



In My Opinion

Science and Society: We're Not Paying Our Dues

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Humankind is not adjusting well to the scientific age. The problem is that we are only too happy to accept the fruits of science, but unwilling to accept the accompanying responsibilities.

The Terri Schiavo saga last spring illustrates the problem. Some argued that society should not play God by allowing Schiavo's feeding tube to be removed, but society decided long ago to play God by developing the technology that extends human life. We cannot have it both ways: If we use medical technology to keep people alive, we must make the hard decision to allow people to die when that technology becomes counterproductive.

Examples of similar science-and-society problems are legion. Earth is overpopulated because we welcome the fruits of agricultural and medical technology without accepting the responsibility to limit births. The automobile destroys our environment, our cities, and our lives because we love its mobility so much that we will not accept reasonable limits on its use. In one of the planet's greatest challenges, we guzzle fossil fuels without attending to the global warming that comes with them.

Modern technology is miraculous, but its side effects are deadly. I'm convinced that we can all live like kings

and queens if we can learn to use technology wisely. Yet much of the planet remains poor, miserable, and uneducated.

The problem is partly embedded in our genes. Billions of years of biological evolution, capped by some 6 million years of specifically human evolution, have not prepared us well for modern technology. Consider, for example, overpopulation. The universal urge, instilled by eons of evolution, is to procreate. But with the coming of agriculture and modern medicine, human numbers skyrocketed and our urge to procreate became counterproductive. Today our population far exceeds Earth's carrying capacity, yet our numbers continue to climb because we have not accepted family planning as a moral responsibility.

Overly individualistic ideologies often lead to harmful uses of technology. The automobile is a good example. It has given many of us unparalleled freedom of movement, but that freedom is now destroying our cities and our environment. It's a freedom that didn't even exist until about a century ago. Yet people get incensed at suggestions that even a small part of that freedom be sacrificed for the greater good by, say, raising the driving age or increasing the gasoline mileage standards. We

accept the technology, but reject the responsibility.

Cultural habits, especially as expressed through many of the world's religions, often stand in the way of rational decision making about science and technology. Science is certainly compatible with humane and liberal religious values, including a belief in God, but it is not compatible with fundamentalist beliefs such as the so-called "literal truth" of particular religious texts. Thus, fundamentalists around the world tend to oppose the changes needed to overcome, for example, overpopulation: family planning, sex education, and the education and economic freedom of women.

We stand with one foot in modernity and the other in medieval superstitions, a contradiction that cannot endure. If allowed to continue for many more decades, such consequences as resource shortages, failed nations, terrorism, and environmental collapse will put both our feet back into the Middle Ages.

But don't despair, for our predicament is eminently solvable. The solution is to use the part of our anatomy that has gotten us this far: our brains.

Education is the place to start. Paying our dues for modern science and technology means, primarily, learning more than we are learn-

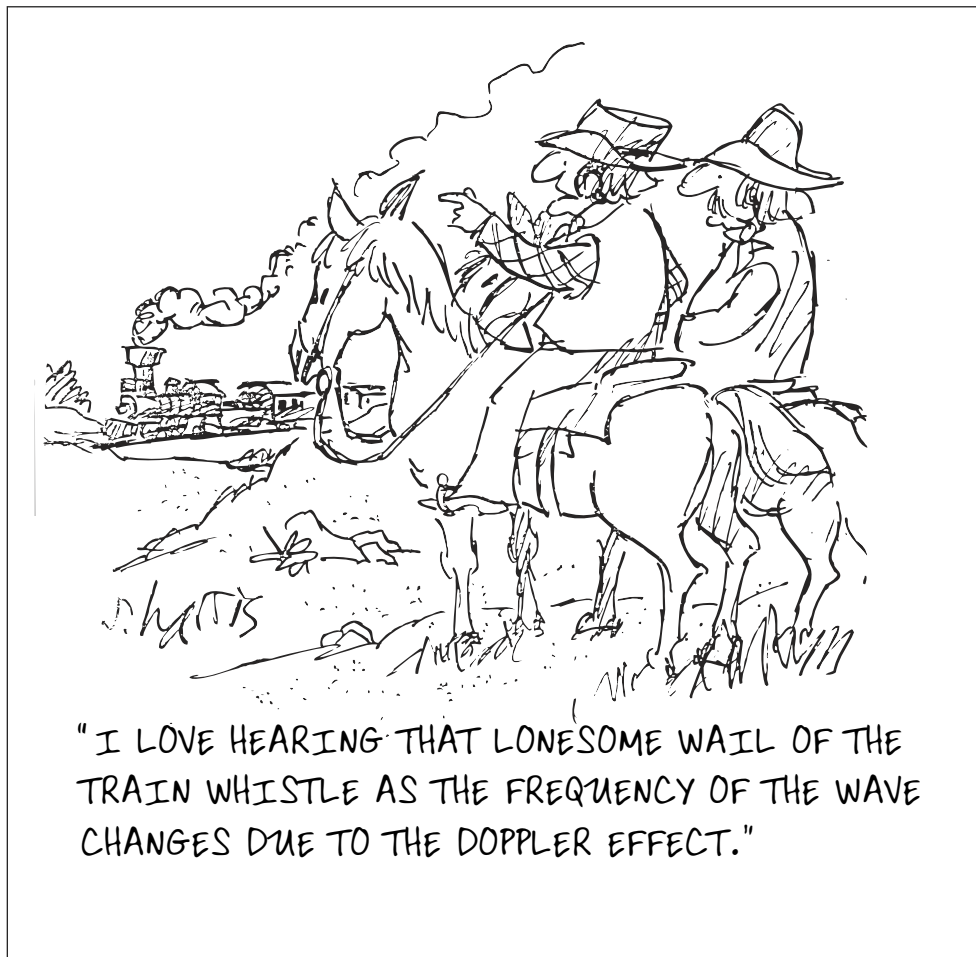
ing today. Education must be more rigorous and universal, must spend far more time on science, and must emphasize critical rational thinking. Unfortunately, superstition continues to inhibit science education as fundamentalists seek to “supplement” the fundamental principle of biology, namely biological evolution, with creationism. This is exactly like supplementing the notion that

our planet is spherical with the notion that it’s flat. There is no debate among scientists about this issue, yet fundamentalists continue their noisy public spectacle. Until we can overcome such distractions, we won’t get the educational system we need.

Scientists themselves have been the leading shirkers of responsibility for the humane use of science. It’s up to scientists to help educate teachers, students, politicians, reporters,

and others. But we scientists have spent nearly all of our time doing and teaching narrowly focused research, earning prestige and profits but spending little time with even the undergraduates on our own campuses, much less concerning ourselves with the broader society.

The problems of science and society become more pressing by the day. We’d better get busy.



Cartoon by Sidney Harris