

New Term Introduced at First Conference on Environmental Future

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[This essay, originally published in 1972 in *Biological Conservation* 4:371-372, is the first presentation and explanation of the concept of *demophoric growth*, later to be relabeled *demotechnic growth*.]

The purpose of this note is to publicize a new and potentially useful word introduced at the International Conference on Environmental Future held in Finland, June 27 to July 3, 1971. The definition and context of use appears in a paper by J. R. Vallentyne in the conference proceedings (N. Polunin, ed., "The Environmental Future," 1972).

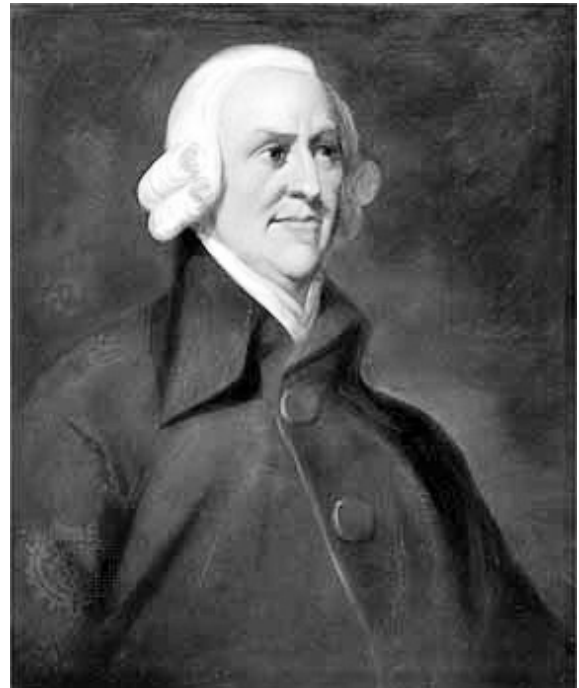
The word is demophora as a noun, demophoric as an adjective, with suggested accents on the second and third syllables, respectively, as in geography and geographic. Derived from Greek (*demos*, population; *phora*, production), it is intended for use in combined reference to human population and technological production-consumption, using the latter term to encompass not only products of manufacture and cultivation, but also the resources consumed and wastes generated in their production and use. The word stresses the unity and interdependence of biological and technological phenomena inherent in the "man-machine" concept, with implications that are primarily, though not exclusively, metabolic.

Two considerations motivated us to invent the word. The first was a scientific need to express the interplay of cause and effect relationships between human population phenomena and technological growth. The second was a need for new tactics and strategies to facilitate global agreement to control the rates of human population growth, environmental pollution, and resource depletion.

The scientific value of the word hinges on the existence of causal interrelationships between population and technological phenomena. The surprising thing is not the lack of evidence for such relationships, but the absence of a word to describe and epitomize them. Numerous causal connections between population and technological phe-

nomena were, for example, described by Adam Smith in *The Wealth of Nations*, and others uncovered since that time now form much of the basis of current socioeconomic doctrine.

In a similar sense, it is widely accepted by human evolutionists that tool-using primates and their associated "technologies" evolved as coupled systems—a change in one inducing a change in the other—with selection operating on the total system as a unit. Also, from an ecological point of view, Ramon Margalef has pointed out that the



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biomass and metabolism of *Homo sapiens* must logically be defined to include tools, machines, factories, vehicles, and the like, in addition to biological tissues. Finally, the combination of the two aspects of human metabolism" into a single word permits certain characteristics of the "man-machine system," such as momentum, to be described in a manner that cannot adequately be conveyed by the same components individually. For the above reasons, we feel that *Demophoric Explosion* and *Demophoric Control* will ultimately be accepted as more accurate and meaningful terms than any or all of Population Explosion, Population Control, Technological Revolution, and the like.

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The suggestion that the word may be useful in an “Orwellian” sense is based on a belief in the urgent need for global agreements to control the explosive growth of human population and technological production-consumption. Many authorities are convinced that if these matters are not brought under human control during the present decade, then a number of unpredictable, highly disruptive, and perhaps irreversible changes will result in subsequent decades. The problem at the present time is the low probability of agreement on such controls unless viewpoints change. Neither individuals nor nations look with favor on the imposition of external controls.

It is possible, however, to put forward an opposite view—that most individuals and governments favor global demophoric controls. Technologically developed nations, for example, appear to favor instituting global controls over the growth of human population—particularly in areas where additional population growth is likely to bring reduced socioeconomic returns (e.g., over-populated, underdeveloped nations and densely populated urban centers in all parts of the world). Likewise, developing nations appear to be overwhelmingly in favor of global measures

for the control of technological production-consumption—particularly in luxury-gutted developed nations where current levels of technological production-consumption are high and still rising. Viewed in this manner one could conclude, with some sense of reality, that a barterable basis for agreement does exist.

The combination of the two phenomena into a single, scientifically-based word could be a critical factor in facilitating discussion and agreement on measures for the control of human population and technological production-consumption (demophoric control). The mere presence of the word could force all parties to recognize opportunities for individual gain through compromise in a context where, by definition, agreement could not be misconstrued as a “loss of face.” Once such discussions have been initiated, the critical questions will hinge on specific control mechanisms and the nature of “trade-off” relationships between growth of human population and technological production-consumption. If the word facilitates discussion on any of these matters, it will have served a useful and timely purpose; if not, little will have been lost. ■