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Molly Scott Cato, *Environment and Economy* (London: Routledge, 2011), xx + 263 pp.

Has the discipline of economics itself contributed to today's escalating environmental crises? Molly Scott Cato is a green party activist and green economist in the business department of London's Roehampton University. Her *Environment and Economy* follows her *Market Schmarket* and *Green Economics*, and precedes her recently released *The Bioregional Economy*. It answers the above question affirmatively, and is particularly useful for understanding the economic factors that underlie today's issues and crises as well as for considering the measures that could redress the latter. Awareness of such factors and measures also enriches scholarly understanding of the literature, culture, and politics of environmentalism.

The volume is actually a compact, paperback economics textbook, one requiring no prior economic training and therefore suitable for courses in "environmental science, earth science, and political theory" (xvii) as well as economics. (Neither reviewer has an economic backgrounds; Whitney is a professor of English and Woodward holds bachelor's degrees in English and in Political Science). Its purpose is to present a comparative overview of five different kinds of contemporary economics in terms of their history and promise in addressing ecological challenges: neoclassical, environmental, ecological, green, and anti-capitalist. This heterodox overview challenges at a stroke unreflective confidence in neoclassical economics, which dominates business, government, and economics study in much the greater part of the world. The dominant is mustered out of its prestigious, technical niche and held up for critical evaluation along with the others. The author treads a fine line between the advocate and the disinterested informant who asks readers to judge for themselves. She admits that her bias shows, though wins sympathy with her candor and earnest drive to alleviate "the pickle we are in" (xvii). But problems arise at times when specific critiques become too hasty, impatient, or dismissive to be fully effective. Some readers will find themselves arguing with the author, who sometimes appears to believe she has settled matters she may not have.

The two chapters comprising the book's introductory section connect the dots between environmental problems and their economic causes (causes such as consumerism or the clearing of pasturage for food animals), provides a brief history of the place of the environment in the early economic theories of the past, and explains the foundational contributions of several key "whistleblowers" in the twentieth century (e. g., the Club of Rome, E. F. Schumacher). The rest of the book is divided into two parts, the

first introducing the abovementioned five economic schools and the second identifying contemporary environmental issues and how the different schools approach them. All fifteen chapters are divided into sections of a few pages and benefit from an impressive apparatus typical of textbooks: figures, tables, power-point boxes, case studies, summary and discussion questions, and lists of further reading. There are also highlighted terms defined in a glossary, which joins an index and nine-page bibliography in the back. Though the writing is usually clear and direct and the questions apt and thoughtful, lapses typical of many textbooks are also present: the occasional puzzling figure or table, and mysterious subheadings and terms. But the meticulous organization means that readers can dip into the book at will to gain understanding of particular topics and issues without the benefit of an instructor.

The five schools soon become four, since environmental economics turns out to be a specialized wing of neoclassical economics. Both affirm the economy's unlimited capacity for growth that is measured by G. D. P. as well as the scientific status of economics as a discipline that can accurately gauge the environmental costs and benefits of economic development. And both affirm the essential roles of markets, private property, money, and debt. Following the axiom that markets offer the best solution, environmental economics sets out to do just that, "to commodify and price the environment" (55). One such popular if controversial market mechanism requires corporate polluters or airline passengers to buy credits that pay for the sequestration of indigenous farmland for tree-planting, trees that will theoretically offset their carbon emissions. In this regard, Cato points out in a later chapter that the Stern report of the U. N.'s IPCC commission was using correct neoclassical terminology when it identified the underlying cause of climate change as the biggest "market failure" in history. Lord Stern did not mean that market solutions have failed us (a logical impossibility in this mindset), but that the planet's ecosystems are being seriously compromised because we haven't yet figured out how to let the market work its magic. One of the book's strongest points is that if we depend only on the market to elude disastrous climate change, as highly influential economists urge us to, we will find ourselves immersed in something worse than a pickle sauce.

The next chapter offers a contrasting perspective in ecological economics, which came into its own as an academic discipline in the 1980s. Here the economy is recognized as a part of the natural environment, not the other way around, and the entropy law of thermodynamics as making indefinite growth impossible. The most efficient use of energy would make all waste into raw material for another productive process, and today, since the world's economy is already far overshooting the earth's capacity, a steady-state economy is required, featuring development but not growth. Economics may well *not* be a science, and in any case a monetary value can't be put on nature. Economics is not basically about buying and selling but rather well-being, living in justice with others and in some degree of harmony with the environment. Ecological economists do not necessarily believe that capitalism in some form is antithetical to these goals, and in fact they apply the notion of capital to nature, emphasizing the value of natural capital and its need for protection. Despite starting from different principles,

the practice of ecological economists in addressing specific problems sometimes blends with that of environmental economics.

It is green and anti-capitalist economists who are most likely to view the capitalist market as "environmentally obsolete" (219), who foresee dramatic increases in globalization's social as well as ecological costs and injustices, and who emphasize the necessity for political change and governmental regulatory action in response to a democratic demand that may gain momentum through continuing changes in attitude, even if only as the result of catastrophic weather and its consequences. Yet if differently inflected, principles of ecological economics remain fundamental here, especially to green economics. On that subject Cato's tone becomes more personal, engaged, and effective, though reviewer Woodward questions the relevance of the perceived fluffy spirituality toward which the author gestures. The major themes are economic diversity, localization, and happiness. Diversity means the growth of social enterprises, cooperatives, and means of production held in common (rather than publically or privately) alongside a diminished market sector. One means of countering unsustainable economic growth is to eliminate the dependence of economies on debt, the chief engine of economic growth (because growth enables debt to be paid back with interest). Instead, a citizen's income would provide a basis for security, and measures like local currency would slow down the movement of money away from communities into financial centers, as would a bioregional economy emphasizing local markets and resources. Conviviality rather than consumption or industrial productivity should characterize economic life, integrating work into a larger and more satisfying affective life.

Anti-capitalist economics identifies capitalism, especially the current globalization phase, to be the significant cause of environmental problems. But this approach has not been defined as distinctively as the others, perhaps because it has many roots and branches, including of course Marxism. As described here, some of its goals resemble those of green economists: social justice, diverse forms of production and the protection of indigenous or other non-capitalist economic spheres from neoliberal initiatives. What emerges most clearly is a sense of the power of capitalist institutions and attitudes, and their ineluctable penetration into our lives. This viewpoint calls into question ecological initiatives which fail to recognize institutionalized forms of power that it sees as the true enemy of nature. From this perspective, the bioregionalism of green economics may seem quaint compared to, for instance, the "participatory planning" (115) that has partly replaced markets in Porto Alegre, Brazil, and elsewhere.

The specific "issues and policies" tackled in the seven chapters of the book's remaining section include economic growth, resources, pollution, globalization vs. localization, climate change, and markets or commons. The author considers many actual cases addressing environmental problems worldwide, evaluating the regulatory or incentive-based measures that were or could have been taken. The cases range from acid rain and the ozone hole to the E. U.'s End-of-life Vehicles Directive, the selection of a nuclear waste site, a tariff dispute over bananas, agribusiness' patenting of traditional

seeds, and of course climate change. The chapter on growth is a highlight as the economic goal of continuous, long-term growth in general and of G. D. P. growth in particular is effectively demolished while alternatives are outlined. The resources chapter scores many points against the strategy of conservation through commodification, while the globalization chapter questions, for instance, the claim that the increase in global social inequality is temporary. For anyone like reviewer Whitney who specializes in a pre- or early modern European field, the issue of markets or commons might make a compelling case for a revival of commons systems as a primary economic form not only for production but as a precedent for undertaking protection of the air, oceans, and other resources held in common by the inhabitants of Earth. Here it seems appropriate for Cato to iterate now-familiar refutations of Garret Hardin's notorious thesis on the tragedy of the commons.

The last chapter seems to confirm an impression the reader may have already formed, that there are effectively only two economic models to choose from, and that the choice is of tremendous consequence: mainstream vs. heterodox, passivity vs. ecological citizenship, and faith in authorized experts and the politicians dedicated to preserving the capitalist market vs. critical reason committed to the well-being of all humans and the planet's ecosystems. Cato emphatically declares her primary audience to be the young. Heterodox economic savvy is surely part of what younger generations will need to confront predicted problems of great magnitude. It is heartening both that novel, planet-friendly economic initiatives are making headway now (e.g. David Boyle and Andrew Simms, *The New Economics: A Bigger Picture*, 2009), and that Cato is able to work out of a university business department. The book's conclusion almost suggests that a critical, activist economics should become the center of a liberal education focused on addressing the huge threats of present and future.