

collaboration with the institutions and individuals they will affect.

Before citizens can choose from among alternative equilibria, there must be new images of those steady states which are consistent with the limits to growth. These will require contributions from every field of human knowledge. New economic theories are necessary for an industrialized society in which productive capital is stabilized, material flows are reduced, equality is dealt with directly, and the future is not discounted exponentially. New political understanding is required to provide procedures through which democratic choice can be exercised to reward politicians for the long-term implications of their acts. Technologies are needed that place a high emphasis on the recycling of nonrenewable resources, on the use of pollution-free, renewable energy sources, and on the reduction of both matter and energy flows. Psychological and sociological advances are necessary to design the educational systems and social institutions that could reinforce a new self-image for man, one that would give him a set of feasible aspirations within an environment where man-made material output is in balance with the globe's finite limits.

But something beyond the scope of the traditional disciplines is also needed. A new emphasis on social systems is required to connect and coordinate research among all disciplines so that every type of wisdom and knowledge can be used in managing the difficult transition from growth to equilibrium. The philosophical concepts of holism, feedback, and the dynamic properties of systems could be usefully applied in every field of human effort and in education at all levels.

Systems understanding must be coupled with still another effort, the greatest of all—the construction of a consistent, feasible set of long-term values for human society. Under the false assumption that everything can be maximized for everyone with sufficient material growth, the present, temporary period of material growth has allowed social institutions to avoid all discussion of ultimate goals and value conflicts. The transition to equilibrium must begin with a broad discussion of what is and is not important to human society, where priorities lie, how trade-offs are to be made, and in what condition the human race would like to find itself when growth on this finite earth finally ceases.

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