared. She replies, “Nope. I feel pretty brave” (p. 175-176). Steingraber chooses to have a natural childbirth, and, thanks to her access to natural childbirth advocates, she is able to do so. Steingraber’s personal narratives interact with concrete research to inform her readers.

In *Having Faith*, Steingraber continually stresses the importance of political action and precautionary measures. Through her use of synecdoche and incorporation of personal experience, Steingraber is able to stress connections between the personal and political and demonstrate the importance of putting in place political, precautionary measures to protect the private arena. She is able to overcome what Hope (2004) describes as the constraints of social movement autobiography: she recasts her personal experiences as evidence in the discourse of science. Interestingly, Steingraber’s unique “feminine” style and use of autobiography is disconnected from her push for mothers to engage in political action. In *Having Faith*, Steingraber ultimately discredits the notion of taking action in the private sphere and, instead, elevates political action as the ideal method for fostering change. Steingraber documents her own activism primarily in the private arena and in exclusive areas available to her as a researcher. Thus, the autobiographical narratives she offers do not demonstrate the political action she advocates. Moreover, the *public* actions Steingraber takes are not available to her audience.

The Gap in *Having Faith*: Examples of Political Action Available to Mothers

Throughout *Having Faith*, Steingraber uses synecdoche to effectively establish a relationship between the inside and outside environments. She describes in detail how toxins are harming both environments, and it becomes clear that strong science does not solve this problem. As *Having Faith* concludes, Steingraber argues that there are two approaches to addressing the problem of toxins in mothers and babies. She states, “One focuses on changes that individual mothers can make in their own lifestyles. The other focuses on political action” (p. 276). She entertains both approaches, starting with individual change. In discussing individual action, Steingraber states:

One method does hold real promise for detoxifying breast milk: have babies early in life, have a lot of them, and have them in rapid succession. The data quite clearly indicate that this is a lifestyle choice capable of bringing about dramatic reductions in breast milk contaminants across the board. I suspect I am not alone in finding this strategy too high a price to pay for accommodating myself to the ongoing pollution of the food chain. (p. 278)

By discrediting the individual approach to toxins, Steingraber is able to elevate political action as the most effective method. She states, “So let’s look at political action as an alternative approach to purifying breast milk. All the biological evidence indicates that it works” (p. 278). She notes bans on DDT, recycling initiatives, restrictions on the use of PCBs, and industrial emission reductions and emphasizes how these political moves have been used to effectively address environmental problems. After offering specific examples of political action, Steingraber acknowledges scientists, environmental engineers, and organic farmers as well as “ordinary folks who cared enough to organize, agitate, write letters, publish articles, testify at public hearings,

file law suits, sign petitions, talk to their neighbors, march in the streets, stage sit-ins, and generally raise awareness about toxic chemicals” (p. 279). Steingraber uses her own position as an expectant/breastfeeding mother in addition to the examples of others to encourage her readers to engage in environmental activism. Interestingly, the model Steingraber herself offers to her readers is largely a model for individual change. When Steingraber does enter the public sphere to speak out about toxins, she does so in exclusive research conferences.

Steingraber’s use of autobiography in *Having Faith* creates a tension between personal and political action. Although Steingraber describes how her personal experiences are connected to broader social problems, her autobiographical narratives do not offer readers, mothers and expectant mothers, a model for the political action she advocates. Steingraber chronicles her research journey as well as the choices she makes during her pregnancy. After researching issues affecting pregnant women, Steingraber learns to effectively manage morning sickness, seeks the advice of advocates for natural childbirth, and gives birth to her daughter without medical intervention. She offers an example of how research and access to the right resources can give pregnant women the choice to opt out of a system that is not sensitive to their needs. In addition to chronicling her individual behaviors, Steingraber includes narrative accounts of her participation at research conferences: she visits Geneva to speak about persistent organic pollutants (POPs), and attends the U.S. conference on the Precautionary Principle. Steingraber attends both of these events because she is a scientific researcher. Although she describes her decision to make her discussion of POPs personal, the audiences at her conference discussions are likely fellow researchers, rather than mothers. Steingraber’s autobiographical accounts in *Having Faith* are powerful, but the majority of her personal narratives do not involve a discussion of her political activism.

Solomon (1991) argues that social movement autobiographies can serve as an inspirational model for followers and can aid in the recruitment of new members. In the conclusion of *Having Faith*, Steingraber urges her audience to engage in political activism. Interestingly, the connection between the models offered in Steingraber's personal narratives and her push for political action appears weak. Steingraber sets a strong example for others: she breaks the silence about toxins and their effect on the most intimate aspects of life, bravely researches difficult questions and problems, rejects the status quo by opting for natural childbirth, and has dedicated her life's work to raising general awareness on the subject of environmental toxins. However, Solomon's (1991) analysis of the autobiographies of Elizabeth Cady Stanton and Anna Howard Shaw raises questions regarding Steingraber's use of autobiographical narratives. Solomon (1991) argues that Stanton and Shaw provided readers with concrete images of women they could become, which served to make their narratives powerful and persuasive. Because Steingraber primarily uses autobiography to chronicle her private experiences and involvement in exclusive research conferences, the model she offers in *Having Faith* may not be the best for aiding her specific audience in taking political action.

The concrete example of mothers taking action in the political sphere that Steingraber does offer is not an autobiographical account. As discussed previously, Steingraber suggests that mothers understand the thinking that goes with the Precautionary Principle. Following this argument, she describes a scene that is worth quoting at length:

When mothers make their voices heard in the political arena of environmental policy-making, the effect is powerful—even when they are silent. In November 2000, twenty women traveled to Washington, D.C., where the EPA's Science Advisory Board was meeting to evaluate its latest assessment on dioxin, which includes new evidence that

birth defects and reproductive abnormalities may be occurring at levels of contamination close to those now seen in the general population. The women said nothing. Instead each wore over her clothes a plaster-of-paris belly cast from a real-life pregnant mother. Lining both sides of a narrow corridor and filling the front row of seats, the women displayed on their plaster bellies signs reminding the panelists that dioxin is toxic to unborn babies. (p. 287)

While this passage demonstrates the power of mothers' voices can in the political sphere, the action the women took required traveling to Washington, D.C. Although their actions were powerful, the women undoubtedly had access to resources unavailable to many of Steingraber's readers. Despite its many strengths, *Having Faith* lacks concrete examples of political action attainable to Steingraber's audience of mothers.

Having Faith: Conclusions

Having Faith is a deeply personal investigation of the relationship between pregnancy and environmental toxins. By playing a dual role as both investigative biologist and expectant mother, Steingraber connects with her readers and is able to make scientific information meaningful to a lay audience. Moreover, her unique use of the feminine style allows her to break the science/experience dichotomy. As in Bryson's (2001) analysis of *Living Downstream*, Steingraber effectively balances the tension of combining autobiography and science. Moreover, in *Having Faith*, Steingraber's use of synecdoche allows her to break common dichotomies in environmental rhetoric. Steingraber's synecdochal approach deconstructs the dichotomies of public/private and human/nature. *Having Faith* is powerful and thought provoking, making it a truly inspiring and informative rhetorical artifact that demonstrates the effects of environmental contamination on pregnant women and fetuses.

In *Having Faith*, Steingraber uses autobiographical narratives to document both her participation in research conferences and her private experiences and choices as an expectant and breastfeeding mother. As she concludes, Steingraber advocates a political approach to solving the problem of environmental toxins. She argues that individual action is not enough, and urges her audience to become involved in environmental activism. Steingraber's use of autobiography aids her in describing the effects of environmental contamination on pregnant women and fetuses, but it does not offer her readers (mothers and expectant mothers) a model for the political action she advocates. Steingraber's use of autobiography has both strengths and limits. Steingraber maximizes the opportunities presented by her unique position as a scientific researcher; chronicling her experiences speaking out in the private arena of scholarly research demonstrates how she uses available resources to push an implementation of the Precautionary Principle. While there are strengths to her rhetoric, Steingraber's push for change also falls short. The model for action she offers is not a mode available to most of her readers, who are likely composed of mothers and expectant mothers. Because she speaks to mothers and mothers-to-be in *Having Faith*, Steingraber may benefit from chronicling instances in which she speaks out politically as a mother, rather than as a researcher.

Chapter Three: *Raising Elijah*

An Overview of *Raising Elijah*

Like *Having Faith*, the title for Steingraber's (2011) book *Raising Elijah: Protecting Our Children in an Age of Environmental Crisis* works on multiple levels. Elijah is not only the name of Steingraber's son, but also references Elijah Lovejoy, an abolitionist of the nineteenth century who was killed by a mob. Lovejoy left behind him his printing press filled with radical ideas, which inspired his friend Edward Beecher to become active in the abolitionist movement.

Beecher then became an inspiration to his sister, Harriet Beecher Stowe, who wrote *Uncle Tom's Cabin*. Lovejoy is a model for individual action, and his story demonstrates how the actions of one person can foster a snowball of collective actions that combine to create a social movement. Steingraber compares the story of Lovejoy to her own push for environmental action. She states, "In *Raising Elijah* I call for outspoken, full-throated heroism in the face of the great moral crisis of our own day: the environmental crisis" (p. xii).

Steingraber organizes the body of *Raising Elijah* into ten chapters arranged topically, and covers a multitude of issues including organophosphate, asbestos, environmental causes of asthma, "the big talk" (talking to children about climate change), and environmental causes of kids' learning disabilities. She explores widespread environmental problems and uses everyday experiences to connect with her audience and demonstrate links between the private and public spheres. Steingraber writes, "Throughout these chapters, I discover that the domestic routines of family life with young children—however isolated and detached from public life they seem—are inextricably bound to the most urgent public health issues of our time" (p. xvii). Speaking from personal experiences as a mother of two helps her to shape the environmental crisis as a parenting crisis. As she discusses environmental issues with a physical, scientific nature, Steingraber consistently revisits her own experiences as a parent. She explains her decision to incorporate a personal angle into her argument. In the foreword, she states:

And because I believe that stories move us to action more than data alone, the scientific evidence is strapped to the hood of an autobiographical tale that begins with the birth of my son and spans the first nine years of my life as a biologist

mother of two. Once I chronicled interspecies relationships in a central American rainforest; now I seek to understand the complex habitat of my own household.

(p. xvi-xvii)

Steingraber's rhetorical style is geared toward a specific audience, and her strategic choices make her rhetoric particularly powerful. Steingraber carefully weaves scientific information and personal narratives, and uses both sources of information strategically.

In *Raising Elijah*, Steingraber argues that parents, who hold a special interest in the health and well-being of future generations, have a responsibility to take action to protect their children. Throughout the text, she elevates the importance of individual, collective, and political action. This contrasts with Steingraber's preferred solution of political action in *Having Faith*. To construct a rhetorical style that is fitting for her target audience of parents, Steingraber highlights notions of convenience and inconvenience and reverses common assumptions related to the terms. Steingraber's choice to speak to a specific audience combines with her emphasis on multiple avenues of action to make *Raising Elijah* a powerful and compelling text.

The Audience of *Raising Elijah*: Parents, Parental "Truths," and Convenience

In *Raising Elijah*, Steingraber explicitly states that her target audience is parents. After offering the abolitionist movement and Elijah Lovejoy as models for action, she argues that, in the environmental crisis, the lives and well-being of children are at stake. She states, "And, because the main victims of this unfolding calamity are our own children, this book speaks directly to parents" (p. xii-xiii). In *Having Faith*, Steingraber suggests that her work speaks to everyone concerned for future generations, yet a closer look reveals that the text is ultimately written for mothers and expectant mothers. This contrasts with *Raising Elijah*, in which Steingraber explicitly identifies parents as her

target audience and emphasizes the importance of parental action. Targeting parents runs the risk of placing an enormous burden on parents and, additionally, may neglect those who are childless. As noted by Stearney (1994), “Our best hope for environmental recovery is to obtain the commitment and the skills of as many people as possible” (p. 156). Although there are no doubt limits to targeting specific individuals, parents make up a large target audience. Moreover, Steingraber’s parental identity allows her to create a unique peer-like relationship with her audience that is more focused than that in *Having Faith*. Whereas in *Having Faith* Steingraber’s identified and implied audience were different, Steingraber writes *Raising Elijah* with a clear focus on parents. Throughout the text, Steingraber reinforces how the state of the environment affects children and families, and offers courses of action, available to parents, to combat such threats.

Parental “truth.” In *Raising Elijah*, Steingraber’s construction of a peer-like relationship with her audience helps her to build the case that parents have a special role to play in the environmental movement. In Chapter Two, “The Nursery School Playground (and Well-Informed Futility),” Steingraber offers a detailed history of pressure-treated wood. Designed to prevent rotting, chrominated copper arsenate (CCA) wood is injected with copper to kill fungus and arsenic to kill insects. Because the wood was affordable and long-lasting, pressurized wood became ubiquitous in the 1970s when it was used to make household decks and playgrounds. Steingraber makes the argument that children suffer the most harm from the presence of CCA-treated wood in the private sphere. Because children have frequent hand to mouth contact, their exposure to CCA-treated wood is particularly concerning. Moreover, Steingraber notes how children are slower to detoxify and excrete pollutants. While all of this information may lead only to devastation and fear, or what Steingraber refers to as “well-informed futility,”

Steingraber urges the importance of parents' awareness of CCA-treated wood. She states, "And if we decide we are better off not knowing about problems like arsenic—because down that road lies only despair and futility—what else are we willing to close our eyes to?" (p. 330).

Steingraber anticipates parental concerns and her use of the word "we" emphasizes her own identity as a parent as well as her connection to fellow parents. Steingraber's discussion of CCA-treated wood builds her argument that children and parents suffer devastating consequences from the presence of environmental hazards.

Throughout *Raising Elijah*, Steingraber constructs a relationship between parents and the environment that is similar to the connection she makes in *Having Faith*. Although Steingraber is a scientist, she relies primarily on her experiential, parental knowledge of "truth." For example, when comparing organic foods to foods treated with pesticides, Steingraber compares her identity as a biologist to her identity as a mother. Steingraber states that as a biologist, she does not know if organic foods are healthier than foods treated with pesticides. However, she follows to state that as a parent, "My job is to avoid situations that seem inherently dangerous... So I don't feed my children food grown with pesticides. Period" (2011, p. 65). This passage constructs the idea that parental truth is stronger than scientific truth; parents know to give the benefit of the doubt to their children's health, rather than to questionable chemicals. Like in *Having Faith*, Steingraber indicates that parents have a unique understanding of precaution, as it is a fundamental component of their parental duties. Although science suggests organic foods are not necessarily healthier than organically grown food, parents know to avoid situations that seem dangerous. This belief reflects that of the women in *Empowering Ourselves*. Peeples and DeLuca (2006) state, "Environmental Justice advocates argue that they are the only people who know the 'true' situation or the 'right' solution, because they are the only ones who have lived in

the area, who drink the water and who breathe the air” (p. 79). This parallels Steingraber’s argument in *Raising Elijah*: parents are the ones who know the true situation because they are the ones raising children. Steingraber demonstrates that parents are obligated to engage with environmental truths, as their children’s health depends on their action.

Convenience and inconvenience. In *Raising Elijah*, Steingraber employs a feminine style to speak to her audience as a fellow parent and demonstrate a parental understanding of “truth.” Steingraber constructs parents as knowers of truth in a unique way by contrasting convenience with inconvenience. Convenience is a necessity in the busy and hectic lives of parents, and Steingraber uses this idea to capture parents’ attention. She then moves to undermine dominant notions of convenience and inconvenience. As Steingraber describes pressure-treated wood on playgrounds, she contrasts convenience with inconvenience:

Finally, it’s worth revisiting that fundamental parameter around which working parents orbit: *convenience*. In this fast paced world of ours, so goes the dominant narrative, trace chemical exposures are the price we pay for convenience—whereas the items in the sustainability bin trend toward time consuming and inconvenient. But CCA wood offers no such trade-off. It manages to be both unsustainable and inconvenient. (2011, p. 54-55).

It may seem inconvenient for manufacturers and parents to avoid pressure-treated wood, as the material is affordable and is used in many places where children are present. Steingraber deconstructs the dominant notion of convenience by demonstrating how the presence of toxins in wood is what truly makes parents’ lives inconvenient.

To protect her children from the pressure-treated deck at her own house, Steingraber acquires a list of safety tips from *Pediatrics for Parents*. The list is filled with inconveniences

such as laundering clothes separately, sealing CCA-treated wood annually, and washing hands immediately after touching the wood. Steingraber shares the list and comments:

After reading through the list, I looked out the sliding glass window at the arsenic-treated planks of our deck, with all the irksome inconveniences they generated. Beyond them stood living trees, whose cells contained sap, not poison. They would not rot in the rain. They would not necessitate disposal in a hazardous waste landfill. They required none of my time. No towels. No gloves or masks. And one of them looked like a pretty good climbing tree. (p. 55)

Steingraber demonstrates that the problem is not the list from *Pediatrics for Parents*. The problem is that there is arsenic in wood, placing children at risk of developing bladder cancer. It is a parental responsibility to keep children safe, and the presence of arsenic threatens this duty. Steingraber undermines assumptions about convenience by making the argument that chemicals designed to make life easier ironically create a whole host of inconveniences for parents. Although CCA wood was created for convenience purposes, Steingraber makes the case that the wood does not even achieve its intended purpose. Steingraber's use of personal examples reflects Hayden's (2003) definition of the feminine style as including evidence based in personal experiences and anecdotes. For Steingraber, ignoring the list of precautions is not an option. Although Steingraber is peer-like in her parental identity, she also serves as an example for other parents. As discussed in *Having Faith*, it is not likely that Steingraber views her audience as less powerful than herself. She is simultaneously peer-like and authoritative, and her emphasis on convenience allows her to shape scientific evidence in a way that is compelling and important to parents.

Steingraber further contrasts convenience and inconvenience in her discussion of organic food and pesticides. Although shopping organically and avoiding pesticides may seem like an inconvenient task for busy parents, Steingraber describes how shopping organically at her local co-op is convenient, as she doesn't have to spend time going through labels and thinking about what is and is not organic. Parents are busy, but this should not force them to settle for foods treated with pesticides. In fact, Steingraber argues that much like pressure-treated wood, pesticides ironically achieve the opposite of their intended purpose. Instead of making life easier, pesticides generate inconveniences for parents. At the co-op, parents don't have to choose between toxic and non-toxic. Steingraber describes her and her husband's appreciation for their local co-op:

As we also discovered, shopping at the food co-op was simply more convenient. No matter where we bought our weekly groceries, pausing in the aisles to ponder ingredient labels was inadvisable. With two preschoolers in the cart, speed was a requirement. To hunt down the organic options in a supermarket involved too much navigating, too much reading. But in the co-op, Jeff or I could, more or less, mindlessly grab the foods off the shelf that matched the words on the grocery list. (p. 72-73)

At co-ops, parents don't have to choose between picking through foods and reading labels or settling for pesticides. They can quickly and conveniently grab what they need and get on with their busy lives. Importantly, this passage speaks to a specific kind of parent: those who have access to co-ops as well as the resources and knowledge necessary to choose them. While Steingraber elevates sustainable options, she notes in the beginning of *Raising Elijah* that her argument "rejects altogether the notion that toxicity should be a consumer choice" (p. xvi).

Steingraber appeals to concerns of parents, but does not ignore the fact that in many cases, individual action does not protect children from toxins. In her discussion of threats posed by PVC plastic, she states, “Believing that we can buy safety for our children with money and knowledge leaves those with neither in harms way” (p. 134). Steingraber’s rhetoric is geared toward parents, but she does not ignore the complexities of parenting and environmental threats.

In the face of such problems, Steingraber provides the audience with simple, practical advice on making small changes that have significant impacts on environmental wellness and human health while also acknowledging that individual change is not enough. Approximately halfway through the text, Steingraber provides parents with three suggestions for individual action without minimizing the importance of protective policies. Her directions for individual action are to plant a garden, mow grass with a push mower, and hang dry clothes. Steingraber again looks at convenience and inconvenience. Although these tasks initially seem inconvenient, Steingraber explains how these small changes are worth the sacrifice and are in many ways *more* convenient for parents. For example, Steingraber explains how planting a garden creates the need for compost and solves several problems: food scraps are not disposed to landfills, homemade fertilizer is made without fossil fuels, and formation of smog-producing, heat-retaining gas is prevented. Using a push mower is an effective form of exercise, and thus eliminates the need to set aside time for physical activity. Moreover, she covers the dangers of lawnmowers, and highlights how parents can hear and watch their children while safely using a push mower. She also suggests parents hang dry clothes not only for the environment, but because many household fires are caused by dryers. At the same time, dryers essentially disintegrate clothing. Furthermore, by using a clothesline, parents can hang and organize clothes simultaneously. Steingraber rejects the notion that modern day appliances make life convenient.

Not only are they bad for the environment, but also they undermine parental duties and make life inconvenient.

Like the women of *Empowering Ourselves* (Peeples & DeLuca, 2006), Steingraber makes sense of the “truth” of the matter in relation to personal experience. Steingraber’s rhetoric is designed to convince parents that there is truth in these notions of convenience and inconveniences and their relation to toxins in the environment. Toxins that harm the environment and human health are, at least, supposed to make life more convenient. Convenience is something parents care about because raising children is hard work. In Chapter Eight, “Homework (and Frontiers in Neurotoxicology,” Steingraber urges parents to alter their view of toxic chemicals and recognize the enormous inconveniences they generate. She states:

It’s no longer possible to discern, in our children, what part of their temperaments or cognitive quirks is innate and what part is derived from the cumulative impact of chemical exposure. Is a rush-ahead, chaotic, unfocused style the sign of a cheerfully unconcerned personality? Or a symptom of a subtle brain disorganization triggered by prenatal exposure to pesticides? ... At the very least, trying to decipher all this is terribly time-consuming, expensive, and inconvenient for parents” (p. 212).

Parents should not have to wonder whether the culprit of their children’s slow learning is the education system or environmental toxins. Raising children is hectic but important work, and parents should not have to sacrifice the health of their children in order to make their lives easier.

While she makes the argument that toxins undermine parental duties and make life inconvenient, Steingraber does not ignore the fact that, sometimes, being conscientious is a sacrifice. In Chapter 4, “The Grocery List (and the Ozone Hole),” Steingraber chronicles her and her husband’s struggle to prepare meals from scratch. She first acknowledges the convenience

of organic food: “Also, organic, local food tastes better, and all those tempting colors and flavors seemed to inspire food curiosity. Thus, I didn’t have to cater to finicky eaters. That definitely made life easier” (p. 78). However, Steingraber also acknowledges the fact that cooking organic meals for a family of four is time consuming. Similar to the women of the BWHBC who acknowledged uncertainties (Hayden, 1997), Steingraber acknowledges the fact that, sometimes, being sustainable requires sacrifice. As noted by Hayden (1997), acknowledging uncertainty helps contribute to a tentative, personal tone. Steingraber states, “As you might expect, there is no special secret to making it all work, and when both parents hold full-time jobs, family dinners sourced from local farms require a kind of resolve worthy of military campaigns” (p.79). After acknowledging the commitment necessary to “making it all work,” Steingraber offers the two strongest lessons she learned from parents who have been successful in making healthy, organic meals from scratch: make families meals a priority and not a chore or afterthought, and plan meals ahead of time. By appealing to notions of convenience while acknowledging the sacrifices necessary to take care of families, Steingraber appeals to parents and remains peer-like in the process. She offers suggestions and serves as a model for success, but also seeks the advice of other parents. Throughout *Raising Elijah*, Steingraber advocates action and sustainable habits in the private sphere. However, she goes beyond this approach to action by advocating multiple levels of action including individual, household, and political.

The Personal is Political: Individual, Collective, and Political Action

Unlike *Having Faith*, Steingraber’s rhetoric in *Raising Elijah* is primarily action-oriented. In *Raising Elijah*, Steingraber offers herself as a model for action, and builds on her use of autobiography in *Having Faith* by further developing a vision for collective and political action. In addition to offering specific suggestions for individual change including push mowing, hang

drying clothes, and planting a garden, she describes personal experiences that serve as models for individual parental behavior. Whereas in *Having Faith*, I argue that Steingraber's model for personal behavior and her audience of mothers and mothers-to-be does not connect well with her push for political change, the link between personal behavior and political change is strongly established in *Raising Elijah*. Steingraber uses her personal experiences to aid her argument that parents have a critical role to play in environmental movement building, and she links the personal and political in each chapter through both her chapter titles and the content within. Instead of advocating for change in either the private or public sphere, Steingraber enriches audience understanding of action by elevating the importance of action at the individual, collective, and political levels.

Individual action. Steingraber uses personal narratives to demonstrate individual, parental action. She describes the pressure-treated playground at her daughter's nursery school and her decision to change providers. After failing in her efforts to organize with other parents to have the play structure removed, Steingraber chooses to move her daughter to another daycare. She states, "I could not watch my three-year-old narrate stories about herself while climbing around on a structure that contained carcinogens. Known carcinogens. Bladder carcinogens. It was my job to keep my children safe" (p. 50). Like the women of *Empowering Ourselves* (Peeples & DeLuca, 2006), Steingraber's basic parental duties are called into question by the presence of environmental toxins. Steingraber has a no tolerance attitude when it comes to carcinogens, and she serves as a model for other parents. Moreover, this passage paints children as innocent and unaware, and supports Steingraber's claim that children are the main victims of the environmental crisis. Steingraber's rhetoric in *Raising Elijah* goes beyond that in *Having Faith* by linking models for behavior and action to a specific target audience.

Steingraber again demonstrates her commitment to environmentally conscious parenting in her chapter, “Asthma (and Intergenerational Equity).” She narrates an instance in which she was offered a competitive job in the Midwest. The job included a good salary, an academic post, and retirement benefits. Moreover, her husband was offered a job for a post in the art department at the same university. Steingraber describes her family’s trip to visit the institution:

Soon we were on a sleeper train heading for the Midwest—the kids each promised a turn in the top bunk in exchange for open-mindedness. Jeff and I both had campus interviews scheduled. Mostly, we hoped, as a family, to get the lay of the land, and look at the area schools, neighborhoods, food co-op, public library. (p. 158)

In this passage, Steingraber highlights her commitment to her family and children. Although she has a tempting job offer, what is more important to her is the community’s compatibility with her parenting style. She briefly mentions the campus interview, but offers specific examples of her interests in the community, all of which are related to her family. Steingraber is not willing to be flexible when it comes to her commitment to her family’s health and well-being. Once again, the rhetoric of Steingraber’s personal narrative offers a model to her parental audience.

On her way to the Midwest for her interview, Steingraber researches the community’s air quality and finds a few disturbing facts: a coal-burning power plant lies on campus and an old-style trash incinerator is located in the downtown area. She sets aside her findings during the visit, noting that all communities struggle with environmental hazards. Steingraber follows to overview the highlights of the visit, including a local, organic dinner, her daughter’s visit with the grade school, and the standing ovation she received for her lecture. After stating the positives, she writes, “The provost apologetically rescheduled our meeting because an asthma attack landed her in the emergency room. And Elijah started coughing. He coughed during the

whole week of our visit, and when we came back home, he stopped” (p. 159). As expected, Steingraber turns down the job offer. She states, “For clean air, I was willing to forego retirement benefits” (p. 159). She continues to explicitly highlight the role her parental identity played in the decision. She states, “But as long as I could squeak out a living, I couldn’t choose to relocate an asthmatic child near a trash incinerator” (p. 159). While everything about the visit suggested that the job offer was an excellent one, placing her child’s health at risk was a deal breaker. Although the decision is an example of individual parental action, Steingraber’s choice to opt for clean air over an attractive job offer is also a fiercely political statement. Steingraber turns down the job offer to protect her son’s health, but also to take a stand for clean air.

In *Raising Elijah*, Steingraber remains focused on the relationship between the environment and children. In her chapter, “Homework (and Frontiers in Neurotoxicology),” she discusses how children’s brains have been harmed by the presence of toxins in food. After discussing the presence of organophosphate pesticides, lead, and mercury in food, Steingraber describes a personal experience with her daughter. After her daughter eats a tuna salad sandwich at a potluck, she tells her mother that she would like to eat tuna every day. Steingraber states, “How do you explain to a kid with a newfound taste for tuna that she’ll have to wait a week before she can have her favorite dish again?” (p. 226). She describes her struggle deciding how to talk to her daughter about mercury in tuna. She considers her options: tell her about the presence of brain poisons, track her tuna consumption, or make up another excuse. Steingraber moves to state:

In the end, I did talk with Faith about the problem with tuna—while also reassuring her not to worry about the potluck sandwich. I said that keeping mercury out of fish required

generating electricity in some way other than burning coal and that I was working hard on that project. (p. 227)

Again, Steingraber's rhetoric offers parents a model for individual action. Steingraber uses herself as the example of how to engage in delicate conversations with children, and the example she sets for her daughter indicates that it is up to parents to model proactive behavior.

Collective action. In addition to chronicling her own life experiences within the movement, Steingraber repeatedly pushes for action on behalf of parents, arguing that individual, parental action grows to represent collective action. This resonates with Peeples and DeLuca's (2006) argument that, for the women of *Empowering Ourselves*, the environmental, communal nature of the problem warrants collective action. Moreover, Steingraber's clear placement of her own experience within a broader social movement reflects Hope's (2004) discussion of movement autobiography. Hope (2004) notes that movement autobiography is distinguished by the narration of personal activism within a larger historical movement. Steingraber's push for collective action in relation to her target audience of parents makes *Raising Elijah* a compelling text that clearly links the personal and political. The following examples demonstrate how Steingraber transcends the private/public binary in *Raising Elijah* by going beyond individual action and pressing for collective, parental action.

In *Raising Elijah*, Steingraber suggests that parents have a critical role to play in the environmental human rights movement. In her chapter, "The Big Talk (and Systems Theory)," she offers a discussion of attitudes toward climate change and steps parents can take to curb the progression of planetary demise. Steingraber notes how climate change lacks specificity and is surrounded by confusion and hopelessness, making it a conversation ender among friends. Beyond offering specific individual changes (push

mowing, hang drying clothes, and gardening), Steingraber explains how these actions fit into a much larger picture. She notes how a part, or individual action, cannot be measured without also looking at the system in which it occurs. She states, “Because it represents the collective actions of individual people, rather than institutions, households are seen as a leverage point for swift change” (p. 180). Beyond their concrete effects, individual behaviors combine to represent collective action. Steingraber describes the importance of her suggestions for change in the private sphere:

But their central qualification for mention here is they are intended to serve as daily, visible reminders to all children of the family that our job as their parents is now, quite literally, *to change the course of nature, which has been placed, by human actions, on a terrible path.* (p. 182, emphasis in original)

Steingraber’s individual suggestions connect individual and collective action, and, moreover, are directly relevant to parents, whose children witness their daily behaviors and responses to the catastrophic truths of the environmental crisis. This passage also highlights the fact that humans are to blame for the demise of their own health and well-being, as well as for the state of the larger outside environment.

After describing the multiple effects of individual changes, Steingraber further emphasizes the symbolic importance of private actions:

The process that clotheslines—and reel mowers and compost piles—begin, however, is the denormalizing of fossil-fuel ways of living. They are daily reminders that we urgently need new choices within new systems. They are harbingers. They signal our eagerness to embrace much bigger changes. They bear witness to our children that we

are willing to exert agency, that we are not cynical, that we respect their right to inherit a habitable planet. And they put the neighbors on notice. (p. 194)

This passage explains how individual actions fit into a broader movement. Parents are the heart of Steingraber's argument in *Raising Elijah*, and she uses her personal narratives to support a much larger picture. Throughout the text, Steingraber brings together parenting and the environmental crisis and highlights the importance of setting a strong example for the next generation. Also in her chapter on systems theory, she states:

The way we protect our kids from terrible knowledge is not to hide the terrible knowledge, or change the subject, or even create an age-appropriate story about the terrible knowledge, but to let them watch us rise up in the face of this terrible knowledge and do something. (p. 178)

It is up to parents to take individual action to protect their own families. When parents take action, they form a powerful collective within the environmental movement.

In her discussion of organic shopping and convenience, Steingraber again links together individual and collective action. She notes that an organic farmer grew the largest tomato ever recorded. The farmer stated that professors were not interested in his natural remedies, and he argued that the amount of money tied up in chemical companies made structural change especially difficult. To this, Steingraber responds, "It's up to parents of young children—and lovers of strawberries and tomatoes everywhere—to say firmly, loudly, and together, *we have to*" (p. 77). This statement suggests that parents should unite and take action. She continues:

If we want U.S. children to eat fruits and vegetables, then surround them with gardens, berry bushes, fruit trees, and urban farms. Plant vegetables in

schoolyards and rooftops. Establish a CSA in every community. Reorient the food purchasing practices of institutions like hospitals, colleges, and nursing homes toward support for local, organic farms and thus provide growth opportunities for local agriculture. (p. 78)

Beyond linking individual and collective action, this passage moves into the political aspect of environmental movement building. As in *Empowering Ourselves* (Peeples & DeLuca, 2006), individual action will not suffice to solve the problem. Steingraber's choice to speak specifically to parents in *Raising Elijah* connects strongly with her push for action. The above example links the personal and political, and highlights the ways in which parents' actions can both protect children and support political change.

Throughout *Raising Elijah*, Steingraber provides examples to demonstrate the importance of action on the political level.

Political action. In Chapter 8, "Homework (and Frontiers in Neurotoxicology)," Steingraber demonstrates the effects of environmental toxins on children's brain development. She draws on the historical example of lead poisoning and compares it to the effects of pesticides on children's brains. In the case of lead poisoning, parental action was not enough to protect children, and the problem required a political solution.

Steingraber states:

If organophosphate pesticides are damaging children's brains at background levels of exposures and above, they should be abolished. After decades of dithering, abolition was the decision we ultimately took with lead paint. It worked. Educating parents to prevent the problem on their own did not work. (p. 210)

Lead poisoning was an environmental threat to children that could not be cured by parental attention to the problem. Although action in the private arena is legitimate and necessary, individual action alone is not enough to protect children from environmental toxins.

Beyond describing the need for political action, Steingraber argues for parental involvement in contemporary environmental struggles. In her chapter on asthma and the importance of clean air, Steingraber advocates for parental action on the political level. She asks, “Why is the only person interested in talking with me about our local coal-burning power plant a childless college student out canvassing for an environmental group?” (p. 156) This passage highlights the absence of parents’ voices in environmental discourse and action, suggesting that their absence is noteworthy. She continues, “So why can’t parent become conversant with the Clean Air Act and its National Ambient Air Quality Standards, whose various rules affect our children so intimately? The American Petroleum Institute certainly is” (p. 156). She notes the strong presence of industry in environmental issues, and also notes the intimate relationship between children and policy. Because they share a unique connection to the next generation, the absence of parents’ voices is concerning. Throughout the chapter, Steingraber covers links between asthma and air pollution, and connects the personal and political in her discussion of the Clean Air Act. Once again, this reflects the discourse of mothers in *Empowering Ourselves* (Peeples & DeLuca, 2006), in that environmental threat to children’s health warrants parental action.

Although she elevates the importance of private, individual action, Steingraber argues that political action is equally important in combating climate change. She states,

“It turns out that the work of achieving deep cuts in carbon emissions is carried out in two very different arenas, one of which is visible to children” (p. 178). Beyond the private sphere is the sphere not visible to children: the political arena. In her discussion of political action, Steingraber offers a vision for action:

What might a forceful public involvement in the climate crisis look like?

Possibly a lot like the civil rights movement. There would be marches, teach-ins, sit-ins, direct actions, speeches, music, art, and appeals by the faith community.

Instead of lunch counters, think coal plants. As climate writer and activist Bill McKibben points out, this kind of political action has multiplicative effects. The civil rights movement didn’t desegregate the South one lunch counter at a time.

Instead, its leaders dramatized the events of one lunch counter to force a national change. (p. 179)

This passage goes beyond private actions that parents can take on their own and offers examples of political, public action. Unlike Steingraber’s example of mothers traveling to Washington, D.C. in *Having Faith*, this passage provides readers with various ways to engage in political action, many of which are accessible to those with limited access to resources. Moreover, Steingraber highlights how political action starts small. Whereas in *Having Faith* Steingraber failed to articulate a strong link between personal action and political change, there are no gaps between the two in *Raising Elijah*. Steingraber equally enforces individual, collective, and political action.

Steingraber discusses institutional neglect of organic farming, and argues that this is a political problem that should be of concern to parents in particular. She states, “This is a structural problem that requires a structural—political—solution. Which is why

agricultural policy and commodity pricing rules are as much issues of parenting as car seat recalls” (p. 91). Steingraber links the importance of organic farming to cost, convenience, and health. Cost of pesticides and health issues related to organophosphates make conventional foods less convenient in the long run. When it comes to organic farming, Steingraber elevates a political solution, and builds her argument by arguing that the political nature of the problem should be of direct concern to parents. Moreover, this passage further aids Steingraber in constructing her argument that the environmental crisis as a parenting crisis.

In her chapter on PVC plastic, Steingraber again argues that, ultimately, a structural solution is necessary in order to protect children and families. After describing her decision to throw out a Curious George PVC plastic raincoat her son received as a birthday gift, she states, “Toxicity should not be a consumer choice. Believing that we can buy safety for our children with money and knowledge leaves those with neither in harms way” (p. 134). Because Steingraber is an affluent parent, she has the knowledge to throw out the coat, but others may not have this luxury. Steingraber further builds her argument by highlighting how throwing out the coat is not a sufficient solution. She states:

I should not be the only one standing between my son and a toxicant with demonstrable links to testicular abnormalities. Especially since, when I’m the one playing the role of regulatory agency, I’m forced to take actions that solve no real problems—like land filling Curious George so he can leach his phthalates into someone else’s drinking water. (p. 134)

This passage mirrors Steingraber's statement in the foreword of *Raising Elijah*, where she argues that the text is not about changing shopping habits or making toxicity a consumer choice. PVC plastic is a toxic threat that requires a political solution.

Steingraber's push for individual, collective, and political action in *Raising Elijah* allows her to gear her rhetoric toward her target audience in a credible and convincing manner. The message throughout *Raising Elijah* is that parents have an obligation to take care of the environment for a number of reasons, and must act in both the private and public arenas. They must protect their children's future and, also, they must model proactive behavior through environmentally consciousness behaviors. By elevating both individual and political action and explaining how individual actions fit into a much larger picture, Steingraber's rhetoric in *Raising Elijah* is designed to move and motivate parents to take action.

Raising Elijah: Conclusions

Whereas in *Having Faith* Steingraber breaks the dichotomies of science/experience, public/private, and human/nature through her use of synecdoche, the obstacles she faces in *Raising Elijah* are unique. *Raising Elijah* is an action-oriented text, and Steingraber's rhetoric is designed with a specific, target audience in mind: parents. Synecdoche is not Steingraber's main rhetorical tool in the text. Rather, she elevates the importance of individual, collective, and political action and highlights notions of convenience and inconvenience to overcome the challenge of framing the environmental crisis as a parenting crisis.

Targeting a specific audience unavoidably excludes those who do not fit with the given narrative. Stearney (1994) notes the risks of motherhood-based rhetoric and emphasizes the limits of speaking to a specific audience. Steingraber's bold rhetorical move to speak

specifically to parents may be interpreted as placing enormous burdens on parents, and, simultaneously, neglects those who are childless. Moreover, in *Raising Elijah*, Steingraber speaks to a specific kind of parent. Her rhetoric assumes that her audience has the resources to take both individual and political action. Steingraber's scientific expertise makes her unique from many environmental justice activists including Lois Gibbs and the women of *Empowering Ourselves*. However, I argue that Steingraber uses her privileged position to her advantage: she transcends the boundary between the private, academic sphere and public discourse, and she gears her rhetoric to an audience that is largely uninformed about environmental impacts on children and families. In *Raising Elijah*, Steingraber empowers her audience of middle-class parents by writing accessible science and connecting individual, collective, and political action.

Chapter Four: Conclusions

The Significance of *Having Faith* and *Raising Elijah*

In this study of Sandra Steingraber's rhetoric in *Having Faith* and *Raising Elijah*, I explored usage of the feminine style, autobiography, and synecdoche as rhetorical tools in environmental movement building. The interaction of these tools provides insight into the tensions of environmental rhetoric and demonstrates how a highly successful activist employs these devices in order to reach a lay audience. It is clear that both *Having Faith* and *Raising Elijah* are rich sites for rhetorical analysis, and although the texts have not yet received the same degree of attention as *Living Downstream*, reviews have been overwhelmingly positive and reflect the significance of Steingraber as an important voice among environmental activists.

Interestingly, these reviews touch on some of the same issues that I examined in my analysis of both books. In his review of *Having Faith*, Woodwell (2002) comments, "She moves with apparent ease from details of personal experience and attitude through an equally

detailed review of pituitary function and embryology” (p. 803). Woodwell (2002) highlights the grace of Steingraber’s writing, and also notes the relationship she constructs between humans and the outside world. In a separate review of *Having Faith*, Massey (2002) also notes Steingraber’s ability to connect science to her personal story. Additionally, Massey (2002) highlights Steingraber’s emphasis on political action, although she does so in a positive way. She states:

So what can a mother, or future mother, do? So-called ‘lifestyle options’ may allow her to reduce the contamination of her breast milk slightly... But the best option for purifying breast milk, says Steingraber, is political action to stop women’s bodies from becoming contaminated in the first place. (Massey, 2002, p. 516)

Massey’s (2002) review reinforces my claim that *Having Faith* speaks primarily to mothers and future mothers and advocates political action. Massey (2002) also highlights how Steingraber constructs the relationship between private and public spheres in *Having Faith*. She summarizes the central lesson of *Having Faith*: “public acts have personal consequences, and the solutions to very personal problems are sometimes public as well” (Massey, 2002, p. 516). Reviews of *Having Faith* speak to Steingraber’s graceful language and her ability to combine science and experience and articulate links between private and public spheres. In addition to being reviewed positively, *Having Faith* has reached an international audience. The book has been translated into German, Korean, and Estonian editions.

Reviews of *Raising Elijah* are equally positive. In his review of *Raising Elijah*, Mittelstaedt (2011) states, “Steingraber is often likened to environmental icon Rachel Carson, a flattering comparison that is entirely deserved” (p. 37). Mittelstaedt’s (2011) review is overwhelmingly positive, and he even argues that Steingraber is perhaps the best environment

and human health writer of our age. Monzon's (2012) review of *Raising Elijah* is also positive. He speaks to Steingraber's skillful weaving of autobiography and scientific findings, and comments on Steingraber's specific audience. He states:

Ultimately, the volume is not about shopping differently; it is about calling parents to action in a human rights movement guided by the conviction that toxicity should not be a consumer choice. This movement demands a regulatory framework within which parents can exercise their most fundamental duty to protect their children. This book demands reflection and action. (Monzon, 2012, p. 87).

Monzon's (2012) comment highlights how Steingraber links between individual and political action in *Raising Elijah*. Additionally, he comments that the book is a must-read not only for parents, but also for aspiring parents or caretakers of children. Like *Having Faith*, *Raising Elijah* has reached a broad audience. Steingraber's webpage offers a link to *Raising Elijah*'s Facebook page, which has over 3,000 followers and has regularly updated information on Steingraber and environmental activism.

My analysis has examined these issues in more detail by attempting to explain *how* Steingraber's specific rhetorical strategies enable her to achieve her rhetorical purposes. Effective environmental rhetoric must confront inevitable challenges including breaking dichotomous patterns of thinking and mobilizing audiences to become environmentally conscious and engage in activism. Steingraber's unique rhetorical style includes use of a tone that is simultaneously feminine and authoritative, and her personal experiences allow her to connect with her audience and highlight the private sphere as an environment worthy of public policy. Steingraber's rhetorical strategies have both strengths and limits. With my critiques of *Having Faith* and *Raising Elijah* in mind, I now revisit my specific research questions.

Steingraber's Use of the Feminine Style

I analyzed *Having Faith* and *Raising Elijah* asking, how does Steingraber negotiate the science/experience dichotomy? Breaking this significant dichotomy is critically important for environmental rhetors. The science/experience dichotomy presumes that experiential and scientific knowledge claims are at odds with one another. But as Fischer (2000) argues, leaving science to the scientists is an insufficient strategy for elevating the importance of environmental recovery. Knowledge from citizens who have experienced pain and suffering from environmental injustice are important for environmental movement building. Nonetheless, the imposing physicality of environmental problems does require scientific data. Fischer (2000) states, "Although they are generally traceable to human agents, environmental problems have an imposing physicality compared to other social problems" (p. 90). The science/experience dichotomy separates scientific and experiential forms evidence, which can pose a challenge for rhetors wishing to advance the environmental movement.

My analysis revealed that Steingraber breaks the science/experience dichotomy through her distinctive use of the feminine style. Although Steingraber's rhetoric is largely peer-like and personal, her style is not fully "feminine." Steingraber's privileged position as a researcher creates a natural hierarchy between herself and her audience. As a scientist speaking to a lay audience, she faces the challenge of making her language accessible. To overcome this challenge, Steingraber employs a peer-like tone, refers to a maternal understanding of "truth," and uses scientific evidence strategically to support her claim that action and policy are necessary to protect pregnant women, fetuses, and children. Steingraber's status as a scientist makes her rhetoric authoritative and

convincing, yet she validates a maternal understanding of “truth” that allows her rhetoric to resonate with ordinary citizens. For many environmental justice activists, science has been used to silence those who speak primarily from experience, resulting in a tension in which scientific and experiential knowledge claims are at odds with one another. Steingraber’s unique identity as both scientist and mother creates a tension in her discourse, yet her ability to overcome this tension by showing the fundamental similarities between both perspectives makes her rhetoric powerful and persuasive. In *Having Faith* specifically, she demonstrates how both scientists and mothers are motivated to investigate environmental issues in search of “truth.” Steingraber’s rhetorical strategies enable her to transcend a traditional, dichotomous approach to knowledge as based in either science or experience. She accomplishes this transcendence with another important rhetorical strategy that interacts with her use of the feminine style: autobiography.

Action and Autobiography: The Uniqueness of *Raising Elijah*

In this analysis, I also asked, to what extent does Steingraber’s rhetorical approach aid her in constituting audiences and positioning them to take action? Steingraber’s use of autobiography and motherhood/parental appeals function differently and have unique consequences in *Having Faith* and *Raising Elijah*. In *Having Faith*, Steingraber discredits the individual approach to solving the problem of toxins in the environment and, instead, elevates the importance of a political solution. However, I argue that her reliance on autobiographical narratives in which she models proactive behavior and individual change creates a disconnection between herself and her primary audience (mothers and expectant mothers). Although Steingraber describes how her

personal experiences are connected to broader social problems, her autobiographical narratives do not offer her specific audience a model for engaging in political action.

In *Having Faith*, Steingraber models personal action while preaching political change. While her use of autobiography does not necessarily detract from her arguments, it is not well suited for mobilizing her specific audience to become agents of change. While Steingraber's rhetoric in *Having Faith* is successful in raising consciousness about environmental hazards and breaking dichotomies of environmental discourse, this is not Steingraber's only goal in the text. As *Having Faith* concludes, she states, "It is time for mothers around the world to join the campaign for precaution, which is fundamental to our daily lives as parents or expectant parents and about which we are all experts" (p. 286). Although Steingraber uses autobiography to elevate the importance of maternal knowledge, her autobiographical accounts in her role as a scientific expert creates a disconnect with her and her target audience that makes it difficult to see how exactly mothers might "join the campaign for precaution." While she breaks the science/experience divide in terms of knowledge, her discussion of action in *Having Faith* falls short. Hayden (2003) states, "As a form of public address, feminine style is well suited to rhetors who perceive themselves or are perceived by others as wielding little power" (p. 89). Because of Steingraber's powerful position, her use of autobiography does not offer her readers with a concrete path for engaging in political action.

In *Raising Elijah*, autobiography plays a more pivotal role in positioning audiences for action. Steingraber uses autobiography in a way that sidesteps one of the significant constraints in movement autobiography according to Hope (2004): "the severe

constraint against recasting the personal experience of private lives as evidence in the public discourse of science” (p. 82). Hope’s reference to personal experience as evidence refers to Steingraber’s strategy of communicating illness and cancer as evidence for environmental contamination in *Living Downstream*. However, in *Raising Elijah*, Steingraber uses personal experiences not as scientific evidence, but rather to connect with her audience as a fellow parent and to model possibilities for action. She uses scientific information to convincingly demonstrate how private experiences are connected to public health concerns. In addition, Steingraber explains in detail how individual acts, especially those made by parents, combine together to represent the collective action of a group striving to improve the state of human and planetary health. *Raising Elijah* shows how Steingraber manages to avoid the constraint mentioned by Hope (2004) by including personal experience as a means to build identification and promote action.

Steingraber’s use of autobiographical narratives in *Raising Elijah* is different from her rhetoric in *Living Downstream*. Hope (2004) notes that Steingraber in *Living Downstream*, Steingraber breaks the tradition of scientists’ silence about personal experiences. In *Raising Elijah*, Steingraber goes one step further by speaking specifically to parents and making the argument that children are the main victims of the environmental crisis. In the forward of *Raising Elijah*, she states, “I call for outspoken, full-throated heroism in the face of the great moral crisis of our own day: the environmental crisis” (p. xii). Steingraber breaks silence but also advocates outspoken discourse and action among her audience. By gearing her rhetoric to a public rather than scientific audience, Steingraber is able to break the tradition of keeping personal

experiences private. Moreover, Steingraber's rhetoric in *Raising Elijah* is action-oriented, which aids her in overcoming rhetorical constraints and positioning her readers to take action.

An analysis of both *Having Faith* and *Raising Elijah* offers insight into how Steingraber's rhetorical style has developed over time, as the two texts were published approximately nine years apart. Ultimately, I argue that Steingraber's use of personal, autobiographical narratives and a peer-like tone is further developed and more effectively linked to action in *Raising Elijah*. This is not to say that *Having Faith* is not a powerful, persuasive text. An analysis of Steingraber's use of synecdoche in *Having Faith* demonstrates how her rhetoric functions to break the ubiquitous dichotomies present in environmental rhetoric.

The Dichotomies of Environmental Rhetoric

In addition to science/experience, the dichotomies of human/nature and private/public also pose challenges for environmental rhetoric. Di Chiro (1995) argues that mainstream environmentalism has historically constructed a separation between humans and the natural world. This dichotomy can perpetuate the assumption that contamination of the "natural" world will not affect humans, and that the human world should be valued more highly than the natural world. The human/nature dichotomy is related to the barrier separating private and public spheres. The barrier between private/public is especially relevant to rhetors employing maternal appeals, as motherhood is traditionally viewed as something enacted only in the private sphere. Articulating how private struggles represent systematic, public issues has historically been a challenge for environmental activists. Peebles and DeLuca (2006) argue that the feminine style

is a fitting rhetorical tool for mothers engaging in environmental activism, as it aids them in transcending the public/private dichotomy.

While Steingraber's personal identity and creative weaving of autobiography and scientific information allows her to overcome the science/experience dichotomy, my researched posed further questions regarding the dichotomies of environmental rhetoric. I analyzed the texts asking, how does Steingraber negotiate the significant dichotomies of environmental rhetoric such as human/nature and public/private? Once again, Steingraber's rhetoric is different in *Having Faith* and *Raising Elijah*. In *Having Faith*, Steingraber's use of synecdoche serves to break the human/nature dichotomy. In order to establish a relationship between pregnant women and fetuses and the outside world, Steingraber employs a synecdochal approach to demonstrate how the inside and outside environments represent one another, and are therefore inextricably linked. Throughout the text, Steingraber shows how the health of pregnant women and fetuses can be seen as a representation of the health of the outside environment, and vice versa. Steingraber's use of synecdoche in *Having Faith* also serves to break the public/private boundary, a dichotomy closely linked to that of human/nature. Her synecdochal constructions show how public decisions about pollution inevitably shape her private decisions about mothering

Raising Elijah features synecdoche as a means to break the public/private dichotomy much more than *Having Faith*. In *Raising Elijah*, Steingraber breaks the dichotomy of public/private through her push for multiple levels of action. By demonstrating how individual and collective action are linked to one another and noting the equal importance of parental, political action, Steingraber breaks the boundary

between private and public issues and spheres. Environmental threats to children's health must be addressed on multiple levels in order to be abolished. Public issues are private issues, and vice versa. Individual, collective, and political actions are necessary in order to combat environmental threats to human and planetary health.

In addition to Steingraber's push for action on multiple levels, the titles of Steingraber's chapters suggest a linkage between private and public issues, and the content within each chapter does not fail to provide evidence. In "Milk (and Terror)," Steingraber demonstrates how the 9/11 attacks, a public issue, affected mother's breastmilk, rates of miscarriage, and asthma. In "The Grocery List (and the Ozone Hole)," Steingraber describes how chemicals sprayed on strawberries and tomatoes are not only destroying the ozone layer, but are also known carcinogens. This serves to demonstrate how toxic trespassers harm both private and public arenas. In "Pizza (and Ecosystem Services)," Steingraber connects organic farming to family meals as well as the health of the outside environment. She provides numerous reasons to eat organic in order to support the health of both people and the planet. In Chapter Five, "The Kitchen Floor (and National Security)," Steingraber discusses PVC plastic and links its dangers to the private sphere by explaining PVC kitchen floors and children's raincoats. She moves to explain how PVC plastic is also related to national security. PVC plants contain highly toxic chemicals including vinyl chloride, a liquid explosive. Steingraber highlights the dangers PVC plants pose to national security, and paints a disturbing picture of a PVC plant's hazardous liquids being used as weapons of mass destruction.

In *Raising Elijah*, Steingraber links private and public by explaining how toxic chemicals harm both the private and public spheres. Once again, *Raising Elijah* is an

action-oriented text. Beyond raising awareness of environmental threats to human health, Steingraber offers courses of action available to her audience of parents on the individual, collective, and political level. In *Raising Elijah*, Steingraber highlights the destructive effects of toxins on human and planetary health, which allows her to break the private/public boundary. Moreover, the courses of action she offers involve engaging in action in both the private and public arenas, and Steingraber notes how multiple types of action are connected to one another.

In *Raising Elijah*, Steingraber centers her arguments around human health, with specific attention to the health of children. Steingraber's privileging of human interests in *Raising Elijah* is likely intentional. In the text, Steingraber's goal is to mobilize parents to become environmentally conscious and take action to protect their children. To make this claim persuasive, she argues that children are the main victims of the environmental crisis. This choice may be interpreted as separating humans and nature. Although she does occasionally note how toxic chemicals harm natural and human environments, Steingraber remains largely focused on human environments. However, I interpret this as a way in which *Raising Elijah* builds on the success of *Living Downstream* and *Having Faith*. *Raising Elijah* does not reinforce the human/nature dichotomy, but rather takes this deconstruction for granted. As those earlier texts effectively deconstructed the human/nature dichotomy, *Raising Elijah* moves on to identify those pollution problems that will motivate parents to take political action.

Contributions

Implications for theory. Steingraber's rhetoric provides a new way of thinking about the feminine style. Steingraber writes scientific information in an accessible

manner, and she links the evidence she provides to personal experiences. This aids her in deconstructing the science/experience dichotomy. Although Steingraber's style is peer-like and she uses personal experiences to aid her arguments, her style is not fully feminine in that she is in a position more powerful than that of her audience. This analysis extends theoretical understanding of the feminine style. While many scholars have analyzed the importance of experiential knowledge claims (Hayden, 1997; Hayden, 2003; Peeples & DeLuca, 2006), there has been little attention to how scientific and experiential knowledge claims function alongside one another. As demonstrated in my analysis, Steingraber's scientific status makes her use of the feminine style unique and allows her to break the science/experience dichotomy. My analysis of Steingraber adds to theoretical understanding of the feminine style in social movement discourse, specifically in the case of the environmental movement.

Steingraber's use of the feminine style is related to another rhetorical strategy she employs: autobiography. Steingraber's use of autobiography in *Having Faith* is different than in *Raising Elijah*. I argue that in *Raising Elijah*, Steingraber's use of autobiography aids her in positioning her audience of parents to take action. Unlike in *Having Faith*, her rhetoric in *Raising Elijah* elevates the importance of individual action and weaves in autobiographical narratives to demonstrate the importance of individual action. My analysis extends Hope's (2004) and Solomon's (1991) analyses of social movement autobiography. Solomon (1991) states, "I suggest that autobiographies complement and supplement formal arguments by offering sustained, personal examples of a particular ideology enacted in real life" (p. 355). Solomon (1991) argues that Stanton and Shaw's autobiographies provided readers with images of women they could become. In *Raising*

Elijah, Steingraber achieves this goal. Looking at *Having Faith* and *Raising Elijah* through the lens of social movement autobiography shows where *Having Faith* falls short. In *Having Faith*, Steingraber dismisses the individual approach to fighting environmental threats to pregnancy, and does not offer her specific audience with a path for action that is available to them. My analysis of autobiography demonstrates how weaving personal narrative into a formal argument does not necessarily promote action in audiences.

Finally, my analysis demonstrates how synecdoche can be used to simultaneously focus discourse and aid constructive conversation. Steingraber's use of synecdoche in *Having Faith* offers an example of how forms of representation can effectively sever the human/nature and public/private dichotomies. Steingraber's use of synecdoche contributes to Moore's (1993, 2003, 2009) analyses of synecdoche in environmental discourse. Moore (1993) notes that representational ideographs can limit discourse to a part of the problem that does not aid in resolving the conflict. Steingraber constructs a synecdochal relationship between mothers' bodies/fetuses and the outside environment. Instead of limiting discourse, she focuses on the part that does aid in resolving the conflict. Because humans are responsible for environmental contamination, constructing this relationship aids in constructive conversation and promotes environmental recovery. My study of Steingraber's rhetoric confirms Moore's (2003) idea that synecdoche can connect people to problems and issues by establishing relationships between the parts that contribute to the whole of a resource crisis. Unlike the relationship between salmon and life, Steingraber's use of synecdoche focuses specifically on those capable of curbing environmental tragedy: humans.

Implications for practice. In addition to contributing to rhetorical theory, this analysis holds implications for environmental practice. Because Steingraber is a successful rhetor in the mainstream environmental movement, environmental speakers and activists can benefit from a rhetorical analysis of Steingraber's work. Environmental justice activists could benefit from further construction of synecdochal relationships between private/public and human/nature. This would serve to aid an understanding of how children, a vulnerable human population, suffer greatly from environmental contamination. Additionally, it would be useful for environmental advocates to use anecdotes and autobiographical narratives to model both individual and political action. Finally, this analysis demonstrates how a rhetor can use both scientific and experiential evidence to build the environmental movement. Environmental justice activists as well as scientists would benefit from using diverse knowledge claims. As Steingraber notes, biologists and parents have similar perspectives. Both biologists and mothers want to know what they can do to protect the inside and outside environments. Steingraber deconstructs the science/experience dichotomy by employing a peer-like tone and highlighting shared goals. Her words are powerful and convincing, and understanding her rhetorical appeals contributes valuable information to the environmental movement.

Suggestions for future research. Academics interested in studying Steingraber may find it useful to analyze Steingraber's discourse in the media. Steingraber is a prominent protestor in the anti-fracking movement and started the nonprofit organization New Yorkers Against Fracking. Steingraber has devoted columns in the Huffington Post Blog entirely to fracking, and, on Earth Day in 2013, she was arrested for civil disobedience. In the *Toronto Star*, Porter (2013) states, "After years of writing articles

about the imminent dangers of fracking, giving expert testimony, delivering speeches, drafting petitions, even launching a coalition protest group called New Yorkers Against Fracking, Steingraber went old school last month. She practiced civil disobedience” (para. 12). Porter’s (2013) statement highlights the numerous ways in which Steingraber has spoken out against fracking. Moreover, the article demonstrates the media attention Steingraber has gained from her anti-fracking efforts. Because fracking is a growing threat throughout the United States, studies on Steingraber’s anti-fracking discourse could hold important implications for the environmental movement.

Future studies of Steingraber’s rhetoric could build on rhetorical theory by examining Steingraber in relation to intensive mothering. Contemporary US society is characterized by “intensive mothering,” in which mothers are solely responsible for meeting all of their children’s needs (Afflerback, Carter, Anthony, and Grauerholz, 2013). Afflerback et al. (2013) note that intensive mothering requires mothers to put their children’s needs before their own. The authors state, “The ideology of intensive mothering holds mothers independently responsible for childrearing and accountable for each and every facet of their children’s well-being, including protecting their children and families from potential harms caused by industrialization and modernization” (Afflerback et al., 2013, p. 389). Examining *Having Faith* and *Raising Elijah* through the lens of intensive mothering could offer unique insight to relations between gender and the environment. My analysis of *Raising Elijah* revealed that Steingraber’s vigilant parental identity is driven by the inconveniences generated by the existence of toxins in the environment. While Steingraber’s rhetoric could be seen as reinforcing intensive mothering, it could also be seen as providing an explanation. A more in-depth study of Steingraber’s rhetoric in relation to intensive mothering could shed light on links between motherhood and the environment.

Academics interested in looking more closely at the feminine style specifically may find it useful to consider Steingraber's use of the tool and its effects on her audience. While Steingraber transcends the science/experience dichotomy through the feminine style, her rhetoric could also be seen as disempowering. Steingraber invites her audience members to ask questions regarding the relationship between humans and the environment, yet her audience does not necessarily have the scientific knowledge to answer those questions. A more in-depth study of Steingraber's use of the feminine style in relation to empowering audiences to *answer* new questions warrants further research. In addition to the feminine style, Steingraber's use of synecdoche is a right site for further research. Because of its various implications, synecdoche is of unique interest for the field of environmental rhetoric. Scholars could look at this rhetorical strategy in anti-fracking rhetoric, particularly that of Steingraber, who has now focused her activism on fracking and has claimed that fracking is the most important and concerning environmental issue of our time. In her 2010 article in *Orion Magazine*, she states, "I HAVE COME to believe that extracting natural gas from shale using the newish technique called hydrofracking is *the* environmental issue of our time. And I think you should, too" (para. 1). It would be useful to explore the relationship between fracking and the environmental crisis to see if Steingraber specifically constructs a synecdochal relationship between the two.

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