Life, Interrupted

Reproductive Damage from Chemical Pollutants

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Cet article examine l'influence des polluants chimiques et toxiques sur la santé reproductive des femmes, compromettant tout espoir de grossesse. Ce fait étant reconnu, des avocates des droits reproductifs des femmes et des environnementalistes ont établi de nouvelles alliances pour contrer la menace grandissante face au droit de faire des enfants et surtout de les faire en bonne santé.

Harm to human health, and especially to women's reproductive health, is moving up quickly on the scale of environmental concerns. This development, based on a growing understanding of the harm from small amounts of pollutants, reverberates with fundamental values of women's lives, human rights, and also may become a galvanizing issue for environmental activists.

In 1992, *Agenda 21*, the blueprint for global environmental action created for the United Nations Earth Summit in Rio, paid only passing attention to the damaging effects of chemical contamination on human health, including reproductive health. Instead, it emphasized the need to manage risks to the environment associated with chemical use. Nations were urged to "strengthen international risk assessment" of chemicals and "produce guidelines for acceptable levels of exposure" for a greater number of toxic chemicals (UN 1992).

Ten years later at the Johannesburg Summit, priorities shifted. This time, the document developed by conference participants focused less on risk assessment and more on people's health, setting goals for 2020 "to use and produce chemicals in ways that do not lead to significant adverse effects on human health and the environment" (UN 2002).

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What happened during that decade to raise alarm about toxic chemical pollution as a major threat to human health and sustainability of the planet? In short, environmental scientists showed that dangerous chemical contamination is interfering with human reproduction. Extensive chemical usage threatens the ability of women and men to bear children and to raise healthy children (Colburn, Dumanoski and Meyers).

Procreation is a fundamental human right, and is among the most momentous rights and life activities of women and men. Interference with that right through the involuntary exposure to chemicals threatens basic assumptions about human existence and sustainability.

Recognizing that environmental contamination by toxic chemicals is compromising the ability to reproduce, women's reproductive rights advocates and environmentalists are establishing new alliances to confront the growing threat to the right to bear children and to bear healthy children.

The Problem: Hormone Disruption and Reproduction

In January, 2003, the U.S. government released startling results from the largest survey of its citizens' body burden of environmental chemicals. The Centers for Disease Control (CDC) studied toxic chemicals in the bodies of ordinary people in the U.S. and found a wide array of toxic chemical contaminants and hormone disrupters (CDC 2003a).

Confirming the results of an earlier, smaller analysis issued by the CDC in 2001, the report explained that every single person studied bore measurable levels of pesticide products. Mercury, a toxin, was found in women of childbearing age, along with disturbing amounts of the plasticizers and phthalates, which are associated with developmental damage in animals and found in products such as cosmetics, perfume, and car interiors. Yet, the study analyzed only 116 of over 70,000 synthetic chemicals in commercial use (CDC 2003b). And no one knows the consequences to human health of combining a chemical potpourri of toxins.

The CDC study comes in the wake of new attention to the hormone-disrupting properties of chemicals. Hormone disrupters are human-made substances that interfere with the body's hormone system, upon which healthy reproduction depends

(Thornton 2000). Hormones also affect human growth, development, and intelligence. The list of synthetic chemicals that cause hormone disruption is long: dioxin, PCBs (now banned but still bioaccumulated in the environment), phthalates, organochlorines, mercury, and pesticides. These chemicals can be found in food, water, building materials such as vinyl pipes and flooring, and household products, ranging from tuna to drinking water, from soft plastic bath toys to plastic food wrap, from nail polish to carpeting (Colburn et al.; Schettler, Solomon, Valenti and Huddle).

So drenched is the environment with these chemicals—air, water, and soil—that, according to Joe Thornton, author of *Pandora's Poison*, all persons (and animals) on the planet have now absorbed some chemicals into their systems, and normal bodily systems cannot break them down (Thornton 2002). They are literally inescapable. Neither social status nor geographic location nor personal precaution will fully protect a person from exposure to these contaminants (Thornton, McCalley and Houlihan).

Environmental scientists are discovering that even at very low levels of exposure, hormone disrupters can cause infertility, low sperm count, birth defects, second generation childbearing problems, early puberty, and a host of other serious medical conditions and diseases (Ford; Schettler et al.; Colborn; deFur and Raffensperger). Among the first scientists to propose the connection between environmental contamination and breast cancer were Devra Lee Davis and Mary Wolff (Davis et al.; Wolff et al.). Previously, analyses of environmental harms focused on cancer and diseases caused by major exposures; new studies look at the long-term degradation of human and animal life from minor exposures (Colborn; Steingraber; Thornton, Pandora's Poison).

The conclusion: reproduction suffers.

Minuscule amounts of chemicals may act as hormone disrupters, and the harm may be discovered only years later to children born of unsuspecting parents. For example, offspring of rodents exposed to phthalates, a very common element in consumer products, experience reduced sperm counts and altered sexual characteristics (Myers). Low levels of exposure of laboratory animals in utero to another compound, bisphenol-A, a chemical used in polycarbonate plastic, causes a lowering of the age of puberty of offspring (Myers).

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Even though there is universal exposure to this potentially devastating and untested cauldron of chemicals, they are absorbed involuntarily. No one agrees to participate in a grand experiment with synthetic chemicals, or even knows that she is participating. Exposure to and bodily absorption of these chemical contaminants are not done willingly, voluntarily or by consent of those affected.

A Reproductive Rights Approach to Environmental Contamination

Reproductive rights inherently encompass the right to choose to bear children, as well as the right to decline childbearing.

Advocacy organizations have outlined the rights of childbearing women as including healthcare prior to pregnancy and childbirth, a healthy delivery, postnatal care, and informed consent in decisionmaking ("The Rights of Childbearing Women"). Some have called for "freedom from reproductive hazards" within the environment, workplace and home (Kolbert 306).

Existing laws and documents on reproductive rights have not yet grappled with the specific issues raised by environmental factors that cause harm to reproduction. But rights articulated both internationally and in the U.S. provide an important framework for reproductive freedoms, including the right to bear children.

International Human Rights

International human rights documents recognize the right to bear children and the responsibility of governments to provide enabling conditions to do so in safety, according to Laura Katzive, an international lawyer with the Center for Reproductive Rights in New York. The Universal Declaration of Human Rights, a primary international human rights document, adopted by the nations of the world in 1948, explicitly identifies the basic human right of every man and woman to "found a family" (Art. 16.1).

The Declaration further states that all people are entitled to live in a "social and international order in which their rights can be realized" (Art. 28). This affirmative right, says Katzive, can be seen as extending the obligations of governments beyond merely refraining from interfering with the right to bear children to an active duty to ensure that healthy conditions exist in which all people can exercise the right.

In addition to elaborating on the right to attain the highest standards of sexual and reproductive health, language in international documents also emphasizes "safe motherhood," a term used to underscore the impor-

tance of the right to bear children under healthy conditions (Centre for Reproductive Rights). The definition of

> safe motherhood includes the reduction of pregnancy-related deaths and ill-health in infants, as well as the alleviation and elimination of environmental health hazards that affect the ability to bear children. (World Health Organization qtd. in Boland 23-24)

When applied to the problem of hormone-disrupting chemicals, the concept of "safe motherhood" serves to highlight the rights of women and men to bear children in a healthy, enabling environment.

Country Laws: The United States as an Example

As far back as 1942, the U.S. Supreme Court stated that the right to bear a child is a central liberty—"one of the basic civil rights of man," the Court wrote in *Skinner v. Oklahoma*. Any action by the government that would impinge on the right to bear children must meet the strictest standards of scrutiny, the Court said.

The right to bear children is part of a zone of privacy, which includes the right to use contraception and the right to make decisions about abortion. The U.S. Supreme Court acknowledged these as an integral part of the U.S. Constitution. The right to privacy protects citizens from governmental intrusion in decisions to bear children, just as it protects citizens from governmental intrusion in decisions not to bear children.

Although the U.S. Supreme Court has recognized that the right to bear children is "fundamental" (*Carey v. Population Services International*) hormone-disrupting chemicals pose a somewhat different challenge in the law. The production of the potentially-damaging chemicals is largely undertaken by corporations and, as such, does not generally involve an action by the government which can give rise to constitutional scrutiny under the scheme of law in the U.S. system. But it is legitimate to inquire whether the government has taken sufficient steps to protect women and men from serious reproductive harm or abrogation of the right to privacy, and to insist that corporations have a legal and moral obligation to prevent harm to the fundamental right to bear children.

Taken together, international doctrines provide valuable guidance for framing a pro-choice position on the rights of women and men who desire to procreate. They appropriately place the emphasis on the adult right to reproduce and to bear healthy children. The reproductive rights and women's rights movements worldwide have been in the forefront on these topics.

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DES: Consequences of Hormone Disruption for Women's Reproduction

The problems associated with DES (diethylstilbestrol), a chemical compound prescribed to pregnant women in the 1950s and 1960s to prevent miscarriage, has a terrifying connection to the litany of adverse effects on reproduction from hormone disrupters, as shown in wildlife populations. DES, while a pharmaceutical, had hormone-disrupting properties, and the experience and study of it provides much information and alarm about environmental hazards. In the case of DES, many of the daughters of the women who took that drug were unable to bear children, and are at higher risk of developing breast cancer due to in utero exposure to hormone disrupters (Palmer et al.). Scientists studying hormone disruption report similar incidences of sterility and deformed genitalia in the offspring of fish and birds exposed to synthetic chemicals (Colborn et al.; Schettler et al.). The same mechanism of hormone disruption is at work, and the results are alarming prognosticators for women facing harmful chemical exposures.

When Valerie DeFillipo, a senior director at Planned Parenthood Federation of America in Washington, DC, attended a conference on environmental contamination and hormone disruption, she saw the links. DeFillipo said she began to understand how what is put into the environment enters your body and affects reproduction, and realized its importance to the reproductive rights community in the future (see, also, Cooper). And a solid alliance between environmentalists and reproductive rights advocates could change the hearts and minds of policymakers, said Patricia Waak, former director of the National Audubon Society's Population and Habitat Program.

A Precautionary Approach to Chemicals

Among environmental scientists, there is a growing consensus that supports a shift in the way chemicals are released into the environment. They believe that it is no longer appropriate to assume that a chemical is safe and then later to ban it or limit its usage when it is proven to cause severe damage. A "dirty dozen" of especially persistent chemicals have been targeted for complete elimina-

tion in an international treaty of 127 nations, known as the Persistent Organic Pollutants (or POPs) treaty (Reuters). But these chemicals have already caused significant harm to human health and the environment. Instead of permitting the release of chemicals, whose harm may not be known for years or decades, environmental scientists are recommending that the "precautionary principle" should be implemented. According to the precautionary principle, chemicals would be tested prior to their release, and only upon receiving completely clean results would they be released. Scientists also encourage searches for safe alternatives to existing chemicals that cause harm (Thornton 2002, 2000; Myers).

Sweden is the first nation in the world to adopt fully the precautionary principle, calling for the introduction of new goods free of hormone-disrupting chemicals and for the phase-out of harmful human-made chemicals (Swedish Government).

Conclusion: A Critical Opportunity to Work Together for Environmental Sustainability, Better Health, and Greater Reproductive Freedom

Contamination from chemicals, without the knowledge or consent of the individuals who absorb them, unquestionably violates reproductive rights. Reproductive rights clearly include the fundamental right of women and men to have children if they so desire, and to have children whose health is not irrevocably compromised by environmental contaminants.

The effects of hormone disrupters concern people from varied backgrounds, diverse economic strata, and all geographic locations. Men as well as women are threatened by the harms caused by hormone disrupters. Reproductive rights advocates and environmentalists are natural allies, as are those in the growing environmental health movement, such as activists concerned about the environmental causes of breast, ovarian and prostate cancer.

Environmentally-conscious women's organizations and reproductive rights activists could bring new support and political clout to secure this solution to prevent future chemical contamination of the earth.

This collaboration could also be a powerful antidote to the efforts of the anti-choice movement to weaken reproductive rights by promoting "fetal rights," giving a fetus rights that are independent of, and in some cases superior to, those of the pregnant woman and virtually eliminating her rights. In the area of hormone disrupters, pro-choice thinkers can preempt any anti-choice assertions that focus on endangerment to the right-to-life of the fetus, rather than on the rights of the pregnant woman. Toxic chemicals do their harm by destroying an adult's ability to bear healthy children, and their children's ability to lead healthy lives, including healthy reproductive lives. The anti-choice arguments are neither appropriate nor necessary.

At this early stage of the debate, the opportunity exists to head off a dangerous dynamic by avoiding the model that blames and punishes mothers for their behavior during pregnancy. Individual women should not be blamed for the damage their children suffer from toxic pollutants in their food and water (Brody).

In addition, although the "common ground" with anti-choice groups is, indeed, slender in most areas, reproductive rights organizations can take the lead in challenging them to stand up against environmental toxins that affect the well-being of all persons desiring to become parents. For example, several Catholic healthcare organizations that are generally opposed to abortion and contraception have become leaders in demanding substitutes for medical products, such as mercury and plastic tubing, that damage the environment and may interfere with reproduction. Working with environmental organizations like Health Care Without Harm, many hospitals are now committed to eliminating dangerous materials, products, and processes to improve patients' health and future well-being (Leciejewski).[1]

The understanding of such rights that pro-choice advocates bring to this emerging issue can provide the framework for promoting change. And by focusing on this vital environmental concern, together environmental and reproductive rights advocates can broaden the definition and application of reproductive rights as fundamental human rights. Women's lives, and the future of the planet, may depend on it.

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[1]See www.chw.edu and Healthcare Without Harm at www.noharm.org.

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