fit with a Christian view? Is there such a thing as a moral science? Is the modern market model benevolent with sympathy and the impartial spectator principles operative, or are markets more of the malevolent type, devoid of these qualities? In our discipline we should have the comparative advantage in addressing these questions and this book can help us get started.

Beyond Growth
Herman E. Daly

There is a growing interest among Christian economists around the themes of environmental economics, ethics, and ecology. A recent article in this Bulletin (Barrett and Bergstrom, 1998) surveys the broad questions and tools available to analyze the natural economy as God’s creation. A return to one of the classic works in this area, Herman Daly’s Beyond Growth is useful for those interested in one of the original frameworks for analyzing the intersection of ecology and economy. Daly asks important fundamental questions not only about the scale of economic growth but about several central tenets of the mainstream neoclassical economic paradigm. Yet his new “preanalytic vision” offers a hopeful principle to Christians trying to reconcile economic concepts with the religious insight that the world is God’s Creation.

Daly admits his book was inspired by a rocky tenure as a senior economist at the World Bank. Daly sought to change the central growth paradigm of the Bank as well as impact modes of project evaluation and policy making. Although he encountered mixed success there, the influence of this book and his earlier For the Common Good have been felt across a range of governmental and nongovernmental institutions and spurred new lines of Christian academic scholarship.

Beyond Growth is fairly easy but worthwhile reading. Although it suffers as a collection of essays on a variety of topics, the strong stand-alone introductory and final inspirational chapter linking religion and sustainable development draw the work together. Daly’s objective is to convince readers of the need for an environmental macroeconomics approach which adds scale to the traditional questions of allocation and distribution. Chapter Two lays out Daly’s alternative approach, his “preanalytic vision,” in which the economy is a subsystem of the ecological

Reviewer
Denise Stanley is Assistant Professor of Economics, University of Tennessee-Knoxville.
Daly critiques many economists' emphasis on growth of GNP as the primary measure of success. Two figures in the text contrast the traditional circular flow diagram of the economy with one in which the economic system is constrained by natural limits of the ecosystem.

This preanalytic vision is referenced throughout the fifteen chapters of Beyond Growth. In Part I Daly critiques many economists' emphasis on growth of GNP as the primary measure of success. Since sustainable development clearly should incorporate other developmental concerns and the carrying capacity of the natural environment, Daly and Cobb's Index of Sustainable Economic Welfare (ISEW) is offered as one alternative measure. It is further developed in Part III and contrasted with other environmental accounting and national growth indicators. Unfortunately Daly does not fully draw out the policy implications of these important indices, just as he gives only cursory lipservice to tradeable permits here. He sketches out some interesting links between the permit schemes and the optimal scale of resource exploitation, but fails to clarify how permits also solve the allocation and distribution problems of developing economies in particular. Since the publication of this book there has been a growing move towards using tradeable permits to promote sustainable development, yet exploring the distributional impacts of such programs in second-best settings with many microeconomic market imperfections remains an outstanding concern.

Part II of Beyond Growth delves into the specifics of Daly's economics. This section, perhaps the most technical of the book, applies traditional microeconomic marginal analysis to new ecological questions. Daly shows how the optimal scale of natural capital use is where the marginal costs and marginal benefits of its use are equated through an "ecological efficiency" ratio. He also questions one of the crucial assumptions underlying traditional growth models, namely production functions with substitutability. Here Daly makes a strong case for the inherent complementarity of natural and physical capital, leading to very different results from the application of growth models. In his final words to the World Bank staff, reprinted in part here, he explores a few broad policy options ranging from taxes on resource throughput to investments in long-run resource supplies.

Parts IV and V form the most controversial sections of Beyond Growth with which ACE readers will either strongly agree or disagree. In Part IV Daly attempts to link population growth trends with the appropriate scale and distribution of resource use. He correctly points out that fertility rates are higher for the poorest segments of society since (in the terms of Karl Marx) they lack ownership to the means of production and (in the terms of Robert Malthus) they lack access to the means to control reproduction. The tenor of the chapter, however, is a more Malthusian emphasis on high population growth rates stressing the carrying capacity of the environment and continuing impoverishment. Daly summarily dismisses demographic transition theory and makes no mention of the important work around the microeconomic theory of fertility, which would suggest the reverse causation in which broadened natural resource access and poverty reduction would lower fertility rates. As Barrett and Bergstrom (1998) mention, this important controversy around the chain of causation between population growth and environmental degradation is still one of the fundamental questions facing Christian scholars.

Even more controversial are Daly's remarks in Part V around free trade and its role in unsustainable development. He correctly argues that Ricardian trade theory is perhaps flawed in its assumption of capital immobility but fails to draw out the later extensions of trade theory which relax this assumption and still produce the standard result of enhanced total welfare through trade. Perhaps true also are his observations that trade is highly energy-intensive due to increased transport costs.
and that increased globalization has led some developing countries to over-rely on natural resource extraction exports. Yet too few specific examples and references are provided to fully convince the lay reader. Daly is on stronger ground in his contention that trade allows producers to externalize costs, possibly leading some producers in a race-to-the-bottom to lower environmental standards in settings of widespread market imperfections. Since the writing of Beyond Growth a lively debate has emerged around international environmental standards and the type of "compensating tariffs" Daly advocates here. (See, for instance, Dean 1997.) The broadest group of readers will perhaps be most inspired by the final section of the book, "Ethics, Religion, and Sustainable Development." This is a moral call for Christian and non-Christian economists alike to adopt new economic paradigms. Echoing Genesis, he declares that nature as God's creation has both instrumental and intrinsic value and it is the human obligation to care for the world given by God. Here Daly finally makes explicit the links between skewed income distribution and the non-optimal scale of resource use in many societies. This leads to an interpretation of the oft-cited Jubilee principle of Leviticus with a new twist; specifically, Daly notes how this 50-year cycle of redistribution truncated the upper tail of the income distribution in agrarian Biblical societies. Thus a practical modern day implication of the Jubilee principle of limited inequality would be a tax rule that the wealthiest members of society receive at most ten times that of the poorest. And Daly suggests that humans, as stewards of God's creation, should consider a new rule in solving the optimal scale, distribution, and allocation questions: maximization of well-being of sufficient per capita wealth over time, along Bentham's utilitarian lines.

Overall, readers will be intrigued by Daly's remarks and new concepts which both complement and criticize traditional economic thinking. Although a useful index and endnotes are included the book unfortunately lacks a concluding chapter. He leaves the process of integration and reflection up to the activist and academic, Christian and non-Christian, reader. This recent book has already motivated new lines of scholarship and dovetails nicely with emerging debates around trade and the environment and ecological economics. It is already on the syllabus at thirty universities and has been the core of grassroots and national religious workshops. Daly's prophetic vision appears to be capturing a different audience than he perhaps originally intended, yet Christian economists who explore and interpret the ideas in Beyond Growth can perhaps build the bridges between academia and policy in the important debates around ecology and economic development.

REFERENCES
