

SCIENCE AND HUMAN PROGRESS

[We reproduce below an extract from the commentary of Richard A. Meserve, President of the Carnegie Institution of Washington, USA, in his report for the year 2004-2005, pp 7-8 — Editor]

“ . It can reasonably be argued that the human condition advanced more significantly over the 20th century than over the entire remainder of history. This change was due in large measure to significant scientific and technical accomplishments. The harnessing of electricity has allowed illumination during the night and provided clean energy for use in the home and at work. In fact, nearly 16% of the world's electrical supply (20% in the U.S.) comes from nuclear fission, a form of energy that we did not even know existed at the turn of the 20th century. Automobile and aeronautical technology and highway development facilitated rapid transportation and have changed lifestyles around the globe. Water distribution and sanitization have provided safe and abundant drinking-water supplies that were unknown to our forebears. Medical advances have eradicated various diseases and substantially lengthened the average American's life span. Agricultural mechanization and biotechnology have enhanced the food supply.

The revolution in electronics has fundamentally altered communications and changed the way we amuse and educate ourselves. The internet has provided ready access to an enormous range of information from anywhere in the world with a few mouse clicks. In short, our lives are vastly different from those who lived only a century ago. The typical American has access to opportunities and capabilities that were beyond the reach, or even the imagination, of the wealthiest individuals in previous centuries, however, the treasure that science can yield is far from fully exploited; there is the promise of more startling change to come.

Progress notwithstanding, science and technology have also presented us with challenges. Technological advances, for instance, have created environmental problems – most

notably, air and water pollution, as well as climate change. but science has simultaneously given us the capacity, if we have the will, to understand and limit adverse impacts. Any fair accounting of the balance sheet would show that science and technology have advanced the human condition far more than they have threatened it.

The U.S. has led the world in creating and implementing many of the past century's technical developments, yielding an economic and strategic strength that is vastly disproportionate to our population. But here are problems on the horizon. Globalization is presenting a challenge to our position as a world leader. Jobs are flowing overseas to lower-wage skilled workers even, through modern communications, for service work. In technical fields in which the U.S. has long enjoyed an edge, we now face competition from countries such as China and India, which are growing quickly and whose workers' skills are expanding rapidly.

Of course, we should welcome the improvement of standards of living around the globe that has accompanied these changes. Such advances serve humanitarian purposes in that they enable more people to escape poverty, hunger, and disease. Moreover, these advances also nurture a web of economic, political, and personal connections that can minimize distrust, enhance cumulative prosperity, and further the prospects for understanding and peace. Nonetheless, there is reason to worry about the future position of the U.S. in a world in which the technological advantage that we have long enjoyed is diminished. It is not inconsistent to hope for advances in the rest of the world while simultaneously seeking to maintain our role as a scientific and technological pathfinder and thereby to maintain our leadership position. ”

NASA LOOKS FOR SOLUTIONS TO POTENTIAL ASTEROID PROBLEM

[We reproduce below extracts from an article by Micheal Cabbage in the Orlando Sentinel of 14 May 2006 accessed at the website of CCnet 7/7/06 – 16 May 2006 — Editor]

“Mark your calendar for Sunday, April 13, 2036. That's when a 1000 foot-wide asteroid named Apophis could hit the Earth with enough force to obliterate a small state. The odds of a collision are 1 in 6250. But while that's a long shot at the racetrack, the stakes are too high for astronomers

to ignore. For now, Apophis represents the most imminent threat from the worst type of natural disaster known, one reason NASA is spending millions to detect the threat from this and other asteroids..... NASA scientists are confident the knowledge they've gained will prevent the asteroid from