



A Conversation with Eli Noam

Academia, tele-information, and the network of networks.

Eli Noam is Director, Columbia Institute for Tele-Information, and Professor of Finance and Economics, Graduate School of Business, Columbia University. He has written and edited dozens of books and articles on telecommunications and other subjects. Among his recent books are *Public Television in America* and *Telecommunications in Latin America*. His books now in preparation include *Interconnecting the Network of Networks*, *Media Concentration in the United States*, and *Competing for Attention Span*.

UBIQUITY: You've had quite an impressive career, and we appreciate this opportunity to talk with you about some of the things you've done in recent years.

ELI NOAM: I will deny everything.

UBIQUITY: Okay. Your wife, Nadine Strossen, is president of the ACLU. Will she protect you?

NOAM: No, I'm afraid not. What she'll do is protect your right to print whatever you want.

UBIQUITY: We'll take that as good news, but we'll tread carefully— Speaking of good news, we understand that you recently received good news about the Columbia Institute for Tele-Information, which you founded in 1976, and for which you serve as director.

NOAM: That's correct; we just received the pleasant news that the Alfred P. Sloan Foundation, which specializes in high

technology and public awareness, has designated and upgraded us as one of its dozen national centers for industry research. In our case, for research on telecommunications.

UBIQUITY: Congratulations! Where are some of the other centers?

NOAM: There's a center on semi-conductors at Berkeley. Research on computers is covered by Stanford; financial services by Wharton; aviation by Harvard; the auto industry by MIT; and there are several others.

UBIQUITY: With regard to your Institute, why did you choose the word "tele-information" rather than telecommunication to describe it?

NOAM: Because Tele-Information is a broader term. Telecommunications has acquired a somewhat more narrow connotation meaning just the telecom industry -- so that cable television, for example, would be outside of telecommunications in the present usage of the term, as would, arguably, even the Internet and Web applications. We wanted a broader focus.

UBIQUITY: Give us an example of what your current Ph.D. students are working on?

NOAM: I had a discussion with one of them just five minutes ago on his dissertation, which will be a comparative study of factors encouraging Internet usage in U.S., India, Sweden and New Zealand. Obviously, there's interest in the Internet, and Internet developments are so rapid that academia often limps behind the news, even though academia was at the forefront of creating the Internet. The private sector is taking more and more of the initiative and so academia is continuously having to race after developments, particularly in terms of the economic studies of impacts and applications.

UBIQUITY: And this has changed the nature of research efforts?

NOAM: Definitely. In the past, dissertations took several years to think through and to design and to write and then to publish. But now, increasingly, we are forced to ask how to conduct research over years when the object studied is measured in months or less.

UBIQUITY: Does that connect to a larger question of a changing role of academia as a whole?

NOAM: Well, yes. But I conclude that academia is becoming

more important than ever in this fast-changing world that is filled with various merchants of hype. Society has more and more of an interest in getting true evaluations, which universities have historically provided. This is an increasingly difficult task for universities to fulfill -- partly because evaluation requires such a rapid update of information, along with persistently nimble thinking. But the university is also hampered by an increasing trend towards self-commercialization, either to create university-wide revenues, or for personal motives. As they increase their personal business fortunes they often tend to lose the credibility accorded them in the past.

UBIQUITY: If we understand it correctly, you yourself have been in academia throughout your entire career, with the single exception of a three-year period in the late 80's, in which you were a New York State public service commissioner.

NOAM: Correct.

UBIQUITY: How did that happen?

NOAM: I had been active in the research of telecommunications policy issues, and it was a logical thing for the Commission to include an academic with my interest and background. I had also not been involved in any consulting-for-hire, so I was free of any inference that I was on a particular side in these issues, which are often quite politicized. In addition, it just then happened that Governor Mario Cuomo, for a brief while, toyed with the idea of running for President, and his advisors and the press suggested that one of his weaknesses had been, in the past, that his appointments were drawn largely from people whom he had known since his kindergarten days. And so, for a brief window of time, he actually reached out to a different set of appointments, and I was one of them.

UBIQUITY: Presumably you hadn't gone to kindergarten with him.

NOAM: No. Not only that, but I was not even a Democrat. I had no political connection with the Governor or with his people at all. I remained an independent.

UBIQUITY: Tell us a little about your intellectual evolution. You have a Ph.D. in economics from Harvard, as well as a law degree from Harvard.

NOAM: Right. The reason why I took the law degree, which I earned while doing my Ph.D. dissertation, was not in order to practice law -- that had never been a goal of mine. Rather, I got a law degree because I found in the study of economics an

over-emphasis on mathematical modeling that had little relation to the real world. And I decided that the institutional side of the economic and business world as exemplified in legal relations provided a much better description of those kinds of reality. And finally, being interested in public policy, I felt that economics and law made a good combination. And I was right.

UBIQUITY: Was there a downside in your choice?

NOAM: No, but it meant that I was never at the center of gravity of economic theory. I had to forge a different path. So I became interested in the combination of economics and law as applied to communications and media. I have never ceased to marvel about this. Essentially by accident, I had come upon a wide-open area. And my amazement never ceases at the way in which the whole world now accepts how important media and communications and the Internet have become -- economically, technically, and culturally -- while the number of economists doing serious work in this field has been so small.

UBIQUITY: Do you have a theory of why that's true?

NOAM: Because, being such a new and different field, it doesn't have the traditional academic stakeholders. Since Ph.D. advisors tend to replicate themselves, a young faculty member today is likely to have written his or her Ph.D. dissertation five years ago with an advisor who studied economics 20 years ago on some entirely different, mainstream topic. And so the system tends to self-perpetuate itself.

UBIQUITY: This is a general problem in economics departments?

NOAM: Yes, it's also a general problem throughout academia, whether political science departments, law schools, and almost every academic entity except departments of electrical engineering, computer science, and schools of communication.

UBIQUITY: Is there anything that could be done to change that?

NOAM: On some level, it seems you just have to outlive the previous generation. People have written so much on paradigm shifts that the observation has become a bit trite.

UBIQUITY: What do you think of the interaction among faculties at today's university? Some years ago there was incessant use of words such as interdisciplinary, and multidisciplinary, and metadisciplinary. Is that still the case?

NOAM: There's lip service, obviously, to the united search for truth and knowledge. But structure is destiny, and the academic enterprise is organized by disciplinary-based departments. And so, to a large extent, people are forced to focus their attention and energy on the disciplinary requirements, and anything beyond that has the aspect of pure luxury: it's mere "bridge building." It's not going to get them tenure or promotion, and it's usually not going to get them any kind of publications in the major disciplinary journals that will win them recognition.

That having been said, it's always been true that some of the most outstanding people of the academy have, in fact, been bridge builders. And often they have been both strong inside the discipline and also possessed of a strong broad perspective that enables them to build these bridges.

UBIQUITY: What about institutional support for those kinds of activities?

NOAM: Various institutional models help people do that: there are centers and institutes that go beyond individual departments, and there are some various interdisciplinary journals today. So I shouldn't say that interdisciplinary activity doesn't exist. But, still, the disciplinary, narrow-focused nature of most academic enterprise is alive and well. And I don't see anything that's going to change that very easily -- including the Internet.

UBIQUITY: Not even the online universities that are being created?

NOAM: No, I don't think so. We might find them turning out to be even more conservative than traditional universities when it comes to the disciplinary structure, because they cannot innovate on every level simultaneously. As they innovate in delivery, style and credentialing, they will try to duplicate a traditional university as much as they can, in order to preserve credibility and acceptability. If they could have an electronic football marching band, they would do it.

UBIQUITY: That's a hilarious thought. But tell us: are you personally interested in the online universities?

NOAM: Oh, absolutely, and I'm involved in them in a variety of ways. I think they're the wave of the future, though they're going to supplement rather than replace the traditional universities. But they're certainly going to give the traditional universities a run for their money, and force them to self-reform, which they have not been willing to do in the last several decades because there has been very little pressure on them to do so.

UBIQUITY: How are you personally involved with them?

NOAM: I'm on the Board of Trustees of Jones International University, the first accredited Web-based university. Independent of that, my own institution, the Columbia University Business School, is involved with an organization called UNext.com.

UBIQUITY: As a matter of fact, we interviewed Don Norman for Ubiquity; he is President, UNext Learning Systems. [Note: See the Ubiquity [interview archives](#).]

NOAM: They are a pretty innovative organization. I've also been involved in creating an experimental Web based course for a Swiss university, the university of St. Gallen. And, by the way, creating such courses has turned out to be an enormous amount of work, and the experience has given me a healthy respect for the role of the middleman in this activity. Lastly, I've also been writing about online learning, because I find it to be a fascinating subject.

UBIQUITY: What approach are you taking?

NOAM: Well, I have been thinking about what electronics does to the traditional university and trying to counter the established wisdom on that topic.

UBIQUITY: In what way?

NOAM: A commonplace of today's opinion is that the information technologies are actually strengthening the universities by adding to their capabilities.

UBIQUITY: Whereas you argue -- what?

NOAM: I argue that the information technologies will weaken the universities unless they change themselves in fairly substantial ways. They will weaken them by removing much of the need to have a physical place in which scholars congregate. Up until now, for two thousand years, information was expensive, and the scholars came to the information, using it and adding to it in a collegial way. The students then came to the scholars. But that arrangement is going to unravel rapidly for various reasons, economic as well as technical. Electronics provides alternative means to establish the same relations of research collegiality and teaching. So the universities need to recognize what their core strength is, which is not information transfer but peer group and mentoring experience and mentoring experiences. What they need to do is strengthen those traditional, interpersonal aspects of education, and move away from that

kind of mass-production factory-style teaching model that has been the rule for the last 50 years at least.

UBIQUITY: Before we end the interview, we'd like to ask you what you regard as the major looming issues in telecommunications policy?

NOAM: The key policy issue is the interconnection of networks with one another, in order to keep together that sprawling network of networks that has been emerging. On one level, it's important to set the technical issues of standards and protocols so that numerous people, institutions and applications across society can communicate with each other. No governmental role is needed here. More difficult to resolve are economic issues of compensation, payments, and content access issues. A second major set of issues would be focused on the upgrade of narrowband networks to broadband networks with the capability to support a high-speed, video-capable Internet that can distribute everything anytime and that can move from the mass-media model to an individualized media model.

UBIQUITY: Okay, one final question. Is there any kind of advice you might give to a young, information technology professional about how to get up to speed in dealing with those two large sets of issues?

NOAM: I'd say: "You've picked a great area and a great time. Now buy my books! Read my articles!"

UBIQUITY: An excellent answer -- and an excellent way for us to end our conversation.

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