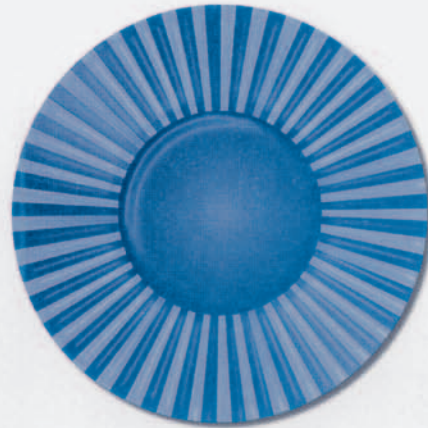


Paul Saffo: Betting on
“Strong Opinions
WEAKLY HELD”

Paul Saffo is a director at the Institute for the Future, a 28-year-old management consulting foundation that provides long-range planning and forecasting services to Fortune 100 companies and government agencies. A specialist in the long-term social and commercial impacts of new information technologies, Saffo's clients include major computer, telecommunications and media companies. He has published numerous articles in a number of periodicals. He holds degrees from Harvard College, Cambridge University and Stanford Law School.



Educom Review: You're usually referred to as a "futurist." Is that how you categorize yourself?

Paul Saffo: No, I prefer to call myself a forecaster. "Futurist" is a term with a very unhappy history from the first part of the century, when it identified a sort of neo-Fascist, Italian movement. More recently, it is a term that's more preoccupied with outcomes than processes, and people who describe themselves as futurists generally describe what the world will be like, not how we will get there. And what that flirts with is, in my business, the cardinal sin, which is prediction, because prediction isn't just hard, it's logically impossible. The truth is that at any given moment in time there is an array of possible outcomes—possible futures, if you will—and the whole point in forecasting is to understand the size of that array of outcomes.

ER: You did undergraduate work at Harvard and then have law degrees both from Cambridge University and from Stanford. One doesn't expect a lawyer to get into the forecasting business.

Saffo: My undergraduate work was a funny mix of anthropology and computer science and the history of science, and so the issues that preoccupied me as an undergraduate are the things that preoccupy me now, such as: what is the relationship between technology and culture? And the legal experience was serendipitous in that it was also my first lesson in forecasting, where I got the macro right and the micro wrong. I figured law was an appropriate place to be because that's where the rubber met the road in terms of the intersection of technology and society. Macro, that's correct; micro, it's wrong because being a lawyer means being a

lawyer and doing a lot of boring things that only lawyers do—even though legal policy issues are absolutely fascinating. I always skew toward the policy side of things, which is why I was editor-in-chief of the *International Law Review*.

ER: As a forecaster, what are the biggest surprises you've seen in terms of technology and culture?

Saffo: Well, you have to use "surprises" qualifiedly, because oftentimes, at a general level, something is completely expected but at a detail level it's completely unexpected. The World Wide Web is a real interesting surprise. In general, it came about right when one would have expected the Internet to take off on a diffusion curve if it were going to take off at all, because the Internet had been around for about 20 years and it generally takes about 20 years for new ideas to gain acceptance to the point where you get rapid adoption. And the notion of hypertext was more than 20 years old at that point. The phrase was first coined in the early 1960s and first imagined in its modern form in the 1940s by Vannevar Bush. The surprise was that the two of them would collide together in the form of the World Wide Web.

Just to give you an idea of what a surprise that was, put yourself back in, say, 1986 and '87. CD-ROM is almost 10 years old and everybody then expected CD-ROMs to really take off big-time. Hypertext as a term finally had leaked out of the labs and was coming into public consciousness. And the pundits of the time were all saying we are going to have a

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hypertext hyperfuture, and by hyperfuture they imagined a world where you would buy interactive CD-ROMs with hypertext on them.

ER: With the benefit of hindsight, what should the pundits have been told?

Saffo: They should have been told: "Well, you've got the hyperfuture right but, you see, it is not going to happen that way. CD-ROMs are going to be a niche market and very few of them will have real hypertext. But instead there's going to be this huge, global hypertext system that will be so inexpensive and ubiquitous that 10-year-olds will routinely sit at their computers and connect to network hypertext computers in Japan and download cartoons. And then their parents will get online in the evening to buy things. What they are going to buy is not electronic information but paper books from earth's

biggest bookstore, Amazon.com." It's a case where the reality is a perfect inversion of the forecast. That forecast about a networked world seemed wildly outlandish, much more outlandish than the forecast about CD-ROMs or hypertext. And yet the CD-ROMs remain a curiosity and the World Wide Web is a reality. And that's a kind of surprise that is absolutely normal in the forecasting business. Really, the art of forecasting is knowing at what level of granularity does the curtain of good information fall, and be sure to be clear in your forecast which parts are uncertain. We think about forecasting as the art of finding certainty, but it really is not. It's really the art of acknowledging uncertainty.

ER: Let's think about the personal computer. Any surprises in the last 15 years? What would you expect in the next 15?

Saffo: Well, what we call the personal computer has been a moving target. The personal computer as it is used today is profoundly different from the personal computer in use 10 years ago. Ten years ago it was a standalone device defined by what it processed for us. End applications were the end-all and be-all of computing. Today the box outwardly resembles the box back then but, in contrast, it is defined not by what it processes for us but by what it connects us to. And the things to which it is connected are what define it, not the applications. Nobody asks anymore, "Gee, what operating system do you have?" or "What word

