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THE SCARCITY OF RESOURCE ECONOMICS

by

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"Even though it may be impossible to mine to a depth of one mile at every point in the Earth's crust, by the time A.D. 100,000,000 I am sure we will think of something."

Wilfred Beckerman (1972)

To question the long-run adequacy of natural resources is to ponder the future of the human race. Answers to all other economic questions hinge on this ultimate ponderable. Economists have contributed to the framing and pursuit of this overarching question. Ultimate answers, of course, are not in the offing, and so one might expect economists to condition their analyses and proffer specific resource use and development prescriptions with some modesty and attention to the larger, long-run question. But in the arena of resource and development policy, humility and conditional prescriptions have been evaded through incomplete, blindly optimistic, and -- too frequently -- flippant, arguments as to why resources over the long run are not of special concern. This essay addresses the incongruous role economists have played -- as theorists, empiricists, and participants in the policy debate -- with respect to the ultimate ponderable.

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The only major economic inquiry of resource scarcity was undertaken by Barnett and Morse (1963) more than two decades ago. They argued that if resources were becoming more scarce, more capital and labor would be necessary over time to extract resources. Their empirical analysis clearly indicated that this was not the case from the late 19th century through 1957 except in the case of forestry. Their work reframed the question and initiated empirical analysis. It was a good start that raised an abundance of issues. The scarcity of resource economics, to a large extent, stems from the inappropriate reception of this study. We should have accepted it as an exciting first analysis rife with beguiling questions for further research.

Instead, we accepted it as sufficient evidence that resources were not scarce over the long-run. Although good work has been undertaken since, there has not been another major conceptual and empirical analysis. Our predisposition to optimistic conclusions was demonstrated by our vociferous attack by economists on the 'Limits to Growth' model developed by Meadows et.al. (1972) and similar attack on the Global 2000 report (U.S. Council on Environmental Quality and U.S. Department of State, 1980) The optimists do not totally dismiss the fears of unbridled growth. But because their arguments have not been openly questioned within the discipline and have been quoted widely beyond, they have set the image of the profession as a whole.

This image does not convey a picture of modest scientists testing the null hypothesis from every angle before cautiously suggesting the nature of truth. More important, the possibility of long-run resource scarcity raises theoretical and methodological issues. Most of these issues were identified in one form or another by Barnett and Morse but were deftly skirted by them and have been almost ignored since. This paper elaborates on these conceptual difficulties and related measurement problems.