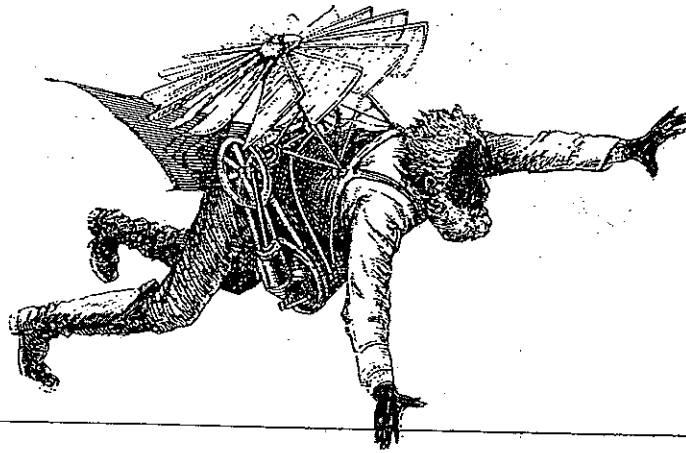


By Laura Lee

Forecasts That Missed by a Mile



It's easy to be wrong about the future, and there's a plethora of bad predictions to prove it.

From my earliest days I have had a keen ear for bad predictions.

There is a story that my parents like to tell: When I was four years old, my family lived in a small house with an even smaller yard. To extend my play area I would often venture into the road. When my parents saw me out there they would shout, "Get out of the road—you'll get hit by a car." My reply was invariably, "But I didn't get hit by a car!"

Normally it takes awhile for a prediction to ripen into a bad one. Something has to happen, or not happen, first. If I predict, for example, that you will buy THE FUTURIST, and you fail to buy it today,

my prediction is still valid. You could buy the magazine tomorrow, or the next day. As long as you are still around and THE FUTURIST is available, there is a possibility my prediction will come to pass. Eventually, though, you will die (unless some of the predictions about immortality come true) or the magazine will disappear completely, in which case we would have a failed forecast on our hands.

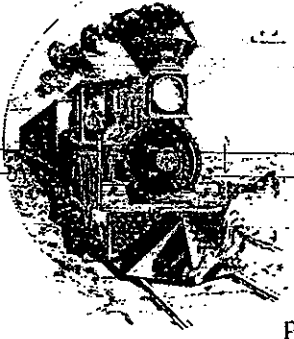
Hold those flight plans: "Heavier than air flying machines are impossible."—Physicist William Thompson, Lord Kelvin, 1895.

A Good Time to Be Bad

Thanks to its round numbers, the year 2000 has held a special place in the world of forecasting. For the past century, scientists, writers, philosophers, and social scientists—everyone, it seems, but computer programmers who thought two digits were enough to represent a year—have been looking forward to the big 2-0. Between 1888 and 1900 alone there were 150 novels set in the year 2000. Now, here we are, living in the future so many envisioned. Is it all we imagined it would be?

In some ways, yes. Scientists of the past predicted widespread use of fax

Another problem solved: "Rail travel at high speeds is not possible because passengers, unable to breathe, would die of asphyxia."
—British scientist Dionysius Lardner, 1823.



machines, personal computers, and credit cards. Today there are televisions and telephones in almost every American home. Supersonic jets cross the Atlantic in three hours. Forecasters envisioned it all many years ago.

But I am interested in the people who got it wrong: the prophets who said man could not fly, that nuclear war would destroy the world by 1980; the people who said that no one would sit still for television, and who rejected the Beatles because guitar bands were on the way out. The world has no shortage of bad predictions.

There may be those who think it unfair to quote bad predictions out of context. When "a railroad executive says airplanes will never work, shouldn't we explain the obvious vested interest he has in the status quo? And is it really a "bad prediction" when, in a time of war or depression, a politician tells the people what they need to hear to avoid a panic? ("The economy's fine, there's nothing to worry about, go out and invest now.")

The criticism has merit. There are many good reasons to make a bad prediction. My parents, for example, had a purpose in predicting I would be hit by a car—to get me out of the street. As Paul Dickson wrote in his 1977 book, *The Future File*: "A prediction that does not come true is not necessarily a bad prediction. For instance, predictions that have foretold environmental catastrophe may be avoided in the long run because of those very predictions." The terrible effects of the Y2K bug may have been avoided because people were frightened into action by doomsday predictions. Pollution legislation, caution over the use of nuclear weapons, and environmental protection efforts may be similarly fueled.

My intention in examining bad predictions is not to make the prog-

nosticators look foolish (even if some do). Some of their pronouncements are isolated missteps in otherwise insightful books and articles. And when we examine some of the things that *didn't* happen, we may wonder why such good ideas were abandoned. But I leave it to others to explain some of the predictions that people have made. My only criterion for a "bad prediction" is whether it came true or not.

The Traps of Prediction

I have the greatest affection for the experts whose clouded crystal balls allowed them to be included in the ranks of bad predictors. During the course of my research I have read hundreds of articles on what the future would bring. Many scholars made their forecasts in a hedging prose full of "perhaps" and "statistics seem to indicate . . . if we assume current trends . . ." There are several possible scenarios. . . . Such experts employed language as though their greatest fear in the world was being proven wrong. But I have more admiration for the scientists, authors, and visionaries who were imaginative and bold enough to make absolute statements unafraid that they might be in error.

No one is immune to being a bad predictor. Some of the greatest minds in history have fallen prey to the various traps of prediction—such as pessimism, optimism, or simple myopia.

There are the overly pessimistic forecasters—the doomsayers and alarmists who shout "the sky is falling" in the hopes that we will change our behavior and keep the sky up there.

There are those who assume the future will continue on a logical path based on what is happening today. This kind of "safe" prediction fails to take surprise into account. These statements generally say more about

Long-lived mania: "The baseball mania has run its course. It has no future as a professional endeavor." —*Cincinnati Gazette*, 1879.

the time in which they were made than they do about the future.

You will notice, for example, that scientists of the 1950s—when bomb shelters, nylon, and Styrofoam were news—predicted that the people of the 1990s and early twenty-first century would enjoy better living through atomic energy and synthetics—plastics, nylon, Styrofoam. In fact, the buzzword of the 1990s was "natural." In the late 1960s, as we planned to send a man to the Moon, scientists envisioned lunar colonies. In fact, it's been more than a quarter of a century since a man last walked on the Moon.

Then there are the overly optimistic forecasters. Some are lovers of technology who propose mechanical solutions to problems that don't really exist—at least, not yet. For example, M.W. Thring's 1973 prototype household dish-clearing robot was designed to tackle what is arguably the least taxing of household chores.

Some inventions have been anticipated for years, yet they haven't caught on with the public. Case in point: the video telephone. First introduced by AT&T at the 1964 New York World's Fair, the picture phone allows callers to see as well as hear



Bad Predictions for Society

"Law will be simplified [over the next century]. Lawyers will have diminished, and their fees will have been vastly curtailed." *Journalist Junius Henri Browne, 1893.*

"All marriages will be happy [in the 1990s], for the law will put to death any man or woman who assumes conjugal position without the proper physical, mental, and financial qualifications." *Author John Haberton, 1893.*

"Criminals will be prevented from propagating their kind. This will take the place of capital punishment. And, after a few generations, this will do away with crime, because no criminals will be born." *Poet Ella Wheeler Wilcox, 1893.*

The man of 2000 "will not be a sportsman, because there will be no sport. At the present rate of killing, the wild animals, except the New Jersey mosquitoes, will have disappeared by 1950, and such a thing as a bird will be found only in the histories. . . . Teeth will disappear in about 75 years from now, because the food of the future will be concentrated and made directly from chemicals so that there will be no strain on the digestion, or gums." *Editor C.M. Skinner, Brooklyn Daily Eagle, December 30, 1900.*

"We shall escape the absurdity

of growing a whole chicken in order to eat the breast or wing [within the next 50 years] by growing these parts separately under a suitable medium." *Winston Churchill, "Fifty Years Hence," Popular Mechanics, 1930.*

"There is [sic] not enough troops in the army to force the Southern people to break down segregation and admit the Negro race into our theaters, into our swimming pools, and into our churches." *Senator Strom Thurmond, 1948.*

"Nuclear powered vacuum cleaners will probably be a reality within 10 years." *Alex Lewyt, president of the Lewyt Vacuum Cleaner Company, quoted in The New York Times, June 10, 1955.*

"Before man reaches the moon your mail will be delivered within hours from New York to Australia by guided missiles. We stand on the threshold of rocket mail." *Arthur Summerfield, U.S. Postmaster General under Eisenhower in 1959.*

"Houses will be able to fly [by 2000]. . . . The time may come when whole communities may migrate south in the winter, or move to new lands whenever they feel the need for a change of scenery." *Arthur C. Clarke, Vogue, 1966*

—Compiled by Laura Lee

each other. Its use in homes seemed inevitable.

We have the technology today to make home video phones with clear pictures an affordable reality. So far, however, consumers have not demanded them. When the phone rings and you've just gotten out of the shower, you may not want to be visible to the other party. The video phone would also put an end to one of the benefits of running a home office—the ability to talk to corporate clients while in your pajamas. The product may still be on the horizon, but many people, this author included, are not looking forward to that improvement in technology.

While many of the visions of life in 2000 are theoretically possible for the future, many forecasters were premature in their timing. So far we do not have self-cleaning clothes, push-button pre-fab houses, computerized food storage, or personal hovercraft.

That said, technology has been moving so quickly in the past decade that, in some cases, it is not entirely clear whether a prediction is right or wrong. A 1971 prediction of self-repairing computers by the year 2000, for example, left me shaking my head. My laptop does not have this feature, but it is possible that there are computers with the ability to repair themselves in some way.

Recurring Errors

A few specific predictions for our time come up again and again:

Where is all the leisure time we were supposed to have? Most futur-

Bad Predictions for Business

"Daily toil [in the next century] will be shortened to four or five hours." *U.S. Senator W.A. Peffer of Kansas, 1893.*

"There will be no very rich or very poor [by 1993]." *Labor leader T.V. Powderly, 1893.*

"1930 will be a splendid employment year." *U.S. Department of Labor, 1929.*

"I had the idea of a new kind of pen that used a ball instead of a nib. But I decided it wouldn't work, so I dropped the project." *Chester Carlson (1906-1968), inventor of the Xerox copier.*

"The Japanese don't make anything the people in the U.S. would want." *Secretary of State John Foster Dulles, 1954.*

"In all likelihood, world inflation is over." *Managing director of the International Monetary Fund, 1959.*

"By A.D. 2000 one can retire with a comfortable income at the age of 50; and retirement will be compulsory at 60, except for those with skills in scant supply." *R.G. Ruste, American Heritage, 1967.*

"The concept is interesting and well-formed, but in order to earn better than a 'C,' the idea must be feasible." *A Yale University management professor in response to student Fred Smith's paper proposing reliable overnight delivery service. Smith went on to found Federal Express.*

"By the turn of this century, we will live in a paperless society." *Roger Smith, chairman of General Motors, 1986.*

—Compiled by Laura Lee

Bad Predictions for Health and Medicine

"Louis Pasteur's theory of germs is ridiculous fiction." *Pierre Pacht, professor of physiology, 1872.*

"The abdomen, the chest, and the brain will forever be shut from the intrusion of the wise and humane surgeon." *John Eric Eriksen, Surgeon-Extraordinary to Queen Victoria, 1873.*

"By [1993] longevity will be so improved that 150 years will be no unusual age to reach." *Reverend Thomas De Witt Talmage, 1893.*

"Boards of health will have destroyed all mosquito haunts and breeding grounds, drained all stagnant pools, filled in all swamp-lands, and chemically treated all still-water streams. The extermination of the horse and its stable will reduce the house-fly." *John Watkins, Ladies' Home Journal, 1900.*

"There will be no epidemics. There will be no incurable diseases." *Norman Bel Geddes, "Ten Years from Now," Ladies' Home Journal, 1931.*

"We just won't have arthritis in 2000." *Dr. William Clark, president of the Arthritis Foundation, 1966.*

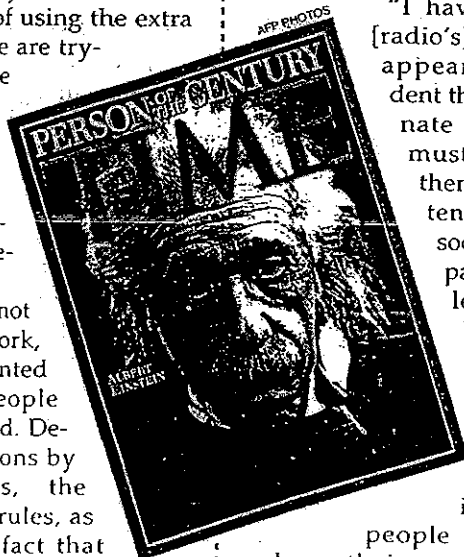
"However fascinating it may be as a scholarly achievement, there is virtually nothing that has come from molecular biology that can be of any value to human living." *Nobel Prize-winning immunologist Frank MacFarlane Burnet (1899-1985).*

—Compiled by Laura Lee

ists imagined a year 2000 in which technology shortened workweeks and gave each American virtually unlimited time at home. In contrast to these predictions, a 1999 issue of *American Demographics* magazine predicted: "The cry of the needy in the new millennium may well be 'Brother, can you spare some time?' Harried baby boomers will create a time famine for themselves by working more hours and committing to more family and community obligations."

The forecasters were right about one thing: We now have technology in the workplace that relieves us of the burden of many routine tasks. However, instead of using the extra time for leisure, we are trying to get even more done. We take on more tasks and raise our expectations of what we should accomplish in a short period of time.

Computers have not eliminated paperwork, newspapers, or printed books, as many people believed they would. Despite some incursions by so-called e-books, the printed word still rules, as witnessed by the fact that the Internet bookseller Amazon.com was one of Wall Street's most successful stocks in the



Bad Predictions for Science and Technology

"Inventions have long since reached their limit, and I see no hope for further developments." *Roman engineer Julius Sextus Frontinus, A.D. 10.*

"That's an amazing invention, but who would ever want to use one of them?" *President Rutherford B. Hayes to Alexander Graham Bell, 1876.*

"It doesn't matter what he does, he will never amount to anything." *Albert Einstein's teacher to his father, 1895.*

"I have anticipated [radio's] complete disappearance—confident that the unfortunate people, who must now subdue themselves to 'listening-in' will soon find a better pastime for their leisure." *H.G. Wells, The Way the World is Going, 1925.*

"The problem with television is that the people must sit and keep their eyes glued on a screen; the average American

family hasn't time for it." *The New York Times, after a prototype television was demonstrated at the 1939 World's Fair.*

"It would appear we have reached the limits of what it is possible to achieve with computer technology, although one should be careful with such statements; they tend to sound pretty silly in five years." *Computer scientist John von Neumann, 1949.*

"Man will never reach the moon, regardless of all future scientific advances." *Radio pioneer Lee De Forest, 1957.*

"Despite the trend to compactness and lower costs, it is unlikely everyone will have his own computer any time soon." *Reporter Stanley Penn, The Wall Street Journal, 1966.*

"But what is [the microchip] good for?" *Engineer at the Advanced Computing Systems Division of IBM, 1968.*

"I predict the Internet . . . will go spectacularly supernova and in 1996 catastrophically collapse." *Bob Metcalfe, InfoWorld, 1995.*

—Compiled by Laura Lee

employed men line up for bread in 1930. "1930 will be a splendid employment year."—U.S. Department of Labor forecast, before the stock market crash of 1929 triggered the decade-long Great Depression.



late 1990s. The number of books has increased as computers have become commonplace.

Until the middle of the fifteenth century, Europe probably produced fewer than 1,000 handwritten books a year; in 1950, Europe produced 120,000 books. A library that would once have taken a century to assemble could be collected in 10 months. Ten years later, the output of books had risen to 1,000 titles a day. In 1995, *Book Industry Trends* reported almost 3 billion books were sold in 1994. There are now more than 1 million books in print, and the United States alone produces about 65,000 new titles a year.

As for the paperless office, the thousands of computers we own have one thing in common: They are all hooked up to printers. The quantity of paper shipped by U.S. pro-

ducers almost doubled from 1980 to 1995, from 16.1 million tons to almost 30 million tons, according to the American Forest and Paper Association. Copier paper alone rose by 500,000 tons in just a year, from 1996 to 1997. According to the International Data Corporation's Giga Information Group, when e-mail is introduced into an office, the amount of documents printed goes up by 40%. As a

company's revenues increase, so does the amount of paper consumed—by 8.8 million sheets per \$100 million in revenue. The Giga Information Group went on to make a few short-term projections based on current use: By 2001, they predict, the amount of paper consumed by office copiers and printers will stretch around the world six times. The number of paper pages is projected to balloon to 1.1 trillion sheets for copiers and 1.2 trillion for laser printers. So much for the paperless

Our Hopeful Future by journalist Victor Cohn likewise imagines a world where the husband spends his time working with his cordless power tools while his wife switches the colors on the walls of the automated home. "And the kitchen? 'Ah!' One can hear the future housewife already." The only observers who seriously pondered the future of gender roles seem to be people who were specifically asked to consider the subject. Maybe this is simply because most of the writers and scientists of the past were men. Or perhaps, as Eleanor Burns and the Women's Collective speculated in *Motive Magazine* in 1971, women have not spent as much time contemplating the future as men. "It's really hard to dream of a future when the present demands so much of our attention," Burns wrote. "Maybe it's harder for us because as women we've learned that it's up to us to provide for immediate needs—like what to have for supper. We have a hard time imagining a time when such things will be the concern of the whole society."

Those writers—primarily feminists—who did comment on the role of women in the future, however, tended to imagine a reversal of traditional roles. They wrote about a time when women earned the money and men took care of household chores.



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office of 2000. While observers reflected on the technological revolution, few envisioned much change in traditional sex roles. The 1964 educational film, *1999*, produced by the Ford Motor Company, shows the woman of the future minding a fully automated kitchen, shopping on a computer terminal, and sending the bills to her husband's terminal so he can take care of the finances. The book *1999*:

As it turns out, neither vision of the future was entirely correct. A recent study of housework trends shows that American houses are simply getting messier. As a culture we are lowering our expectations of what constitutes a clean house as men and women alike struggle to make productive use of their precious off-hours.

Avoiding Bad Predictions

There are scores of examples of critics panning good books, movies, plays, and actors that later became famous. Often these are a matter of opinion rather than real predictions. Rejection letters contain an implicit prediction. The publisher who rejects a manuscript or the Hollywood studio that turns an actor away is betting that the artist will not be successful enough to make any money for them.

If you are a critic, and you would like to avoid ending up in someone's future compendium of bad predictions, here is a hint: Never predict

that someone will never amount to anything. If you are correct, no one will remember. No one will ever record that you said John Smith will remain in oblivion if he does. On the other hand, if you are wrong, no one will ever forget.

In the same way, you should avoid saying any technological achievement can't or won't happen. If you predict we'll put a man on Mars in five years and we don't, you've made a bad prediction, but people will mostly smile and call you "optimistic." If you say it can't be done, you can be sure your quote will be painted on the side of the first manned Mars lander.

To be completely safe, you could follow the example of presidential hopeful Gary Hart, who made a prediction in which he had total control of the outcome. "As a candidate," he said, "I can almost guarantee that I'm going to make some mistakes."

Or you could follow the example of Wilbur Wright, who said, "In 1901, I said to my brother Orville that man

would not fly for 50 years. Ever since I have distrusted myself and avoided all predictions."



About the Author

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3. Forecasts That Missed By A Mile

1. What was the **major thesis or point** of the author in writing this article?

2. Explain **two major facts or ideas** from the article which caught your attention and made you think.

3. Explain **one new significant idea** you learned about predicting the future from this article.

4. Explain **your overall reaction** to the information and ideas presented in the article. Do you agree or disagree with the author?