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Review of: Joe Thornton, Pandora's Poison: Chlorine, Health, and a New Environmental Strategy

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Review of: Joe Thornton, *Pandora's Poison: Chlorine, Health, and a New Environmental Strategy*

Erratum

The citation for this review is *11 RISK 357 (2000)* in most commercial databases.

Joe Thornton, *Pandora's Poison: Chlorine, Health, and a New Environmental Strategy* (M.I.T. Press 2000). Appendices, notes, references, index. LC 99-057011; ISBN 0-262-20124-0 [599 pp. \$34.95 cloth, Five Cambridge Center, Cambridge MA 02142-1493] .

In *Pandora's Poison: Chlorine, Health, and a New Environmental Strategy*, Joe Thornton proposes a new framework for managing the health and environmental risks posed by organochlorine compounds. In the process, Thornton comprehensively describes the evolution of the chlorine chemistry, the ubiquitous use of organochlorine chemicals by industry, the toxicological and environmental risks posed by organochlorine chemicals, and the limits to the current risk assessment methods used by industrial countries to manage organochlorine chemicals. The new approach to risk assessment proposed by Thornton for organochlorine is aptly described as the "ecological paradigm."¹

In contrast to the current "risk paradigm" approach, the "ecological paradigm" proposed by Thornton requires recognizing the inherent risks posed by organochlorine chemicals and imposing a zero-tolerance policy on the use of organochlorine chemicals until more is known about their affects on the ecosystem. The zero-tolerance policy of the "ecological paradigm" is strongly justified because the current "risk paradigm" approach ignores the inability of science to measure organochlorine chemicals, the toxicity of organochlorine chemicals, and the affects of organochlorine chemicals on ecological systems. The ineptness of the current risk assessment approach is exasperated because of the persistence of organochlorine compounds released into the environment and the ability of organochlorine chemicals to accumulate in the fatty tissues of living organisms.

In chapter nine, Thornton introduces his ecological approach to reducing organochlorine pollution. Thornton's "ecological paradigm" approach to organochlorine chemicals requires adopting the precautionary principle, which states that "chemicals which harm the environment should not be released into the environment."²

¹ See Joe Thornton, *Pandora's Poison: Chlorine, Health, and New Environmental Strategy* 7-14 (2000).

² *Id.* at 344.

Thornton proposes three rules for achieving the goals of the precautionary principle: 1) require industry to prove that the organochlorine chemicals they produce are safe before granting them a license to market the chemical; 2) follow a zero discharge policy for chemicals that are persistent or bioaccumulative; and 3) adopt a “clean production” policy whereby the use of hazardous chemicals in manufacturing processes is reduced.³ Thornton further recognizes that an outright ban on organochlorine chemicals could be disastrous because of their widespread use in industrial processes. Thus, the author proposes “sunsetting” (or phasing out) organochlorine chemicals as a class and gradually replacing organochlorine chemicals used in industrial processes with viable alternatives.⁴ In the final chapters of this book, Thornton provides viable alternatives to organochlorine chemical use and addresses the political issues associated with the “ecological paradigm” approach.

The simple, straightforward presentation of scientific principles and scientific data ensures that anyone can read and understand this book. More importantly, the reader acquires the ability to understand the implications of the current approach for managing organochlorine chemicals and the implications of the “ecological paradigm” approach to organochlorine chemicals proposed by Thornton. Additionally, this book is well documented and presents a considerable amount of scientific data that professionals will find intriguing.

In sum, Thornton has achieved the goals he outlines for this book in the preface: He has produced a comprehensive, well documented book about organochlorine chemicals, proposed a viable alternative to current risk assessment practices, and presented material in a manner that is readable. In the preface, Thornton credits the positions he advocates to a group of people whom he describes as having the “modest goal of helping to bring about a just and healthy society.”⁵ If Thornton has a bias, it is only because he shares this group’s goal.

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³ See *id.* at 346-49.

⁴ See *id.* at 355.

⁵ *Id.* at xi.

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