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**COVER** Three-dimensional reconstruction of the neck region of the  $\phi 29$  bacteriophage virus, obtained by digital Fourier reconstruction from electron micrographs of 2-D crystals. The outer transparent and the inner solid surfaces correspond to different staining levels on the micrographs and are visualized using improved computer graphic techniques. See page 1113. [J. Jiménez, IBM Scientific Centre, P. Castellana 4, 28046 Madrid, Spain, and J. M. Carazo, Centro Biología Molecular, Universidad Autónoma, 28049 Madrid, Spain]

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## How in the World Are We?

That question is triggered by the current report, *State of the World 1986*.<sup>\*</sup> The report, which does not set out to be restful reading, presents a balance sheet calculated to agitate misgivings regarding national goals, priorities, and public expenditures. Whatever one thinks of its conclusions, the report serves the public interest in a time of trillion-dollar annual budgets and even more astonishing levels of national debt.

The message of *State of the World 1986* is that global military expenditures are sapping the capacities of big and small nations to stay solvent and provide the resources needed to meet basic priorities. It reminds us that for many countries the true threats to security are not primarily military in nature but rather arise from ecological deterioration, which goes on at an accelerating rate. The authors dwell on the evidence of vanishing forests, soil depletion, falling water tables, ruined grasslands, pressures of population on food sources and economic assets, and the effects of all these interlocked problems on political options and stabilities.

On the bright side, China emerges as a model for economic development, and there is a note of optimism in evidence of receding dependence on oil by the industrialized countries. Still, there is a lot of bad news. If the report reflects the state of much of the world, as it seems to, the uses of public investment by the more fortunate national economies are overdue for reevaluation. But the search for solutions would only begin, not end, if the arms race and militarization budgets were rolled back. The open question, no less problematical than the route to disarmament, would be whether the Western democracies would willingly and generously transfer defense savings to a decade of ecological rescue efforts, and whether for their part the Soviets would do the same in the face of their own dismal domestic miseries and failures. We have found out that economists have a point when they tell us that tax resources are not fungible. Taxes levied to support high national security outlays are not easily reprogrammed or reappropriated to more altruistic purposes in like amounts, certainly not while a huge public debt sits out there or while supply-side nostrums dictate returning tax money to individuals and corporations for the sake of the stimulating consumption, investment, and employment. In its sharpest form the trade-off problem leaves the area of economics and falls squarely into that of politics. We have to wonder whether a public inured to sacrificing for nuclear and conventional deterrence could be persuaded that the national security calls for proportional sacrifice to forestall a global firestorm arising from ecological collapse and its accompanying human desperation.

The case for the "sustainable society" on the global scale has an irrefutable political and indeed moral logic. The time constants reinforce it. But the search for workable solutions does not follow straight lines any more than it does in the instance of the intricate dilemmas posed by terrorism, the rise of Islamic activism, or mutual superpower distrust. As the late Robert Lovett once noted, the foul-up factor is built into the making of choices in an open society, and it is there for very good reasons.

The state of the world deserves a lot of thinking, and the report that has provoked these reflections is profoundly disturbing. It throws perspective onto the limitations of policy planning on the very large and elongated scale. We, and not we alone, come up well short of having the available political technology to match the state of the world's problems on the eve of the third millennium. And for all the fanfare and pretentiousness, the planned economies are in no better shape, laden as they are with ideological baggage. Where the Worldwatch study points us wisely is toward much stronger and better-supported interdisciplinary monitoring of indicators that bear on the chances for progressing toward a sustainable society. This much, at least, can be agreed to.

Within AAAS itself, a new interdisciplinary program on population, resources, and the environment, supported by foundations, is moving ahead. We mean to give it the best we have; for we, too, have our eyes on the state of the world.—WILLIAM D. CAREY

<sup>\*</sup>L. R. Brown et al., *State of the World 1986, A Worldwatch Institute Report on Progress Toward a Sustainable Society* (Norton, New York, 1986).