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Abstract: Early exposure to environmental chemicals is associated with multiple health problems, including neurological and reproductive disorders. In response to this problem, the environmental health movement has emerged as a leading authority on strategies of self-protection, or what we call “precautionary consumption.” In this paper, we use discourse analysis to examine two decades of environmental health reports and advice from a key organization in the United States: the Environmental Working Group (EWG). During this period, the discourse of environmental health used by this organization presents babies as contaminated before birth, and mothers as vectors of chemical risk. This discourse locates risk within three primary sources: first, inadequate regulation of environmental chemicals; second, maternal environments of the body and home; and finally, maternal desires for food and beauty. We argue that EWG strategically mobilizes existing medical and scientific discourses surrounding maternal bodies to build greater support for chemical regulation. Key to this discursive construction is a differential attribution of blame and responsibility, where blame for pollution is assigned to regulatory failure, yet responsibility for mediating children’s exposure is assigned to individual mothers. This social construction of pollution as a mother’s problem is not only gendered but also classed and racialized, and warrants greater attention in feminist research. Our analysis also contributes to scholarship on the maternal-fetal conflict by tracing the ambiguous place of maternal self-care within constructions of child well-being, and advances research on the regulation of women’s bodies and actions throughout their reproductive lives.

The Polluted Child and Maternal Responsibility in the US Environmental Health Movement

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And in the third trimester the mother's body dissolves stored, maternal fat,
shunting it to the baby through the blood, but with this fat the child also receives
the persistent pollutants clinging to it, like PCB's, flame retardants, and dioxins.
—Environmental Working Group, “BodyBurden: The Pollution in Newborns”
(Houlihan et al. 2005, 22).

In 2005, the Environmental Working Group (EWG), a prominent American environmental health advocacy group, published a groundbreaking report documenting the presence of environmental chemicals in infant bodies.¹ Called “BodyBurden: The Pollution in Newborns,” the report identified 287 synthetic compounds, including methylmercury, chlorinated dioxins, brominated flame retardants, and organochlorine pesticides, in samples of umbilical cord blood from ten newborns (Houlihan et al. 2005).² As the first of its kind, the report had significant impact. In 2010, the President's Cancer Panel's report to policymakers cited EWG's research, calling attention to increased risk of cancer from early life exposures to chemicals found in food, homes, air, water, and soil. Drawing on the powerful language of EWG, the panel warned that

American babies are now born “pre-polluted,” contaminated before birth (Reuben 2010, 99).

This statement positioned the polluted child as a threat to collective futures, an effective strategy for grabbing the attention of regulators and lawmakers (Lubitow 2013).

In this paper, we examine past EWG campaigns focusing on fetal, infant, and child health; in so doing, we build on feminist scholarship that identifies key institutions and actors who generate, legitimize, and circulate discourses regarding risks in children’s environments. We follow the work of feminist scholars who identify a novel case – such as a major social-scientific study (Wolf 2016) or a Centers for Disease Control and Prevention (CDC) program (Waggoner 2015) – to further understand how *mothers* are positioned as uniquely capable of, and responsible for, managing children’s health. To do so, we examine EWG, and its subsidiary Healthy Child Healthy World as a central organization within the environmental health movement, a loose coalition of organizations dedicated to exploring links between environmental pollution and human health problems (Brown 2007). The environmental health movement has received little attention from feminist researchers despite its prominent role in producing knowledge about healthy children and “safe” pregnancy and childcare (Scott, Haw, and Lee 2017). EWG occupies a central position within this movement.³ Its research is reported in major national newspapers, and its website receives over 13 million visits per year, with over half a million Facebook followers (EWG 2015, 2).⁴ In our previous research with mothers, we have found that women know of this organization and routinely refer to its shopping guides, particularly its “Dirty Dozen” guide to pesticides in produce (e.g., EWG 2017b). Mothers frequently seek advice when they learn broader safety regulations are not in place to protect children from chemical exposures, and many turn to EWG as a trustworthy source of information

(MacKendrick 2014, 2018). EWG's prominent role in translating science and policy messages about child health situate this organization as an important site for feminist analysis.

Three questions guide our analysis: How do EWG materials discursively construct the problem of environmental chemicals in the fetus, infant, and young child? How do women's bodies and caregiving labor figure into the discursive construction of environmental harm to children? How does this construction of the problem work to advance particular solutions?

Analyzing materials from 1992-2016, we find that the discourse of risk and responsibility employed by EWG locates environmental health threats within three primary sources: inadequate regulation of environmental chemicals, maternal environments of the body and home, and maternal desires for food and beauty. According to this discourse, regulatory failure is ultimately to blame for environmental threats to children's health, but mothers are held responsible for addressing such threats. In the absence of sufficient government action, a mother's body, home, appetite, and beauty practices must be individually regulated to protect the fetus, infant, and child.

In what follows, we provide an overview of the environmental health movement and review feminist research on environmental health and maternal responsibility. Then, we outline our data and methods, and present the findings of our discourse analysis, organized around the risks of insufficient regulation, unsafe maternal environments, and unchecked maternal desires. In the conclusion, we discuss implications for moral judgments of women's bodies and actions throughout their reproductive lives, in a time when environmental pollution is increasing and the visibility of this pollution within bodies is intensifying. Our paper contributes to feminist scholars' understandings of key institutional and cultural settings in which discourses of maternal responsibility circulate (see Kawash 2011).

Chemical body burdens and the environmental health movement

Everyone living in industrial society carries a chemical “body burden.” This term refers to the multitudes of synthetic chemicals inside the human body—over three hundred according to the latest measures by the CDC (CDC 2009, 2017). These chemicals enter the body through everyday activities like breathing, drinking water, eating, using personal care products, living in furnished homes, and spending time in polluted environments outside the home. Some chemicals are quickly excreted, while others are stored in fat and other tissues. Chemical exposure is measured through biomonitoring, a method of analyzing samples of human tissues, including urine, blood, and breast milk, for biomarkers of synthetic compounds. This technology has been used extensively in exposure science, toxicology, and environmental epidemiology to demonstrate the human body’s permeability to environmental chemicals (Sexton, Needham, and Pirkle 2004). Biomonitoring technology has been embraced by the environmental health movement and has helped redirect the movement’s gaze from pollution in the general environment, like polluted air and water, to pollution inside the individual (Altman et al. 2008; Shostak 2013; Shamasunder and Morello-Frosch 2015). As we show below, this redirected gaze pays disproportionate attention to the pollution inside *women’s* bodies, as well as the homes women create and maintain.

The frame of children’s health—from fragile fetus to vulnerable child—increases public resonance of the urgency of environmental pollution. This strategy has proven successful for generating stronger regulation for bisphenol A (a compound in polycarbonate plastic) and flame-retardant chemicals (Lubitow 2013; Corder 2016). EWG is not alone in drawing upon imagery of the fragile fetus, vulnerable child, and culpable mother, which already figure prominently in

health advice for pregnant women and new mothers.⁵ Feminist scholars have traced the “deployment of the figure of ‘the child’ to carry diverse political and cultural agendas” (Baird 2008, 291). Defined by their vulnerability and potential, children are invested with hopes and anxieties about the future and become the face of various political interventions (Katz 2008). Even when framed in collective terms, such interventions often enlist the work of mothers, as those deemed biologically and culturally responsible for reproducing the population (Burman and Stacey 2010, 229).

EWG situates the fragile fetus and vulnerable child within new domains of risk—environmental chemicals in food, the home, and consumer products. The organization serves as a trusted translator of complex health science and as a mobilizer for regulatory action, and thus powerfully shapes public discourse about the causes of, and solutions for, contamination. In their reading of blogs and pregnancy books, as well as conversations with others, mothers learn of these everyday chemicals, and our past research has found EWG to be a key source guiding these mothers’ shopping practices. Particularly popular is the organization’s “Dirty Dozen” list of heavily pesticide-laden fruits and vegetables, and the SkinDeep cosmetic database ranking the toxicity of personal care products (Cairns, Johnston, and MacKendrick 2013; MacKendrick 2014, 2018; Cairns and Johnston 2015).

We do not question the evidence EWG presents about threats to fetal, infant, and child health. The organization’s reports draw on publications in reputable journals representing epidemiology, toxicology, and exposure science. This research demonstrates that key moments of neurological and reproductive system development occur in utero and early childhood, and that exposure to environmental chemicals during these “windows of vulnerability” is associated with low birth weight, preterm birth, birth defects, and health disorders, including learning and

behavior disorders, reproductive problems, and cancer (ACOG and ASRM 2013, 7; see also Birnbaum and Fenton 2003;). Rather than questioning the science on risks to child/fetal health, we examine how such risk is discursively constructed and deployed with an eye toward maternal responsibility, even as broader regulatory action remains a key focus of EWG. We examine how mothers' bodies and lifestyles are positioned as sources of risk, and how mothers' labor as caregivers and consumers is enlisted in the work of protecting collective futures.

The maternal body and children's future health

The environmental health movement's particular concern with women's body burdens corresponds to a long history of medical and moral anxiety surrounding maternal bodies, where the mother's body sets the course for the future child's health (Kukla 2005). Prior to the 1900s, the environment was thought to seep into bodies, such that the things viewed, eaten, or touched by a pregnant woman would affect the health or temperament of the future child (Kukla 2005; Nash 2008). With the development of microbiology in the early 1900s, a conception of the bounded body emerged, wherein only an opening in the body could allow entry to a risky entity such as a pathogen (Nash 2008, 652). Likewise, the placenta was thought to act as a shield, protecting the fetus from any microbes, drugs, or toxics that entered the mother's body (Oaks 2000).

In the early 1960s, the Thalidomide tragedy debunked the idea of the placental shield, revealing the placenta to be a highly permeable entity that transfers substances from mother to fetus (Martin and Hollaway 2014). These substances might be vital water and nutrients, or dangerous drugs, alcohol, and toxic chemicals. This knowledge emerged in tandem with technological innovations that rendered the fetus visible, as well as a legal rhetoric of fetal rights,

resulting in the privileging of the fetus over the mother (Daniels 1993; Duden 1993). To this day, this framework tends to leave out men. Research on fetal harm pays disproportionate attention to the maternal body and largely ignores men's contributions to reproduction and fetal health (Daniels 2006). Women are considered "hypersusceptible" to risk; they are not construed as victims of environmental toxics but as "*vectors* of fetal risk" (Daniels 1997, 583; emphasis added). Men, in contrast, are rarely implicated in the transferring of health risk to future children, an omission owing to deep-seated assumptions about men's limited contribution to the reproductive equation (Daniels 2006; Almeling and Waggoner 2013). As disease risk is located in the maternal body, medical surveillance has extended in both temporal directions to include not only the pregnant body but also the preconception body, the breastfeeding body, and the feeding of young children.⁶ As women's bodies come under greater scrutiny, so too do their actions and choices that might affect the fetus, infant, and child (Wolf 2011). This scrutiny corresponds to a culture of mother-blame that holds mothers accountable for their child's health or behavioral problems (Singh 2004; Blum 2007, 2015). The penalties of mother-blame are especially severe for women of color as well as working-class and poor mothers, who face racialized and classed stereotypes about their capacities as caregivers, resulting in intense scrutiny and judgment from state and medical institutions, even as their children's health problems are shaped by institutional racism and poverty.⁷

Our analysis of EWG materials from 1992-2016 makes two distinct contributions to feminist scholarship. First, we demonstrate how EWG campaigns in this period promote a differential construction of blame and responsibility that has significant gendered implications. Specifically, environmental health advocacy discourse locates *blame* for the polluted child within regulatory failure but locates the risk of such pollution in and around the maternal body and,

accordingly, puts *responsibility* for action in women's hands. This social construction of pollution as a mother's problem deserves greater attention in feminist literature. Second, beyond the specific case of environmental chemicals, our analysis contributes to understandings of the maternal-fetal conflict by tracing the ambiguous place of maternal self-care within constructions of child well-being. While previous research has shown how public health campaigns can adopt a message of maternal self-care to promote the health of future babies (Waggoner 2015), we identify instances where mothers' self-care practices are deemed a threat to their future baby. This analysis raises theoretical questions about the construction of the maternal self vis-à-vis fetal interests.

Methods

Our discourse analysis centers on the brochures, infographics, shopping guides, and reports of the Environmental Working Group, including its subsidiary, Healthy Child Healthy World. Founded in 1992 and based in Washington, DC, EWG is highly regarded as a reliable source for environmental health information. In 2015, it raised 13.6 million dollars, with roughly half coming from individual donations, a third from foundations, and a small percentage from green corporations (EWG 2015, 12). The organization employs a nutritionist and several scientists with expertise in environmental health (EWG 2017a). In 2014, EWG joined with Healthy Child Healthy World, an organization founded by a couple whose daughter had died of a rare disorder – one that the parents suspect is connected to prenatal exposure to pesticides (HCHW 2017). By merging HCHW into its organization, EWG hoped to enact “a more forceful campaign to safeguard young children and the environment from toxic pollution” (EWG 2015). While

EWG's broad mandate also includes agriculture and energy issues, Healthy Child Healthy World is almost entirely focused on environmental health during pregnancy and early childhood.

We collected all documents published by EWG and Healthy Child Healthy World (n=200) from their founding in 1992 through December 31, 2016. All materials were available through EWG and Healthy Child Healthy World websites.⁸ We read each document and selected for analysis texts that were expressly dedicated to fetal, infant, or child health, yielding a sample of fifty-two documents. We began with a careful read of each document, followed by open coding to identify major themes. We paid particular attention to textual references to fetuses, infants, children, breastfeeding, pregnancy, preconception health, and early childhood. We also noted the content of all images contained in the documents (e.g., pregnant woman, baby bottle, infant). Through open coding of all materials, we identified regulatory reform and maternal responsibility as central themes. We then proceeded with focused coding to further investigate the meanings embedded in these themes (Charmaz 2006). Focused coding identified three main features of the discourse of environmental health risk to children: first, the failure of regulatory bodies to protect children's health; second, the risks of unsafe maternal environments; and finally the risks of unchecked maternal desires. Sixteen of the fifty-two documents focused almost exclusively on the failure of regulators to protect fetal, infant and child health, while thirty-six implicated maternal bodies or caregiving labor in a direct way. Of these thirty-six documents, nine were retrieved from the Healthy Child Healthy World website. Themes of maternal responsibility were especially striking in Healthy Child Healthy World's e-book, *Easy Steps to a Safer Pregnancy* (HCHW 2014). Prominently promoted on Healthy Child Healthy World's website as a manual for expecting mothers, this book is one of the more comprehensive

documents focusing on fetal and infant chemical exposure. For these reasons, it figures prominently in our analysis.⁹

We present our findings in three main sections. The first briefly discusses documents with a central focus on the risks of inadequate regulation. Then, we shift to demonstrate how EWG materials implicate mothers in the risks of, and responses to, pollution in fetal, infant, and child bodies. The second and third sections of our findings examine risky maternal environments of the body and home, and risky maternal desires for food and beauty. We devote greater analytic attention to these latter sections, as the theme of maternal responsibility was present in the majority of the documents in our sample and holds particular relevance to feminist scholarship. Throughout these sections, we demonstrate how the gendering of responsibility for environmental pollution in children is also racialized and classed. We also draw out subtle differences in constructions of maternal responsibility found within EWG reports and Healthy Child Healthy World guides.

Risky regulation

A third of the documents we analyze focus entirely on regulatory failure and the need for policy change, with little to no advice for individual consumers, parents, or pregnant or breastfeeding women. In one report, for example, EWG critiques lax indoor air quality standards in California, recommending that the state set new standards designed expressly for “children and other highly vulnerable populations” (Walker and Wiles 1997, 2). Observing the threat to children’s health from poor lead testing standards in California, another report asserts, “The state is complicit in this neglect by health care providers because it has failed to establish, as required by law, a minimum and mandatory ‘standard of care’ which could be used to hold providers accountable”

(Ross, Walker, and Wiles 2000, 9). In 2015, EWG examined children’s crayons and “crime scene detective kits” and found that many tested positive for asbestos. As a result, the organization calls for better oversight of imported toys by the federal Consumer Products Safety Commission (Walker and Lunder n.d.). In materials such as these, EWG explicitly rejects individualized advice. As another example, a report on thyroid deficiency during pregnancy argues that regulators must clean up water sources to remove the thyroid-disrupting compound perchlorate (a compound used in the production of rocket fuel) rather than advise women to consume more iodine (EWG 2006b).

These reports show that regulatory reform is central to EWG’s mandate. Yet, alongside this commitment to changing regulation and making government more accountable, the organization produces a range of materials that frame women’s bodies as the “first environment”—that is, the environment that transfers chemical pollutants to the fetus and infant. Notably, these documents also mention regulatory change but with considerable focus on women’s bodies and actions. We turn now to carefully examine the theme of maternal responsibility in the discourse of environmental threats to children’s health.

Risky environments

Maternal body as the first environment

The maternal body, including the womb and placenta, as well as the mother’s store of body fat and breast milk, render women primary vectors of chemical risk, according to many of the materials we analyzed. Chemical transmission to the fetus and infant are framed as occurring *through* women’s bodies, via umbilical cord blood and breast milk. In this discourse, the maternal body is baby’s first, but ultimately dangerous, home.

The placenta, according to these documents, is an unreliable shield, suggesting that the mother's body is inherently risky, as it allows dangerous chemicals to cross into fetal bodies. EWG's influential report on the body burdens of newborns puts it this way: "Not long ago scientists thought that the placenta shielded cord blood — and the developing baby — from most chemicals and pollutants in the environment, but now we know that at this critical time...the umbilical cord carries not only the building blocks of life, but also a steady stream of industrial chemicals, pollutants and pesticides that cross the placenta as readily as residues from cigarettes and alcohol. This is the human 'body burden' — the pollution in people that permeates everyone in the world, including babies in the womb" (EWG 2005, 13). This characterization of the risky maternal body groups pollutants with cigarettes and alcohol — known to be harmful to fetal development and the focus of long-standing advice for mothers. Thanks to this framing, readers may conclude that, like avoiding smoking and drinking, mothers should avoid pollution. Within the maternal body, potentiality is paired with risk; the very environment that sustains the fetus now carries significant threat, and managing this threat is a component of mothers' care-work. Another EWG report, "Brain Food: What Women Should Know about Mercury Contamination of Fish," warns that "when a pregnant woman eats a serving of mercury-contaminated fish, methylmercury crosses the placenta and enters her baby's brain within a matter of hours. It is stored there, where it blocks the natural formation and migration of nerve cells and slows the growth of the brain" (Houlihan et al. 2001, 11). The report clearly specifies women as the intended audience, and addresses them as future mothers.

The construction of the maternal body as a (future) child's home is made explicit in Healthy Child Healthy World's e-book, *Easy Steps to a Safer Pregnancy*. Addressing pregnant women directly, the book advises readers that "your baby's first home isn't her nursery or even

your house. It's your body" (HCHW 2014, 4). The guide then describes steps to manage the body as home, rendering pregnant women personally responsible for such risk-management strategies and justifying the associated gendered labor as a necessary outcome to ensure the best for baby. In a featured quote, actress Alysia Reiner attests to the helpfulness of HCHW guidelines, stating, "I wanted to create the best home for my growing baby—first in my body then in the world" (HCHW 2014, 16). This narrative is framed as the reassuring experience of a mother who was able to successfully manage the potential risks in her child's first environment.

This construction of the pregnant body as the first environment is not only gendered but also racialized. Throughout the *Safer Pregnancy* e-book are photographs of white pregnant bellies protruding from the bottom of tight-fitting white shirts. This depiction of the belly out in the world visually emphasizes the maternal body's vulnerability to environmental pollutants – a direct conduit to the developing fetus. Some photos feature the belly with no view of the rest of the woman, thereby dismembering her to emphasize the reproductive body—a separation of women into depersonalized body parts that is widespread in conventional advertising (see, e.g., Kilbourne 1990; Duden 1993). Positioned close to this pregnant belly is a bowl of salad or a counter laden with fresh vegetables, illustrating some of the "good" things that can be incorporated into the pregnant body (see, e.g., HCHW 2014, 36). Especially striking in this imagery is the overwhelming link to whiteness. Throughout the *Safer Pregnancy* e-book, all of the photos of the exposed pregnant belly feature white models, conveying a racialized construction of the maternal body. This imagery constructs the *white* maternal body as the initial environment of primary concern. In doing so, HCHW positions white women as the primary target for engaging in safer consumption, with the capacity to protect their child's first environment.

This depiction of a white maternal subject who is in control of her environment can be contrasted with the construction of a racialized, polluted fetal subject in EWG's "Cord Blood Contaminants in Minority Newborns" report (EWG 2009b). This document shares a study of contaminant loads within cord blood samples among minority newborns and is the only document in our sample to focus specifically on racial and ethnic variations in exposure to pollutants. The report emphasizes the *external* polluted environment and not the mother's body, stating that "certain minority groups are at particular risk from chemical exposures, simply because of where they live or work" and noting higher lead exposure among African American children, and higher pesticide exposures among Mexican farmworkers (EWG 2009b, 16). While the report focuses on community-level risk factors with no mention of lifestyle actions, a document linked to the report presents eleven steps for a healthier pregnancy, including consumer and lifestyle practices like avoiding gasoline fumes and eating organic foods (EWG 2009a). As in the Healthy Child Healthy World e-book, these suggestions are directed at the pregnant woman but disconnected from the structural causes of contaminant exposure identified in the report, such as aging housing stock, pollution from industrial activity, and occupation. "Cord Blood Contaminants in Minority Newborns" is one of few materials in our sample to include photographs of infants of color, and is the only one to reference the disproportionate exposure of minorities to pollution because of occupation or discriminatory siting of industrial facilities and busy roadways. Few other materials mention race or ethnicity, and most use images of white and light-skinned subjects.

The white maternal body features prominently in the discursive construction of "inherited" pollution, that is, contaminants transmitted intergenerationally through in-utero exposures, contaminated breast milk, and shared indoor environments. Two EWG reports refer

to a chemical legacy passed on by mothers to their children, and both feature white mothers and children in either stock photos or photographs of research subjects. Addressing a class of flame-retardants called polybrominated diphenyl ethers or PBDEs, these reports — “Mothers’ Milk” (Lunder and Sharp 2003) and “Across Generations” (EWG 2006a)— use the mother’s body burden as a measure of intergenerational transfer of chemicals to infants and children. “Mothers’ Milk,” for instance, states that “breast milk data are very useful...because they are an excellent measure of fetal blood levels, and fetal exposure to fire retardants” (Lunder and Sharp 2003, 5). Inheritance is linked to the maternal body, downplaying the role of the indoor and outdoor environments in polluting children’s bodies and excluding meaningful consideration of how fathers might be implicated in the intergenerational transfer of environmental chemicals. Both reports on inherited pollution emphasize the corporeal attachment between mothers and children. “Across Generations” provides a vivid description of a chemical “bond” between mother and daughter: “The unique bond between a mother and daughter starts in the womb and evolves over a lifetime... new laboratory tests of mothers and their daughters show...another, unwanted aspect of the ties that bind: a common body burden of industrial chemicals.... This common ground between mother and daughter suggests the long-lasting influence of both the pollution inherited from mother to daughter, and the common exposures they share throughout each daughter’s childhood” (EWG 2006a, 3). Accompanying this text is an image depicting a white mother gazing at her white infant daughter. Below them is a timeline ranging from 0 to 166 years – the estimated age by which the daughter would purge 99 percent of the pollution she inherited (EWG 2006a, 4). This image suggests that within the first year of life, a child inherits environmental chemicals that will remain in the body through childhood and perhaps for a lifetime. Significant is how this image frames pollution as inherited from the *mother*, drawing

attention away from the polluted environment that has left a chemical footprint in the mother's body.

This report also warns readers that inherited pollution can be passed down to grandchildren via *female* children whose ovaries develop in utero, highlighting the multigenerational harm posed by the toxic female body. Not only are mothers' bodies constructed as vectors of chemical transmission, but girls' bodies are framed as especially risky due to future reproductive capacity. Thus, while the maternal body is identified as the primary vector of risk, all female bodies are potential transmitters of intergenerational pollution, as defined by their capacity for human reproduction. But it is the white maternal subject who is situated at the core of this discourse, positioned as one with the capacity to control the pollutants entering her body, and thus to protect the child's first environment.

The home as a risky space

While not exclusively the domain of women, domestic spaces are often coded feminine, especially in the case of motherhood, where managing the home is part and parcel of caregiving. EWG has many guides on managing toxics within the home, some directed specifically to "parents." These materials do not expressly link household work with motherhood, although women's disproportionate contribution to household labor is well-established in the sociological literature, particularly in terms of cleaning and cooking (Lachance-Grzela and Bouchard 2010). By contrast, Healthy Child Healthy World's *Safer Pregnancy* e-book presents extensive household cleaning and management advice that is explicitly directed to pregnant women (HCHW 2014). Of the book's five sections, three focus on the domestic environment: "Home Detox," "Cleaning Up," and "Nesting." This book explicitly discusses household decorating and

cleaning as women's work, and directly addresses the pregnant reader. "Home. It's a refuge from the world outside, and it's especially comforting to hole up at home, with your feet up, when pregnant. But—call it modern irony—some of the very things that make our homes so cozy happen to contain chemical toxins that can make them less than safe" (HCHW 2014, 12).

In this book, the home is an extension of the womb, and thus an appropriate space for advising women on strategies of risk avoidance. Just as pregnant women must keep their bodies free of toxic substances, so they must keep toxics from entering their homes. These materials frequently contrast an idealized conception of home as a space of safety with the scientific "truth" of home as a space of toxic risk. While a polluted domestic environment is framed as a pressing concern, the book suggests that this environment can be managed through proper precautions. One of the "easy steps" advised in the pursuit of a "home detox" is to "dust often" – just one example of the domestic labor required to protect children from environmental risk. The guide frequently reinforces such advice with evidence from environmental health research. For example, we are told of a study of household dust that found "35 pollutants in tested samples, including alkylphenols linked to altered sexual development, organotin compounds suspected of affecting brain development, perfluorinated chemicals, pesticides, phthalates, and flame retardants." This scientific finding is followed by an appeal to maternal concern: "If this upsets you now, just wait until you have a crawling baby pawing at your dust bunnies, then putting her hands in her mouth!" After painting this terrifying image of a child immersed in chemical-laden dust, the book leaves the pregnant reader with a straightforward solution: "To safely remove household dust, vacuum regularly with a HEPA vacuum, damp mop hard floors, wipe furniture and other surfaces with a microfiber cloth or damp rug, and carefully maintain the filters on HVAC and other climate control equipment" (HCHW 2014, 14). Given the framing of the e-

book as a guide for pregnant women, it is the expecting mother who is enlisted in this work of managing risks within the home—not, for instance, fathers, chemical manufacturers, retailers, or other actors contributing to environmental health hazards.

The *Safer Pregnancy* book clearly attributes domestic pollutants to regulatory failure, noting that “thanks to very loose regulations, many manufacturers can and do use risky chemicals in complex, undisclosed formulas” in their conventional cleaning products (HCHW 2014, 8). While a lack of regulation is ultimately to blame, women’s domestic labor is presented as the solution most readily available. Readers are reassured that it is “easy to prevent conventional cleaning products from turning your home into an uncontrolled science experiment with your youngest and most vulnerable family member as the guinea pig” (HCHW 2014, 28). Here, the vulnerable child is positioned as the experimental subject of a toxic environment. This discursive construction of the problem not only serves to establish the severity of risk (characterizing the home as an “uncontrollable science experiment”) but also frames chemical avoidance as “easy” – with appropriate knowledge, resources, and efforts on the part of concerned mothers.

Risky desires

In addition to dangers posed to future children by mothers’ contaminated bodies and homes, EWG and Healthy Child Healthy World warn about the dangerous desires of new and expecting mothers—desires for food and beauty that must be kept in check during pregnancy and breastfeeding. Women are implored to eschew self-interest for the sake of the future child, whether by forgoing butter, skipping nail polish, or making homemade personal care products. These directives add to the long list of “rules” for controlling indulgences during pregnancy,

where cigarettes, alcohol, unpasteurized milk, and raw fish are entirely forbidden, and balanced diets are a must, along with regular exercise (but not too much) (e.g. Armstrong 2003).

The risks of maternal cravings

Food is depicted as an especially dangerous maternal craving, owing to pregnant women's unruly appetites and the invisible chemicals lurking in their favorite foods. One EWG report, "Moms and POPs: Persistent Organic Pollutants in the Diets of Pregnant Women," remarks, "everyone knows that women eat – and often crave – different foods when they're pregnant," and goes on to reveal the worrisome finding that "some of the things they eat more of give their babies an extra dose of toxic pollutants at the most delicate stage of life" (Houlihan, Campbell, and Wiles 2000, 2). The report warns of the dangerous health effects of persistent organic pollutants (POPs) and suggests that these pollutants are especially prevalent in the mainstays of the pregnant diet: "Of the 50 foods that are most contaminated with POPs, there are 16 that women eat more of (relative to their weight) than men – including such staples as milk, hamburgers, cheese and butter" (Houlihan, Campbell and Wiles 2000, 2). The report ranks foods by POP concentration, listing risky items that pregnant women purportedly crave, such as pickles, butter, cheese, pepperoni pizza, ice cream, and pumpkin pie. Notably, the point of comparison for women's eating is men, who serve as the normative referent from which to evaluate the voracious pregnant appetite. Yet, even while casting maternal appetites as dangerous, the report explicitly rejects mother-blame, stating that "women should not feel guilt or take blame for the POPs in their food.... Instead, the food supply should be cleaned up." This framing of the problem as something to be addressed through regulation rather than

precautionary consumption contrasts with the easy, empowered consumer choices advocated in Healthy Child Healthy World materials.

In its *Safer Pregnancy* book, Healthy Child Healthy World suggests that pregnancy renders women weak in both energy and willpower. Using a catchy, empathetic tone, the book warns pregnant women against tempting shortcuts that imperil the future child. Advice on appetite regulation is prominent here, with convenience foods presented as highly desirable but dangerous. Building on the common aphorism that “you are what you eat,” the report stresses the particular significance of maternal diet: “when you’re pregnant, your growing baby is what you eat, too...there are things you should work very hard not to eat when pregnant” (HCHW 2014, 32). Later, the reader encounters specific advice on how to shop and cook in ways that minimize risk, noting the “big difference between dinner made from scratch using just a handful of whole foods and microwaving a ready-to-eat frozen entrée with an ingredient list that reads like a lab experiment” (HCHW 2014, 34). The language of the “lab experiment” implies that mothers who fail to practice necessary vigilance are “experimenting” with the health of their baby. The guide presents fatigue as no excuse for lax control over the pregnant appetite:

You’re tired and the last thing you want to do is cook. We get it. But consider this: When you dine out, order in, or consume processed packaged foods, you can never be entirely sure what you’re eating. Preparing your own meals at home using fresh, whole ingredients, on the other hand, gives you maximum control over what ends up on your plate. It’s the best way to ensure an optimally safe and healthy diet for both you and your baby. Besides, cooking tired is a necessary parenting skill. Consider this training. Imagine all the years of baby food prep,

school lunches, and more that you have ahead of you. Cook now and cook often.

(HCHW 2014, 37)

In this formulation, the challenge of regulating the pregnant appetite sets women on the path to responsible motherhood – a path that includes substantial food-related care work. By taming cravings and “bad” habits during pregnancy, a woman begins her socialization into “good” motherhood, as she has perfected the careful, toxic-free habits of caregiving. The postpartum period puts this hard work to the test, as women are exhausted by breastfeeding and sleepless nights. In an infographic titled “Postpartum Pitfalls,” Healthy Child Healthy World warns that “tired moms may be tempted to resort to processed convenience or fast food, which are often high in fat, sodium or sugar and may contain troublesome ingredients and pesticide residues” (HCHW 2015, 1). The text is accompanied by illustrations of a hot dog, pizza, French fries, hamburger, and soft drink. Such items are symbolically linked to the classed stereotype of a stigmatized poor or working-class mother who makes “bad” food choices for her family (Cairns and Johnston 2015; Brenton 2017). Amid this array of risky foods, the image of a yellow sticky note offers guidance, stating “SOLUTION: Use EWG’s Food Scores database to find healthier, greener food options and freezing them ahead of time, if necessary” (HCHW 2015, 1). The message presented to readers is that with appropriate knowledge and effort, the informed mother can triumph over her own dangerous desires. Emphasizing home-cooked meals and whole foods, this vision of risk-management is not only gendered but also classed, given the economic and cultural capital required to maintain a diet of high-quality whole ingredients (Cairns, Johnston, and MacKendrick 2013; Cairns and Johnston 2015; MacKendrick 2018).

As in images of the exposed pregnant body, these invitations to regulate the pregnant

appetite are visually linked to whiteness. “Postpartum Pitfalls” opens with an illustration of a white woman holding a small child up to her face, and ends with an illustration of three white women seated on yoga mats. Through this imagery, the goal of protecting children through careful consumption becomes the assumed purview of white motherhood. While white, upper-middle-class mothers are expected to consume in ways that preserve their children’s purity, feminist research has shown that black mothers frequently encounter medical practitioners who make racist assumptions about their commitment to children’s health and their ability to follow basic health advice (Roberts 1997; Bridges 2008). Given the interconnections between the environmental health movement and scientific and medical institutions, EWG materials may reflect these same assumptions. These guides present efforts to actively promote the health of one’s pregnancy as the assumed concern of upper-middle-class white women, who are already deemed normative mothers.

The risks of pursuing beauty

Beauty, like food, is also depicted as risky and, like eating, maintaining beauty routines will require extra work from pregnant women, even if regulatory failure is the underlying driver of risk. EWG’s “Beauty Secrets” points to the lack of regulation of beauty products as “the single biggest failure in U.S. environmental law” but goes on to suggest that until appropriate changes are in place, “people can do a few simple things to reduce exposure to the contaminants that we do know about” (Houlihan and Wiles 2000, 5). The first piece of advice targets “women who are pregnant, nursing or thinking about getting pregnant” and encourages them to “look for and avoid all personal care products with the word phthalate on the label” (Houlihan and Wiles 2000,

5). Notably, while policy and regulatory reform are prioritized as the drivers of change, women and mothers are enlisted to do what they can in the absence of government action.

This multipronged approach of calling for regulatory reform while targeting individual consumption practices is common in discussions of environmental chemicals in cosmetics. In 2002, EWG ran a full-page advertisement in the *New York Times* calling attention to the dangers of beauty practices to pregnant bodies. The image depicts a pregnant white woman in a thin, sleeveless nightgown, smiling as she smells a bottle of perfume. Above her, a large title reads “Sexy for her. For baby it could really be poison.” A subheading asks: “What are you wearing?” (Malkan 2007, 25). While the small text of the ad emphasizes the failure of regulators to properly test cosmetics for unsafe ingredients, the prominent image and eye-catching headline present a message of dangerous maternal desires. Despite the ad’s substantive focus on much-needed government action, a discursive frame of maternal responsibility is used to attract attention and mobilize action.

The idea that a desire for beauty is dangerous and selfish for pregnant women is most apparent in Healthy Child Healthy World’s infographic titled “When Looking Good is Bad for Baby: How to Avoid Toxic Personal Care Products During Pregnancy,” which shows an illustration of a white woman applying lipstick while looking into a compact mirror (HCHW n.d.). She sits beside a dresser cluttered with cosmetics, and through her green tank top we see the fetus curled up in the womb. The accompanying text states: “168 unique chemical ingredients including probable reproductive and developmental toxins that can harm growing babies are found in the twelve personal care products women use on average daily.” A series of text boxes list the chemicals found in specific personal care products and suggest strategies for chemical avoidance, such as “Upgrade your shampoo” or “Pass on perfume and scents.” The

clear message is that only a selfish and beauty-obsessed mother (like the one in the image) would prioritize her own appearance over the well-being of her future child.

Rather than situating risks within the external environment, it is the pregnant woman's desire to treat herself that puts her baby at risk. Once again, the Healthy Child Healthy World *Safer Pregnancy* book adopts an empathetic tone, noting that "when you ache, are swollen, look different than you ever have in your life, and can't go out for cocktails at your favorite bar, the urge to pamper yourself spa-style tends to emerge" (HCHW 2014, 22). Taking up the voice of an understanding advisor, the book offers a sort of "tough love" approach to women's desire for self-care, suggesting that "before you go wild with the beauty products, make sure you read all labels. Carefully." It goes on to note that personal care products and cosmetics are "woefully under regulated and contain some remarkably unhealthy stuff" (HCHW 2014, 22). Once again, we see blame attributed to a lack of regulation but *responsibility* attributed to mothers. This pairing of empathy for the experience of pregnancy with a hard-line call for maternal control and self-sacrifice appears repeatedly throughout the book. "We get that spa treatments and pregnancy pains go together. But most body and hair treatments rely on toxic products," we are told a few pages later (HCHW 2014, 27). And given the framing of the child as the promise of collective futures, an expecting mother's unchecked beauty practices hold negative implications not only for the health of her baby but also for the future of the population.

Discussion and conclusion

While acknowledging the failure of regulatory agencies to protect the public from environmental pollution, EWG materials in our sample paint a clear picture of risky maternal environments and desires. Women are invoked as the first and last line of defense against the problem of pollution

in children. As the “proximate” cause of children’s polluted bodies, they must repair damage already done (Blum 2007, 205). From the contaminated maternal body and polluted home to the unruly pregnant appetite and vain pursuit of feminine beauty, mothers are positioned as vectors of chemical risk, weak in the face of powerful urges that endanger their children. It is only by resisting these compulsions through self-restraint that a mother may protect her (future) child.

Environmental advocacy groups are not the first to use the frame of children’s vulnerability to mobilize support for a larger social movement. In this case, however, threats to the child are located much earlier in the reproductive timeline, and in the most intimate spaces of the child’s environment. The maternal body is constructed as the threshold separating the fetus from the outside world, and also the staging ground for the population’s future (Mansfield 2012). While childhood is often defined through notions of potential, here potentiality carries a second, more ominous meaning: the potential damage wrought by pervasive risks connected to the polluted, inattentive mother, which undermine the child’s developmental potential and threaten collective futures. Pollution not only contaminates the world in which a child will live but also the body the child will inhabit, spelling the end to the perfect childhood before it starts.

With the aid of biomonitoring technology that can measure chemical body burdens in mothers and newborns, women’s exposure to chemicals has garnered considerable anxiety. This anxiety does not originate with EWG; it is already firmly located within the social construction of scientific and medical knowledge, where life, the environment, and future health are visualized at the molecular level and where concerns about children’s futures are pushed “back in time and into the bodies and decisions of women as mothers and potential mothers” (Lappé 2016, 681). Thus, we argue that this environmental health advocacy group has successfully mobilized existing discourses regarding maternal bodies, responsibilities, and desires to build

public support for chemical regulation. EWG materials present messages that operate on multiple discursive levels: while mothers' choices and lifestyles are often front and center, a more complex narrative addresses the need for government action. This strategy is perfectly illustrated in the *New York Times* advertisement, where the prominent image and title communicate an alarming message of mother-blame while a critique of regulatory failure is buried in the fine print. By contrast, Healthy Child Healthy World materials provide exaggerated representations of maternal responsibility with far less emphasis on regulatory action. They deploy simplistic characterizations of pregnant women who are too tired to protect their fetuses from chemical exposures and new mothers who are too overwhelmed to eschew toxic conveniences that make the postpartum period easier.

Overall, EWG's discursive construction of children's environmental health involves a differential attribution of blame and responsibility. This discourse assigns *blame* to government, but allocates *responsibility* to individual mothers. Put another way, women are disproportionately implicated in the responsibility of risk, with the potential interpretation that the inheritance of chemical risks depends largely on maternal behavior rather than on the behavior of regulatory bodies and manufacturers. In short, women are put in charge of picking up the slack from regulatory failure.

Notably, we see a specific maternal subject produced through this discourse. While EWG materials appeal to new and expecting mothers, broadly, it is white women who are predominantly featured in the illustrations we examined, and upper-middle-class women who are implicitly targeted through advice on lifestyle and consumption practices that are resource- and time-intensive. The racial specificity of this maternal subject is especially striking in Healthy Child Healthy World representations of the pregnant body, pictured almost exclusively as a

white belly. This imagery suggests an imagined audience of white readers and reveals racialized assumptions about which mothers are managing environmental health threats through safer consumption. The depiction of maternal control constructed within EWG materials is in striking contrast to recent media representations of polluted African American communities (such as lead contamination in Flint, Michigan's water supply), where mothers are seen to have little control over the contaminants in their children's environment (e.g., Bernstein and Murphy 2016). Thus, in addition to attending to injustices perpetuated through environmental racism (Bullard 1993), we must also attend to the ways in which a privileged white subject is constructed as one who personally avoids environmental health threats through precautionary consumption. In this discourse, white maternal bodies are vectors of risk, but this risk can be ostensibly controlled through proper knowledge and consumer choices. Such racialized constructions shape the kinds of risks addressed in these materials – and mask others. We see the visual presentation of polluted white, black, and brown bodies as vitally important to understanding the social construction of embodied pollution, and one that deserves greater attention in feminist research – building on scholarship that shows how dominant institutions deploy racialized assumptions about women's lives, as well as women's commitment to protecting the health of their children.¹⁰

In addition to generating insights into the racialized and classed maternal subject constructed within environmental health discourse, our case study contributes to feminist scholarship on the maternal-fetal conflict. We are struck by the ambiguous and sometimes contradictory framing of mothers' self-care practices within this discourse. In her study of a CDC preconception health campaign, Miranda Waggoner (2015) demonstrates how maternal responsibility of the pre-pregnant self is framed through a discourse of self-care. Indeed, elements of self-care are advocated through the environmental health movement's emphasis on "pure"

eating, where the extra cost of organic food is justified as “worth it” for both mom and baby. However, we also see discourses of feminine indulgence and lack of control whereby mothers’ self-care comes at the expense of fetus and baby, whether through satisfying cravings for unhealthy foods or unsafe beauty products. Notably, this call for maternal self-regulation is framed through the empathetic voice of one who understands the struggles of pregnancy – as though coming from one mother to another. Mothers’ needs and desires are acknowledged and attributed to the shared experience of shifting hormones, swollen bodies, and sleepless nights, yet are seen to ultimately pale in comparison to the needs of the fetus and infant. Thus, an expression of empathy for mothers’ experiences is used to strategically advance an underlying message of maternal self-sacrifice.

Ultimately, the construction of maternal responsibility advanced within environmental health movement discourse in this period fits with the precepts of normative femininity that encourage women to carefully manage their appearance by watching what they eat, as well as contemporary ideologies of intensive mothering that ask mothers to put the child’s needs before their own (Hays 1996; Markens, Browner, and Press 1997). As EWG contributes to public understandings of environmental health, it invites mothers to engage in individual practices that promote the well-being of not only their own children but also the future population. Indeed, while individual consumers feel empowered and comforted by precautionary consumption, it offers temporary and fleeting protection (MacKendrick and Stevens 2016). We are encouraged to see small shifts in EWG discourse since the period of our analysis, as the organization is incorporating greater racial and gender diversity in campaign imagery.¹¹ We urge members of the environmental health movement, like EWG, to engage in a feminist reading of their mission and guidance, in order to bring a critical perspective to medical and scientific framings of

maternal responsibility. Bodies reflect the environments in which they are situated, and collectively we must imagine ways to address chemical body burdens without defining solutions according to narrow gender roles and risky reproductive bodies (see, e.g., Scott, Haw, and Lee 2017). The vectors of chemical pollution are not women or mothers but companies that manufacture and release environmental chemicals, and the governments that allow this to happen.

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REFERENCES

- ACOG and ASRM (American College of Obstetricians and Gynecologists and American Society for Reproductive Medicine). 2013. "Exposure to Toxic Environmental Agents." Washington, DC: American College of Obstetricians and Gynecologists.
<https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Exposure-to-Toxic-Environmental-Agents>.
- Almeling, Renee, and Miranda R. Waggoner. 2013. "More and Less than Equal: How Men Factor in the Reproductive Equation." *Gender & Society* 27(6):821-42.
- Altman, Rebecca Gasior, Rachel Morello-Frosch, Julia Green Brody, Ruthann Rudel, Phil Brown, and Mara Averick. 2008. "Pollution Comes Home and Gets Personal: Women's

- Experience of Household Chemical Exposure.” *Journal of Health and Social Behavior* 49(4):417-35.
- Armstrong, Elizabeth M. 2003. *Conceiving Risk, Bearing Responsibility: Fetal Alcohol Syndrome and the Diagnosis of Moral Disorder*. Baltimore: Johns Hopkins University Press.
- Baird, Barbara. 2008. “Child Politics, Feminist Analyses.” *Australian Feminist Studies* 23(57):291–305.
- Bernstein, Lenny, and Zoanne Murphy. 2016. "Tainted Water, Tainted Hope." *Washington Post*, March 4. <https://www.washingtonpost.com/graphics/national/flint/>.
- Birnbaum, Linda S., and Suzanne E. Fenton. 2003. "Cancer and Developmental Exposure to Endocrine Disruptors." *Environmental Health Perspectives* 111(4):389-94.
- Blum, Linda M. 1999. *At the Breast: Ideologies of Breastfeeding and Motherhood in the Contemporary United States*. Boston: Beacon.
- . 2007. "Mother-Blame in the Prozac Nation: Raising Kids with Invisible Disabilities." *Gender & Society* 21(2):202-26.
- . 2015. *Raising Generation Rx: Mothering Kids with Invisible Disabilities in an Age of Inequality*. New York: New York University Press.
- Brenton, Joslyn. 2017. “The Limits of Intensive Feeding: Maternal Foodwork at the Intersections of Race, Class, and Gender.” *Sociology of Health & Illness* 39(6):863–77.
- Bridges, Khiara. 2008. *Reproducing Race: An Ethnography of Pregnancy as a Site of Racialization*. Berkeley: University of California Press.

- Brown, Phil. 2007. *Toxic Exposures: Contested Illnesses and the Environmental Health Movement*. New York: Columbia University Press.
- Bullard, Robert. 1993. "An Anatomy of Environmental Racism and the Environmental Justice Movement." In *Confronting Environmental Racism: Voices from the Grassroots*, 15-40. Boston: South End.
- Burman Erica, and Jackie Stacey 2010. "The Child and Childhood in Feminist Theory." *Feminist Theory* 11(3):227–40.
- Cairns, Kate, and Josée Johnston. 2015. *Food and Femininity*. London: Bloomsbury.
- Cairns, Kate, Josée Johnston, and Norah MacKendrick. 2013. "Feeding the 'Organic Child': Mothering through Ethical Consumption." *Journal of Consumer Culture* 13(2):97-118.
- CDC (Centers for Disease Control). 2009. "Fourth National Report on Human Exposure to Environmental Chemicals." Atlanta: Centers for Disease Control and Prevention, National Center for Environmental Health.
- . 2017. "Fourth National Report on Human Exposure to Environmental Chemicals, Updated Tables, February 2017." Atlanta: Centers for Disease Control and Prevention, National Center for Environmental Health.
https://www.cdc.gov/biomonitoring/pdf/FourthReport_UpdatedTables_Volume1_Jan2017.pdf.
- Charmaz, Kathy. 2006. *Constructing Grounded Theory: A Practical Guide through Qualitative Research*. London: Sage.
- Cordner, Alissa. 2016. *Toxic Safety: Flame Retardants, Chemical Controversies, and Environmental Health*. New York: Columbia University Press.

Daniels, Cynthia R. 1993. *At Women's Expense: State Power and the Politics of Fetal Rights*.

Cambridge, MA: Harvard University Press.

—. 1997. "Between Fathers and Fetuses: The Social Construction of Male Reproduction and the Politics of Fetal Harm." *Signs: Journal of Women and Culture in Society* 22(3):579-616.

—. 2006. *Exposing Men: The Science and Politics of Male Reproduction*. New York: Oxford University Press.

Duden, Barbara. 1993. *Disembodying Women: Perspectives on Pregnancy and the Unborn*.

Cambridge, MA: Harvard University Press.

EWG (Environmental Working Group). 2005. "Body Burden: The Pollution in Newborns."

Washington, DC: Environmental Working Group, July 14.

<https://www.ewg.org/research/body-burden-pollution-newborns#.WvBa3KQvyUk>.

—. 2006a. "Across Generations: The Chemical Pollution Mothers and Daughters Share and Inherit." Washington, D.C.: Environmental Working Group.

<https://www.ewg.org/news/news-releases/2006/05/10/across-generations-chemical-pollution-mothers-daughters-share-and#.Wwa4RO4vyUl>.

—. 2006b. "Thyroid Threat." Washington, DC: Environmental Working Group. October 30.

<https://www.ewg.org/research/thyroid-threat#.WvCMJ6QvyUk>.

—. 2008. "EWG's Healthy Home Tips for Parents." Washington, DC: Environmental Working Group. https://static.ewg.org/reports/2008/EWGguide_goinggreen.pdf?_ga=2.216553759.887894665.1525701340-1537265464.1525449117.

https://static.ewg.org/reports/2008/EWGguide_goinggreen.pdf?_ga=2.216553759.887894665.1525701340-1537265464.1525449117.

—. 2009a. "Pollution in Minority Newborns: 11 Healthy Pregnancy Tips." Washington, DC:

Environmental Working Group. <https://www.ewg.org/research/minority-cord-blood-report/11-healthy-pregnancy-tips#.WvCMsKQvyUk>.

- . 2009b. "Pollution in People: Cord Blood Contaminants in Minority Newborns." Washington, DC: Environmental Working Group.
http://static.ewg.org/reports/2009/minority_cord_blood/2009-Minority-Cord-Blood-Report.pdf.
- . 2015. "EWG Adds Healthy Child Healthy World Program to Strengthen Focus on Children's Environmental Health." March 31. Washington, DC: Environmental Working Group. <https://web.archive.org/web/20150913103827/http://www.ewg.org/release/ewg-adds-healthy-child-healthy-world-program-strengthen-focus-children-s-environmental>
- . 2017a. "About Us." Washington, DC: Environmental Working Group.
<http://www.ewg.org/about-us>.
- . 2017b. "Dirty Dozen." Washington, DC: Environmental Working Group.
<https://www.ewg.org/foodnews/dirty-dozen.php>.
- Hays, Sharon. 1996. *The Cultural Contradictions of Motherhood*. New Haven, CT: Yale University Press.
- HCHW (Healthy Child Healthy World). 2014. *Easy Steps to a Safer Pregnancy*. Beverley Hills, CA: Healthy Child Healthy World.
- . 2015. "Postpartum Pitfalls: Beware of Chemical Exposures during Your Postpartum Recovery." Washington, DC: Healthy Child Healthy World.
<https://www.facebook.com/HealthyChild/photos/a.411243048955.188614.10398403955/10153271584748956/?type=3&theater>
- . 2017. "Our Story." <http://www.healthychild.org/about-us/our-story/>.

—. n.d. “When Looking Good Is Bad for Baby.” Beverley Hills, CA: Healthy Child Healthy World.<https://web.archive.org/web/20170705100135/http://www.healthychild.org/when-looking-good-is-bad-for-baby/>

Houlihan, Jane, Chris Campbell, and Richard Wiles. 2000. “Moms and POPs: Persistent Organic Pollutants in the Diets of Pregnant Women.” Washington, DC: Environmental Working Group.
https://static.ewg.org/reports/2000/MomsAndPops.pdf?_ga=2.53516833.887894665.1525701340-1537265464.1525449117.

Houlihan, Jane, Timothy Kropp, Richard Wiles, Sean Gray, and Chris Campbell. 2005. “BodyBurden: The Pollution in Newborns.” July 14. Washington, DC: Environmental Working Group.
https://assets.ctfassets.net/t0qcl9kymnlu/2GVUmYpZCgu6iuSiKEUY4m/9ccbb2938066649259c634806957d499/Body_Burden_in_Newborns.pdf.

Houlihan, Jane, and Richard Wiles. 2000. “Beauty Secrets: Does a Common Chemical in Nail Polish Pose Risks to Human Health?” Washington, DC: Environmental Working Group.
https://static.ewg.org/reports/2000/BeautySecrets.pdf?_ga=2.251157007.887894665.1525701340-1537265464.1525449117.

Houlihan, Jane, Richard Wiles, Julie Wolk, and Jeremiah Baumann. 2001. “Brain Food: What Women Should Know about Mercury Contamination of Fish.” Washington, DC: Environmental Working Group.
https://static.ewg.org/reports/2001/BrainFood.pdf?_ga=2.12095037.887894665.1525701340-1537265464.1525449117.

Katz, Cindi. 2008. "Childhood as Spectacle: Relays of Anxiety and the Reconfiguration of the Child." *Cultural Geographies* 15(1):5–17.

Kawash, Samira. 2011. "New Directions in Motherhood Studies." *Signs* 36(4):969-1003

Kilbourne, Jean. 1990. "Beauty...And the Beast of Advertising." *Media and Values* 49.

<http://www.medialit.org/reading-room/beautyand-beast-advertising>.

Kukla, Rebecca. 2005. *Mass Hysteria: Medicine, Culture, and Mothers' Bodies*. Lanham, MD: Rowman & Littlefield.

Lachance-Grzela, Mylène, and Geneviève Bouchard. 2010. "Why Do Women Do the Lion's Share of Housework? A Decade of Research." *Sex Roles* 63(11–12):767–80.

Lappé, Martine. 2016. "The Maternal Body as Environment in Autism Science." *Social Studies of Science* 46(5):675-700.

Litt, Jacquelyn S. 2000. *Medicalized Motherhood: Perspectives from the Lives of African-American and Jewish Women*. New Brunswick, N.J.: Rutgers University Press.

Lubitow, Amy. 2013. "Collaborative Frame Construction in Social Movement Campaigns: Bisphenol-a (BPA) and Scientist–Activist Mobilization." *Social Movement Studies* 12(4):429-47.

Lunder, Sonya, and Renee Sharp. 2003. "Mothers' Milk: Record Levels of Flame Retardants Found in American Mothers' Breast Milk." Washington, DC: Environmental Working Group, September 23. <https://www.ewg.org/research/mothers-milk-0>.

MacKendrick, Norah. 2014. "More Work for Mother: Chemical Body Burdens as a Maternal Responsibility." *Gender & Society* 28(5):705-28.

—. 2018. *Better Safe than Sorry: How Consumers Navigate Exposure to Everyday Toxics*.

Oakland: University of California Press.

MacKendrick, Norah, and Lindsay M. Stevens. 2016. "Taking Back a Little Bit of Control":

Managing the Contaminated Body through Consumption." *Sociological Forum* 31(2):310–32.

Malkan, Stacy. 2007. *Not Just a Pretty Face: The Ugly Side of the Beauty Industry*. Gabriola

Island, BC: New Society.

Mansfield, Becky. 2012. "Environmental Health as Biosecurity: 'Seafood Choices,' Risk, and

the Pregnant Woman as Threshold." *Annals of the Association of American Geographers* 102(5):969-76.

Markens, Susan, C. H. Browner, and Nancy Press. 1997. "Feeding the Fetus: On Interrogating

the Notion of Maternal-Fetal Conflict." *Feminist Studies* 23(2):351-72.

Martin, Aryn, and Kelly Holloway. 2014. "'Something There Is That Doesn't Love a Wall':

Histories of the Placental Barrier." *Studies in History and Philosophy of Science Part C* 47(Part B):300-310.

Nash, Linda. 2008. "Purity and Danger: Historical Reflections on the Regulation of

Environmental Pollutants." *Environmental History* 13(4):651-58.

Oaks, Laury. 2000. "Smoke-Filled Wombs and Fragile Fetuses: The Social Politics of Fetal

Representation." *Signs* 26(1):63-108.

Reuben, Suzanne H. 2010. "Reducing Environmental Cancer Risk: What We Can Do Now.

President's Cancer Panel 2008-2009 Annual Report." Bethesda, MD: National Cancer

Institute. <https://deainfo.nci.nih.gov/advisory/pcp/annualreports/pcp08->

[09rpt/pcp_report_08-09_508.pdf](https://deainfo.nci.nih.gov/advisory/pcp/annualreports/pcp08-09rpt/pcp_report_08-09_508.pdf).

- Roberts, Dorothy. 1997. *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty*. New York: Random House.
- Ross, Zev, Bill Walker, and Richard Wiles. 2000. "Lead Astray: California's Broken Promise to Protect Children from Lead Poisoning." Washington, DC: Environmental Working Group. https://static.ewg.org/reports/2000/LeadAstray.pdf?_ga=2.19878193.887894665.1525701340-1537265464.1525449117
- Scott, Dayna Nadine, Jennie Haw, and Robyn Lee. 2017. "'Wannabe Toxic-Free?' From Precautionary Consumption to Corporeal Citizenship." *Environmental Politics* 26(2):322-42.
- Sexton, Ken, Larry L. Needham, and James L. Pirkle. 2004. "Human Biomonitoring of Environmental Chemicals." *American Scientist* 92(1):38-45.
- Shamasunder, Bhavna, and Rachel Morello-Frosch. 2015. "Scientific Contestations over 'Toxic Trespass': Health and Regulatory Implications of Chemical Biomonitoring." *Journal of Environmental Studies and Sciences* 6(3):556-68.
- Shostak, Sara. 2013. *Exposed Science: Genes, the Environment, and the Politics of Environmental Health*. Berkeley: University of California Press.
- Singh, Ilina. 2004. "Doing Their Jobs: Mothering with Ritalin in a Culture of Mother-Blame." *Social Science and Medicine* 59(6):1193-1205.
- Vogel, Sarah A. 2013. *Is It Safe? BPA and the Struggle to Define the Safety of Chemicals*. Berkeley: University of California Press.
- Waggoner, Miranda R. 2013. "Motherhood Preconceived: The Emergence of the Preconception Health and Health Care Initiative." *Journal of Health Politics, Policy and Law* 38(2):345-71.

—. 2015. "Cultivating the Maternal Future: Public Health and the Prepregnant Self." *Signs* 40(4):939-62.

—. 2017. *The Zero Trimester: Pre-Pregnancy Care and the Politics of Reproductive Risk*. Oakland: University of California Press.

Walker, Bill, and Sonya Lunder. 2015. "Tests Find Asbestos in Kids' Crayons, Crime Scene Kits." Washington, DC: Environmental Working Group.

http://1yllvogavjh3f7wbx11bxebx.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/Asbestos_in_Kids_Crayons_Crime_Scene_Kits.pdf

Walker, Bill, and Richard Wiles. 1997. "100,000 California Kids Breathe Unhealthy Air at School." San Francisco: Environmental Working Group California, June 4.

<https://static.ewg.org/reports/1997/CAKidsBreathUnhealthyAir.pdf>

Wolf, Joan B. 2011. *Is Breast Best? Taking on the Breastfeeding Experts and the New High Stakes of Motherhood*. New York: New York University Press.

—. 2016. "Framing Mothers: Childcare Research and the Normalization of Maternal Care." *Signs* 41(3):627-51.

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¹ By “environmental chemicals” we refer to synthetic compounds that migrate into indoor and outdoor environments and human bodies. We also refer to these compounds as contaminants or toxics.

² Methylmercury arises from coal combustion, and chlorinated dioxins are byproducts of waste and plastic incineration. Brominated flame retardants are common in electronics and home furnishings, while organochlorine pesticides are used in agriculture (EWG 2005, 17).

³ When referring to EWG in this paper, we include Healthy Child Healthy World, which merged with EWG in 2014. See also note 9.

⁴ EWG reports are circulated by popular parenting blogs and natural living websites, including mindfulmomma.com, drweil.com, realsimple.com, rodaliesorganiclife.com, and parenting.com.

⁵ See Oaks (2000), Armstrong (2003), Daniels (2006), Wolf (2016), and Waggoner (2017).

⁶ See Markens, Browner, and Press (1997), Waggoner (2013, 2015), MacKendrick (2014), and Lappé (2016).

⁷ See Roberts (1997), Blum (1999), Litt (2000), and Bridges (2008).

⁸ Data collection and research for this article took place between December 2015 and December 2016, and the paper was accepted for publication in June 2017. While the paper was preparing to go to press, Healthy Child Healthy World’s website went offline, and EWG removed from their website the news release announcing their merger with Healthy Child Healthy World. Many of the original documents, images, and webpages we refer to in the paper are consequently no longer available online. All original data are on file with the authors and are available upon

request, and some remain visible on the organization's Facebook page:

<https://www.facebook.com/ewg.org/> and <https://www.facebook.com/HealthyChild/>.

⁹ None of the documents in our sample discuss the relationship between fathers' bodies and fetal, infant, or child health. The few times men are mentioned is to point to risks to men's health from chemical exposure.

¹⁰ See Roberts (1997), Blum (1999), Litt (2000), and Bridges (2008).

¹¹ See, e.g. <https://www.ewg.org/key-issues/childrens-health>.