achievement of wealth would be the key goal for happiness.

Isn't this in closer agreement with our day-to-day experience? Maybe the 75% of young people mentioned in the article who consider being very well off financially as very important or essential are not so far off the mark.

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Endangered Species Legislation

Unlike Charles C. Mann and Mark Plummer (News, 3 Mar. p. 1256), I am optimistic about the effectiveness of the Endangered Species Act (ESA). Certainly it is not a comprehensive biodiversity protection law, and there are many ways it could be strengthened and improved. But its most crucial task is preventing the extinction of species and populations, and it has succeeded, arresting the decline of hundreds of species. It has also helped states cope with species endangerment and provided the muscle for the United States to prevent extinctions abroad through the Convention on International Trade of Endangered Species of Wild Fauna and Flora; designation per se has raised people's awareness of our effects on the biota. The ESA has served as a model for similar measures in a number of other countries.

Recovering species is the ultimate goal, but that cannot be achieved until the factors that diminished populations to endangerment are ameliorated and the species have had time to recover. The ESA has no power to stop rampant human population growth and increasing pressure to use organisms, lands, and waters, the driving forces underlying almost all endangerment. Nor can it fundamentally alter a species' population biology; r, the intrinsic rate of natural increase, a normal age structure, and a viable sex ratio cannot be legislated. Criticizing the law for failing to recover species ignores these biological realities, persistant underfunding for recovery efforts, and the determined efforts to oppose individual listings and recovery programs and of those to weaken ESA overall.

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Environmental Concerns and the Third World

In their recent Policy Forum "Economic growth, carrying capacity, and the environment" (28 Apr., p. 520), Kenneth Arrow and his colleagues caution against uncritical acceptance of the idea "that economic growth is good for the environment." They provide an insightful analysis of the tenuous evidence for this idea, including the limited data supporting "an empirical relation between per capita income [of nations] and some measures of environmental quality." Although widely accepted, one key element of the "growth-is-good" argument—the widespread assumption that people in poor nations are not as concerned about environmental quality as are their counterparts in wealthy nations—has recently been tested empirically and found to be incorrect.

In 1992, the George H. Gallup International Institute conducted a survey of public perceptions and opinions regarding environmental issues in 24 nations, ranging from poor countries such as Nigeria, the Philippines, and Turkey to wealthy European and North American countries. Gallup's "Health of the Planet Survey" involved face-to-face interviews with representative samples of citizens within these nations

(nearly 30,000 in all) and yielded results that contradict conventional wisdom. Although the 24 countries span all levels of economic affluence, only modest differences were found in public awareness of environmental problems and support for environmental protection across their populations (*1*). In fact, Pearson product-moment correlation coefficients for the relationships between nations' per capita gross national product and 14 different measures of national-level environmental awareness and concern were more often negative than positive—that is, public concern over environmental problems was more likely to decline rather than increase with the level of national affluence (*2*).

Overall, the Gallup results contradict the view that "in the earlier stages of economic development, increased pollution is regarded as an acceptable side effect of economic growth [but] when a country has attained a sufficiently high standard of living, people give greater attention to environmental amenities." This assumption is also challenged by the widespread growth of grass-roots citizens' organizations devoted to environmental protection in poor nations around the world (*3*).

Environmental protection efforts are indeed typically stronger in wealthier nations than in poorer ones, as Arrow *et al.* state, and this likely stems from institutional and economic problems within the latter countries (limited government resources, high debt levels, limited scientific expertise, inadequate technological capacities, and so forth), rather than a lack of concern with environmental amenities by their residents. In sum, the idea that citizen support for environmental protection is strongly related to national affluence may be even more tenuous than the general proposition—so effectively questioned by Arrow *et al.*—that economic growth is inherently good for environmental quality.

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Telomeres, Telomerase, and Cancer

Telomerase is an enzyme (a ribonucleoprotein complex) that synthesizes telomeric DNA onto chromosome ends (*1*). Under certain conditions, it has been shown that lack of this enzyme will result in loss (shortening) of telomeres. Nam W. Kim *et al.* (Reports, 23 Dec. 1994, p. 2011) have developed a sensitive assay for detecting telomerase activity by means of which they show that

> [i]n cultured cells representing 18 different human tissues, 98 of 100 immortal and none of 22 mortal populations were positive for telomerase. Similarly, 90 of 101 biopsies representing 12 human tumor types and none of 50 normal somatic tissues were positive.