

What the Dormouse Said: An Interview with John Markoff

[John Markoff is author of the new best-seller "What the Dormouse Said: How the 60s Counterculture Shaped the Personal Computer Industry," and is a senior writer for The New York Times. His other books include "Cyberpunk: Outlaws and Hackers on the Computer Frontier" and "Takedown: The Pursuit and Capture of Kevin Mitnick, America's Most Wanted Computer Outlaw."]

UBIQUITY: Congratulations on "What the Dormouse Said" -- it's a fascinating book. Tell us about it.

MARKOFF: Well, I guess I'd call it a revisionist history. It about things that happened around Stanford University between roughly 1960 and 1975, and is a kind of pre-history of personal computing and the personal computer industry. What I was trying to do was to get at some of the culture through which the technology was developed.

UBIQUITY: Why the cultural emphasis?

MARKOFF: Because technology never happens in a vacuum. The book was an effort to try to pin down how personal computing first emerged around the Stanford campus at two laboratories in the 1960's: one was run by John McCarthy, and was called the Stanford Artificial Intelligence Laboratory; and the other was run by Doug Engelbart and known as the Augmentation Research Center or the Augmented Human Intellect Research Center. Before there was Xerox PARC, which most people know about, and before the two Steves (Steve Jobs and Steve Wozniak) in the garage creating the Apple computer, many of the technologies that became the personal computer were developed in these two laboratories on either side of the Stanford campus during the 1960's. I tried to capture that work and the environment in which it took place, which was deeply influenced by the 1960's counterculture and by the anti-war movement.

UBIQUITY: And you did it brilliantly. Talk a little now about the fundamental tension between the ideas of Doug Engelbart and those of John McCarthy?

MARKOFF: McCarthy's work was really right in the center of the computer science world at that time. Before arriving at Stanford in 1962, he had already invented the LISP programming language, which became the standard for artificial intelligence researchers, and he'd pioneered the time-shared operating systems that became the foundation of interactive computing. When he set up his research center his idea was basically to come up with a working artificial intelligence in the decade -- a kind of "superbrain." At least, that's what he and his group thought in 1964 when they opened the lab. But Engelbart was philosophically opposed to that approach. His idea, which he called "augmentation," was really not about replacing the human in the loop but instead to use computing help to augment the human.

UBIQUITY: How did the different approaches play out between McCarthy and Engelbart?

MARKOFF: When he started, Engelbart was thought of as an outsider -- and he really felt like an outsider! So a philosophical divide developed between Engelbart and McCarthy -- not the two men were in personal conflict, but that they just had very different goals.

UBIQUITY: How did each of them stand in relation to the 60s counterculture?

MARKOFF: Both of them were definitely affected by the politics and the culture of the time. McCarthy was in the process of moving from left to right. He had been raised as a communist and was a member of the Communist Party into the early 1960's. And then he was actually very active in a lot of the countercultural stuff around Stanford University and other things. And as a way of building his augmentation system, Engelbart as well was experimenting with lots of things that would be considered countercultural. And in both the laboratories the young people they hired were also very influenced by the counterculture of the times.

UBIQUITY: Do you view the connection between the counterculture and personal computing as being so strong that it could be called cause-and-effect?

MARKOFF: You know, I'm enough of a social scientist to know that claiming cause-and-effect relationships is a very risky business. Of course, I could point you to some precisely causal things. For example, if you want to look at where the personal computer industry got started, probably 20 companies or more came directly out of the Homebrew Computer Club in the mid 1970's. And the counterculture connection is this: the Homebrew Club was co-founded by a young man, Fred Moore, who was a draft resister who was simply looking to find a way to get his own computer so that he could do organizing work. He felt that, if he had a database program, he would be more productive. So at least in that example the connection between the counter culture and the development of personal computer was directly cause-and-effect.

UBIQUITY: Yes. Do you feel that the milieu of that time was such that essentially everybody was somehow involved in the counterculture?

MARKOFF: No, that would be overstating it. There are many people I talked to who I would put squarely in the mainstream and would be thought of as straight-ahead engineers who were motivated by strictly engineering concerns. But there was this significant overlap in the hacker culture of the day -- the hacker in the original MIT sense of the word as "expert programmer" --and the '60s counterculture sense of the word as outsider. And, you know, some of it was simply a convergence, whereas some of it was that one drove the other.

UBIQUITY: What would a good example be?

MARKOFF: Take the example of the Stanford commencement speech at Stanford recently given by Steve Jobs, in which he acknowledged the influence of the Whole Earth Catalog on his own thinking. And the Catalog also had a major influence on Alan Kay, another pioneer of personal computing. There was a time when Alan Kay walked into the Xerox PARC library and told the librarian to buy every single one of the books that were reviewed in the Whole Earth Catalog, because it so very influential.

UBIQUITY: Describe it for us.

MARKOFF: Well, I wouldn't actually call it a book. It was almost sort of an institution -- the embodiment of a philosophy that resonated the computer hacker community at the time.

UBIQUITY: What long-term effect did the 60s countercultures have on people like Steve Jobs?

MARKOFF: If you asked Jobs I think he would say that, yes, has certainly remained a counterculture figure. Of course, if you looked at him from the outside and saw that he was a billionaire who travels the world in a corporate jet you might come to a different conclusion. But I think that in large part many of the values that emerged in the '60s have very much stayed with the computer industry and, in fact, with those responsible for all digital media. I'm thinking particularly of the Open Source movement, which first emerged in the '60s and '70s but didn't really have a huge impact until the mid '90s, and is now very much playing a dramatic role in guiding the direction of technology today.

UBIQUITY: What does Steve Jobs think of free software?

MARKOFF: I haven't had a chance to ask him directly, but by Apple's actions you can see that they're very supportive of the Free Software movement, and have used it very effectively. They've contributed to the movement as well as taken from it. The heart of their operating system is the BSD Kernel, which is an Open Source product, and they've given back in terms of Safari technology. If you think about his sort of digital media strategy, you see that he's making his money from hardware more or less, and using the software essentially to imbue the hardware with spirit. That's how he's used the OS X operating system and the way he's used digital media.

UBIQUITY: Of all the colorful characters you wrote about in your book, and there are many, do you have a personal favorite?

MARKOFF: Oh, I have a lot of sympathy with Fred Moore, because he was such a lonely figure, and should probably be considered the patron saint of the Open Source movement. I also am tremendously fond of Doug Engelbart, and as much credit as he has already received, I don't think he's gotten as much as he deserves for the tremendous influence his work has had on the world.

UBIQUITY: Tell us a bit about both of them -- Moore and Engelbart.

MARKOFF: Fred Moore was an unusual character, and both he and Engelbart early on in life were struck by visions of how to change the world. Moore became a pacifist while he was in high school and stuck to his pacifism all the way through his life. He died in a car accident in 1997. And in 1950, Doug Engelbart had a vision of how to use computers to augment human intelligence, and he stayed absolutely passionate about that all the way through his career, and is still passionate about it now, even at age 81.

UBIQUITY: When he looks back over the last four or five decades, does Doug Engelbart's predominant mood seem to be one of pride, or disappointment, or what?

MARKOFF: Engelbart is a very forlorn figure some of the time because he feels that the world cherry-picked his best ideas and mainly ignored his larger vision of using the technology to augment groups that could then build the technology more effectively. I think that Doug is being too hard on himself; I think he should just claim credit and be at peace with himself. But that's just not part of his personality.

UBIQUITY: Where does he live now?

MARKOFF: He's still in Atherton, where he's lived for many years. It's just a couple of miles from where his laboratory was in Menlo Park. He's still quite active, and has an organization called The Bootstrap Foundation, through which he's still trying to get people to build what he sees is the next generation of his technology - and this time to get it right.

UBIQUITY: What happened to the counterculture spirit shared by so of those who contributed to the personal computer revolution. Do you think it lives on pretty much unchanged? People aren't still taking LSD, are they?

MARKOFF: I think that the period of the 60s was an unusual period in this country, and what is striking to me is how much today's politics are still defined in opposition to or sympathy with the 60s. When I was on book tour and signing books a new employee walked up who had just joined Microsoft and told me he'd been a public affairs person for the Bush Administration, and that he was very pleased to get my book because it chronicled the ideas that shaped the President's thinking -- obviously in opposition. And most of the key figures in the administration -- Bolton, Cheney, Bush -- were all shaped in reaction to things that happened during the '60s. So in that sense the 60s have continued to have a huge impact on the world.

UBIQUITY: Did anything surprise you as interviewed you for your book?

MARKOFF: Well, there were some things that were unexpected but really shouldn't have surprised me. I was interviewing people who had all been in their early '20s or late teens during the period I was writing about, and I can't tell you how many of them went to work for the Stanford AI lab or for Augment as a way of

avoiding service in Vietnam. The war was a real factor in sort of providing the best and the brightest of smart young men who weren't anxious to go to Vietnam and get killed.

UBIQUITY: Well, how has high-tech culture been changing? For example, do you think Wired magazine has changed much?

MARKOFF: Oh, tremendously so. Wired started out as a harbinger of the impact of the World Wide Web, but now it's owned by Condé Nast, and is much more institutionalized than it was, and in many ways less interesting. It's fairly predictable, fairly boosterish of technology. I think that there's still interesting stories in Wired but it's all become institutionalized. It's not as edgy anymore, and I think that's just the nature of all of these things. That's with the way social movements tend to happen and particularly in the case of Wired lots of money is involved and that pervades everything.

UBIQUITY: On the subject of cultural issues, what did you think of the Supreme Court decision holding file-sharing companies responsible for copyright violations of their customers?

MARKOFF: Well, there's just such an explosion of user-generated content that's being freely shared that file-sharing is clearly the next big thing in terms of the evolution of the Net. If you look at experiments like Delicious and Flickr, you see that the level of granularity is no longer the file. There is now sharing of information objects of every type: in the case of Flickr it's photos, in the case of Delicious it's URLs. And people are using the Internet to create a platform and build an open API on top of it that allows people to reuse the objects in ways that were never thought of -- and you can't turn around without seeing some new effort in that space. I doubt that anything that happens in proprietary digital media will affect this phenomenon. One phenomenon is the stuff that's happening in the Star Wars fan movie world, where the quality of the movies is really becoming quite interesting -- not to say that they're going to become Hollywood blockbusters but there is amateur cinematography that is well worth looking at. This has become an "attention economy," and to the degree that people are spending their time looking at the freely shared information they're not looking at or listening to the proprietary information, so that becomes a counterweight to the traditional media world.

UBIQUITY: You said that file sharing and information sharing, would be the "next big thing." Along those same lines, would you care to look out 20 years or so and tell us what you see?

MARKOFF: No, one of the best things about being a reporter is I get to report on what other people are saying and don't have to make silly prognostications myself.

UBIQUITY: Then what are the people you cover seeing for the next 20 years?

MARKOFF: Well, there are a couple of different crowds. There's the singularity crowd, people like Vernor Vinge who feel that we'll get artificial intelligence simply

and inevitably from the sheer computing power of the interconnections of all the computing systems we're building. They believe there's something emergent going on in the networks we're building. Yes, that sounds like nothing more than great science fiction, but who knows?

UBIQUITY: And the other crowd?

MARKOFF: The other world is focused on nanotechnology, which seems to be much more plausible now than it was just five or 10 years ago when people were very skeptical. Advances are being made in terms of things like single molecules that can switch on and off and that could serve as the basis for some new kind of microelectronics.

UBIQUITY: What do you think of all this?

MARKOFF: Probably the moment I realized it wasn't all just utopian stuff was when my friend Mark Seiden went back and connected AOL to the Internet for the first time, as just a mail gateway. This must have been in the early 90s. He spent a week there and came back just shaking his head and saying that the Internet has become like any other big city, and people are getting mugged in the back alleys. The Internet is a mirror to all the good things and bad things our society has to offer.

UBIQUITY: How long have you been covering technology now for The New York Times?

MARKOFF: I started at The New York Times in 1988 and I spent four years in New York before coming back to Silicon Valley in 1992. I stopped being the Internet reporter for the Times in 1992, which dates me. I believe I'm now the longest-surviving daily reporter in Silicon Valley.

UBIQUITY: Where had you gone to school?

MARKOFF: I went to Whitman College, a small liberal arts college in Walla Walla, Washington, and graduated from there in 1971.

UBIQUITY: Did you grow up in Washington?

MARKOFF: I grew up in Palo Alto, California, the heart of Silicon Valley. I went to school with Bill Hewlett Jr.

UBIQUITY: You were a sociology major, right? How did you get into technology journalism?

MARKOFF: I ran my college newspaper and then sort of went off in another direction for four years. I went to graduate school but came to realize that it was not the right place to be, because it was very academic and very vocational. So I decided I would try to start over again as a freelancer and make a career as a

reporter. I was back in the Bay area by 1976 and ultimately fell into the early days of the personal computer world.

UBIQUITY: Describe a day in the life of a New York Times reporter.

MARKOFF: Well, most of my life is lived on 101 and 280, the two freeways that connect San Francisco and the peninsula. The Times bureau is in downtown San Francisco, so I have an office there and my beat extends down to San Jose. As you would expect, my life is driven in part by the news. There are now four of us doing full-time technology coverage for the San Francisco bureau of the Times, and I only have a portion of the Valley. Companies like Sun, and Apple, and Microsoft belong to me in terms of the news, and then beyond that I try to find interesting people or trends or new technologies. Probably more than half of what I do is the stuff I stumble across, and that's the best part of my work. What keeps me engaged is that I have a lot of contact with the technologists here and I find their world very interesting, so I try to see them as frequently as I can. I spend as much time away from the office and the phone as possible, which of course is always something of a stretch.

UBIQUITY: You're also teaching at Stanford's journalism school?

MARKOFF: Once a year for the last three years I've co-taught a class called Covering Silicon Valley at the journalism department at Stanford. It's fun to be around students, because they challenge a lot of your assumptions and force you to justify things and articulate ideas that you take for granted.

UBIQUITY: Do you think covering Silicon Valley is different from covering other things?

MARKOFF: I think what sets Silicon Valley apart was that the entire world became obsessed with it in the late 1990s, and that meant that a sleepy backwater all of a sudden became the hottest property, and all those guys who would have gone to Hollywood showed up in Silicon Valley to write the big pieces. So it became the white-hot center. And then when the bubble burst everybody's portfolios were only half as fat as they had been a couple of days previously. Then nobody wanted to hear about Silicon Valley at all, because they had a bad taste in their mouth, so we slipped off the front pages again, which I thought was kind of humorous.

UBIQUITY: Well, let's end by having you address the student body. What would you tell a new journalist who is about to start covering technology right now?

MARKOFF: I think I would tell new technology journalists to train themselves as biologists. There's plenty more to do in the world of silicon, but the things that may turn the world upside down may happen in biotechnology in the next decade or two. I don't know that I have any great wisdom to pass on.

UBIQUITY: Then let's close with the words from the Grace Slick/Jefferson Airplane song "White Rabbitt," which inspired the title of your new book:

"When logic and proportion
Have fallen sloppy dead
And the White Knight is talking backwards
And the Red Queen's 'Off with her head!'
Remember what the dormouse said:
 Feed your head!
 Feed your head!
 Feed your head!"

And we'll remind people that your book is called "WHAT THE DORMOUSE SAID:
How the 60s Counterculture Shaped the Personal Computer Industry."

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