Information and Communications Policy Research -- More Important, More Neglected

Eli M. Noam[1]

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[1] Eli M. Noam is Professor of Finance and Economics at Columbia University Graduate School of Business. He is also the director of the Columbia Institute for Tele-Information, and served as Commissioner of the New York State Public Service

The first U.S. telegraph message, sent from Baltimore to Washington in 1844, was "What hath God wrought?" The same question was being asked one and a half centuries later when American communications were being transformed by technology, policy, and entrepreneurialism.

The American communications policy experience followed the path from a relatively short-lived unbridled laissez-faire capitalism to a regulatory system that kept steadily expanding in the decades following the Great Depression and World War II. But in the 1970s, communications policy in the U.S. began to shift in the opposite direction, towards a lessening of restrictions.

These policy changes were partly due to a general political and economic climate favoring a philosophy of limiting the role of the state, which made the public more receptive to allowing new entrants as an offset to corporate power, and as a substitute to direct governmental intervention. Additionally, in the case of major communications, advances in electronic technology destabilized the long-standing market structure. Meanwhile, the importance of information as an input for all economic activities grew, and with it the pressure by large users for low cost telecommunications. On the consumer level, increases in leisure time, education, and diversity raised the demand for differentiated entertainment products.

As a result, during the past two decades, individualized and mass electronic media were changed

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from national monopolies and oligopolies to new and increasingly open structures.

As these historic changes unfolded, where was academic policy research? To recognize and appreciate the contributions that Tony Oettinger made to this field, both individually and as an institution-builder, one should look at the presence —or absence- of traditional academic disciplines in this transformation.

Technologists in electrical engineering and computer science departments provided the tools that enabled change. They (and *business-school strategy researchers*) often played a booster role that looked often overoptimistically, at the potential of technical progress. But their role in policy research was fairly small. *Political scientists* and *historians* have had an astonishingly low profile considering the magnitude of change and its long-term implications on the political and social system. *Legal* academics have played some role by research investigative monopoly issues, analyzing free-speech principles as applied to electronic media, researching intellectual property and privacy issues and dissecting new communications statutes. Among other social scientists, *economists* have probably been the most influential, providing the general free-market case which helped to destabilize the "natural" monopoly system. Economists were also active -- often in the employ of interest groups -- in the implementation process of policy change. But once the argument of removing entry barriers had been accepted, they contributed little to a vision of the future.

Thus, as society entered the information age and the information economy, and as its political

institutions wrestled with the revolutionary consequences of transition, academic policy research was strangely marginal. Part of the reason was that academic institutions were not organized for themes that were not part of traditional research agendas of traditional academic disciplines, organized around traditional departments.

A second problem was, ironically, that because of the great importance of the subject to the world at large, those academic researchers with strength in the field were in great demand as consultants, expert witnesses, etc, thus reducing their academic role as well as their neutrality.

To establish communications policy research therefore required individuals who could both create intellectual capital, institutional infrastructure, and credibility. In all dimensions, Tony Oettinger was the pioneer. Almost by himself, he filled the vacuum in academia that existed in the traditional departments and schools.

In contrast, mainstream communications departments have played only a minor role in the enormous changes in communications policy. At the time that the communications system was on the table of national policy, when new institutional arrangements were being established, the academic field of communications studies did not communicate well with the public policy process, whether in Washington, Brussels, or other capitals.

In consequence, mainstream scholarship in communications departments has been without a real-world role, in contrast to some other fields such as environmental studies, which successfully

overcame the structural impediments that limit academia's influence and participation in the public arena. Policy makers often ignore social science research, but scholars also underestimate their own weight. Policy ideas may not win, but they matter. While convenient ideas may get amplified more than those that threaten, the policy process is also a voracious consumer of ideas.

There were many questions to address, but for a long time the answers were mostly conventional. The old policy arrangements had some undeniable social merit as well as power and benefits to disburse to their participants. In most countries communications were a public service oriented to the public welfare. But the reality was more complex. In point-to-point telecommunications, long-standing monopolies had become bloated and slow. Technological decisions tended to be captured by domestic supplier industries. Even so, the change to a more open network environment was accompanied by scholarly assertions of impending social doom, few of which were retracted when the predicted calamities failed to materialize.

In television, too, the reality of the traditional public monopoly broadcast system that existed in many countries fell far short of the idealized expectation of quality programming. The pervasive politicization of the powerful public institutions was not given much research attention. Nor was there much study of the negative impact on national and regional cultures and on artistic independence resulting from a system in which a single national public broadcast monopoly served as the gatekeeper and chief financier of the film and video creativity of an entire society. Despite a vast body of political science research, it was often assumed that such an institution would act for the public, without regard to its self-interest or that of its political patrons.

Part of the problem has been the frequent absence of an adequate and updated fact base. In the academic pecking order, theory is more prestigious than empiricism or policy. Yet theory must refer to a fast-changing reality, especially if it has political implications and if it is to guide applied research. With inadequate incentives inside academia, the empirical and policy base of communications research was further weakened by a brain-drain of those with the strongest fact base into private consulting and think tanks.

Beyond Regulation

Will the next generation of researchers prove to be different? This requires the identification today of tomorrow's issues.

The replacement of communications monopolies by a partly competing, partly collaborating, interconnected, and non-hierarchical *network of networks* change fundamentally the face of the media industries. Specialized *integrators* such as Internet service providers become central institutions of communications. replacing many of the roles of today's telephone companies, broadcasters, and cable operators. Networks will move from public to private, and from private to individualized.

Such a structure will be radically different from the present media system, and it invites policy analysis. For example, is there a role for public control? Could any overall equilibrium emerge out of decentralized sub-optimizing actions? Are issues of distribution and privacy resolved in

such a system? Is standard-setting necessary or possible? How do partially regulated environment function?

Similarly, the interrelation of the various electronic communications networks must be thought through carefully. This is not just a technical and economic matter. Interconnection and access rules define the rights of various media and thereby the participatory rights of their users. They are nothing less than a constitutional framework for the communications infrastructure.

Beyond the Public Internet

One of the many questions about the future of the Internet is whether it will be free. A free Internet in the economic sense is not tenable, and questions about Internet prices and industry structures are important. A free Internet in the legal sense is even more interesting. One question about future policy is whether the Internet will be regulated. Many Internet enthusiasts dismiss the question as irrelevant. They believe the myth that one cannot regulate the Internet. However, communication is not just a matter of signals but of people and institutions. Virtuality is an appealing notion. But one should not forget that physical reality is alive and well. Senders, recipients, and intermediaries are living, breathing people, or they are legally organized institutions with physical domiciles and physical hardware. The arm of the law can reach them. It may be possible to evade such a law, but the same is true when it comes to tax regulations. Just because a law cannot fully stop an activity does not prove that such law is ineffective or undesirable.

This does not mean that we should regulate cyberspace (whatever it is). But that is a normative question of values, not one of technological determinism. And that choice will not be materially different from those which societies generally apply to the panoply of activities. Why should computer communications and its applications be different? As the Internet moves from being in the main a nerd-preserve and an office park, and becomes a shopping mall and community center, it is sheer fantasy to expect that its uses and users will be beyond the law.

Today, for better or for worse, each society will apply its own accumulated wisdom, prejudices, self-interests and misconceptions to the rules governing cyberspace. New situations where powerful traditional institutions are on the defensive lead to more rules, not less.

The techniques for control vary depending on the target. Transmission backbones can be set and controlled. Interconnection and traffic hand-off points can be regulated. ISPs can be held liable for content, and they could be licensed. Hardware can be required to have a screening chip. Content providers can have their servers traced and licensed. Organizations can be held liable for content on their computers, available to employees. Routing tables can be controlled. Taxes and tariffs can be levied. Anonymous remailers could be outlawed.

Such rules, or similar ones, are not desirable. But they are unavoidable in the dynamic that will unfold. For every revolution there is a counter-revolution. And because the revolution is farthest along in America, the counter-revolution is likely to emerge here, too.

In the past, the scarcity of electromagnetic spectrum allocations accommodated only a tiny number of television channels, resulting in program content that averaged many viewing interests in order to aggregate large audiences. The outputs of a medium are defined by its structure. In what ways then will the change in the media structure alter production, news, programs and distribution? These are areas that are under-researched. The broadening of transmission bandwidth beyond traditional limited television leads to a measurable widening of program options and viewer's differentiation, both in the high- and the low-culture ends of the program spectrum. This process will take several decades but it is on its way. Future cyber media based on electronically accessible video-libraries will further drastically affect program differentiation, viewer control, and program provision of from alternative sources.

Beyond the Nation- State

Under the old information order, territorially organized electronic communications networks were based, technologically, on the need for a network architecture that minimized transmission distances; politically, on the desire of the state for control over communications; economically, on incumbent firms' desire for profitable protection; and socially, on the shared reference of national culture. But in the future, with the cost of transmission increasingly distance-insensitive, both telecommunications and mass media networks will become globally organized. This will have important effects. One is on the structure and operations of these networks themselves. A second is on the nature of policy and regulation which will increasingly migrate to regional or international arrangements. And the third is the nature of public communities.

Communications media will not create a global village, but instead help organize the world as a series of electronic neighborhoods transcending national frontiers. In the process, the nature of politics will change, and with it policy.

Outlook

Mainstream academic communications disciplines have not kept pace with the concrete questions of public treatment of information, even though the subject of study, information, has achieved centrality in society and economy. For the field of communications policy studies to blossom it must expand. A first broadening must be into adjoining media. In the past, communications studies have concentrated on mass media, paying little attention to point-to-point and computer communications. Yet the blurring of boundaries separating electronic media and the creation of multi-media technologies, group networks, and interactive personal communications render many distinctions obsolete.

A second broadening takes us beyond the bounds of pure academia. Communications scholars must both address and occasionally venture into a real world whether in production, government, media firms, or public interest advocacy, to name a few. While one must be alert to excessive closeness, research and teaching will benefit overall from such experience.

Third, even within the academic realm, communications studies must overcome insularity. The field of communications studies will hopefully maintain and strengthen its own disciplinary multiculturalism, be it by historians of communications, philosophers, sociologists, interpreters

of culture, to name a few. Yet, despite communications studies being broad in concept, there is an absence of strong links to some disciplines not at the center, such as technology, law, and economics.

And fourth, communications studies must re-establish a strong empirical and applied base within the field, so that theory, methodology, empiricism, and policy will reinforce each other again.

Tony Oettinger, in his work and his team, exemplifies these four dimensions of broadening. Without similar efforts, communications studies will not be able to identify the future of communications or illuminate society's treatment of it, i.e., of policy. If the chasm between the academic field and its subject-matter of study becomes too wide, a self-correcting mechanism takes over. The rapidly moving world of communications media, technology and infrastructure will force communications studies to change focus, directly or through the next generation of students and researchers. And these will be more than ever in Tony Oettinger's debt.