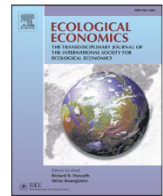




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# Ecological Economics

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## BOOK REVIEWS

### A full life exploring our full world Herman Daly's Economics for a Full World: His Life and Ideas, Peter Victor (2022).

Herman Daly's ideas have been the foundation for generations of scholars who are willing to question economic orthodoxy, including questioning the “near unanimous” commitment to ever-growing Gross Domestic Product (GDP) (Daly quoted in Victor, 2022: 195). He is not the only grandparent of the discipline of ecological economics, but he is one of the most important. As someone who helped establish the field of ecological economics, and this very journal, Daly merits our attention.

Taking up the charge, Peter Victor has written a biography of Daly entitled ‘Herman Daly's Economics for a Full World: His Life and Ideas’. The book succeeds on many fronts.

First, we are provided with an excellent summary of Daly's body of work and how it evolved through time. These contributions begin with Daly's 1968 paper titled ‘On Economics as a Life Science’. In this paper, Daly represents economic activity as a process of converting high-quality, useful energy and matter into goods and services, eventually to become degraded waste matter and energy. You can probably visualize the figure this evolved into: Daly's presentation of the economy as a subsystem of the ecosphere. How many of us working in the field of ecological economics and sustainability rely on this image as the ontological basis of our worldview? I know I do.

We then follow Herman Daly's career as he erects the pillars of ecological economics. Daly's Ends-Mean spectrum places the economy in an intermediate space, dependent on the Ultimate Means of low-entropy energy and matter, yet providing only temporary psychic income, not the fulfillment of Ultimate Purpose. Daly and Cobb's Index of Sustainable Economic Welfare (ISEW) provides an improved method of measuring economic progress. Daly's ‘Steady-State Economy’ is a comprehensive vision of how to manage an economy in which flows of energy and material throughput are held constant to avoid ecological collapse. As one reads the biography, it is astounding to be reminded of the number of important ideas Daly has introduced and popularized.

The book is also full of Herman Daly's evocative metaphors. Limits to growth are explained as analogous to the ‘Plimsoll line’ on a ship, which indicates how high cargo can be stacked before a ship risks sinking in rough seas (Victor, 2022: 121). A steady-state economy is a candle, emitting a constant light, but subject to the Laws of Entropy as the wax is inevitably used up. GDP is a cigarette, while the ISEW is a cigarette with a charcoal filter, a better choice if you are “addicted to numerical measures of welfare” (Daly quoted in Victor, 2022: 116). Not only has Daly been an important architect of ecological economics, he has also painted the walls with colourful and memorable frescoes.

Second, we come to understand Herman Daly the man. As a friend and colleague of Daly, Peter Victor was able to interview his subject at length, collecting unique stories about Daly's life. This insider view provides the reader with a sense of Herman Daly's successes and

struggles. We learn, for example, that Daly was afflicted with polio as a child. The disease left Daly with a withered left-arm. He and his family attempted various therapies to regain movement in the arm, but none worked. So, before starting high school, Daly had his left arm amputated. Looking back on this childhood struggle with polio, Daly reflects that it taught him “some things really are impossible...the best adaptation when you come up against an impossibility is to recognize it and switch your energy to good things that are still possible ... Now, you could make a big leap from that to my later economic theories: unlimited growth is impossible, so let's adapt to a steady state economy. That was never consciously on my mind, but looking back, if you were to put me on a psychiatrist couch, that might occur to the analyst.” (Daly quoted in Kunkel, 2018 and included in Victor, 2022: 175).

We also get a sense of the personal cost of presenting new ideas within the rigid discipline of economics. When he was a tenured Professor at Louisiana State University, Daly found himself at odds with his home Department of Economics. Daly was ostracized and stopped taking on students, worried his supervision would negatively impact their career prospects. At a social event, the wife of another faculty member remarked to Daly's wife Marcia, “Gee, it must be difficult for you to live with Herman with all his crazy ideas.” Marcia asked whether this person had ever read one of Daly's books. She had not. In 1983, Daly left his faculty position at Louisiana State University to work at the World Bank. There is a cost to questioning orthodoxy.

Third, we get a sense of the influence that Daly's ideas have had on scholars and practitioners. The biography is sprinkled with quotes from scholars such as Joan Martinez-Alier, Robert Costanza, Marina Fischer-Kowalski, Kate Raworth, Giorgio Kallis, and others, who share how Daly's ideas have influenced their own thinking. Raworth relates, “Herman's drawing of Empty World Full World was the paradigm-changing diagram for me” (Raworth quoted in Victor, 2022: 69). Throughout the biography we see that many owe an intellectual debt to Herman Daly.

Despite his influence on sustainability scholars and ecological economists, Daly's ideas have been fiercely resisted, or blithely dismissed, by many in the field of economics. Victor summarizes several published debates between Daly and economists such as Robert Solow and Joseph Stiglitz. He also includes stories of Daly's interactions with climate change focused economists such as William Nordhaus. In each of these exchanges, eminent economists did not find Daly's arguments convincing or compelling enough to shift their own thinking. Was it because he wasn't formulating his ideas in the format of mathematical proof? Paul Romer said as much when he criticized Daly's writing as being “permeated with do-goodism and not enough hard science” (Zachary, 1996). Was it because he challenged the fundamental paradigm of conventional economics by questioning economic growth? Or did he bruise egos by referring to the uncritical outputs of economics departments as “the unison snoring of supine economists in deep dogmatic slumber” (Daly quoted in Victor, 2022: 195)? Victor postulates,

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but we do not learn why it was that Daly has failed to sway many economists. The otherwise comprehensive biography could spend more time exploring why this is the case. If Victor had interviewed Daly's detractors, we might understand firsthand how Daly has been received. Similarly, we might learn whether any of Daly's critics have softened their stance over time. In a world of escalating climate and ecological catastrophe, have any of Daly's sparring partners changed their mind about growth in the use of energy and materials? Or would they still advise Daly, as World Bank Chief Economist Lawrence H. Summers did, "That's not the right way to look at it" (Daly, 1996: 6).

In closing, Peter Victor's biography of Herman Daly is a worthy read for all who have been influenced by Daly's ideas. It will remind readers which parts of their own thinking can be traced back to the writings of this pioneer. For a man concerned with constraining the physical scale of the economy, Daly has made an outsized contribution to our collective knowledge.

#### Declaration of Competing Interest

Peter A. Victor was my PhD supervisor at York University.

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