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[Re Computer-Assisted Methods to Analyze Communications, excerpt]:

How to Nurture Creativity and Progress in the Social Sciences: Comment on the National Science Board's Draft Report (2003)

by

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C.) Centers for Content Analysis and International Studies

In the 1930s an early development in social science was to apply quantitative methods to the analysis of communications in the mass media. The first researchers did the work by hand and then began to use computers in the 1950s. But punch-card technology and limited online memory and processing capacity limited the research, almost exclusively, to simple frequency counts. The researchers did not have the technology to ask more sophisticated questions. Pioneers in the field contributed to a summary volume (published in 1959) and then, for the most part, moved-on to other research. Their volume was a message-in-a-bottle to future generations, recording their initial steps to build a new multidisciplinary method, a foundation that could be revisited, for renewed progress, when technology

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improved.[2]

Today, content analysis is a research method that is needed and whose time has come: With the spread of democratic and semi-democratic societies there is a tidal wave of new communications being generated in all countries; and television and radio programming that is independent of state control and reflecting (and affecting) social processes and images of domestic and international political issues. It is likely that, in a sense, a great more is happening in the world. As one effect, the acceleration due to new communication technology may accelerate political organizing. In a world where human rights remain problematic for billions of people, and injustice and discrimination are ubiquitous, it is worth recalling that the invention of the printing press turned the criticisms of an unknown priest in an obscure part of Northern Europe into the Reformation and Counter-Reformation, and set Europe ablaze.

Yet as the production of communications has achieved exponential growth, American research libraries have halted the growth of new print acquisitions. And any hope that even our largest libraries will acquire, archive, and index television is an impossible dream. The

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[2] Ithiel de Sola Pool (Ed.) Trends in Content Analysis. (Urbana IL: University of Illinois Press, 1959). See also Ithiel de Sola Pool, "Content Analysis and the Intelligence Function (1969), reprinted in Lloyd S. Etheredge (Ed.) Humane Politics and Methods of Inquiry (New Brunswick, NJ: Transaction Books, 2000), pp. 19-41.

barriers affect not only American social scientists trying to understand other countries, but social scientists in every country without an ability to acquire, codify, and use a growing flood of potential data in their own countries and regions.

I think it is obvious that we should begin to build Centers for Content Analysis and International Studies, at several sites, in the US and around the world. There is an extraordinary list of tasks - ranging from library-like tasks of setting priorities and acquiring and digitizing selections of the new flows of communications, to the development of new content analysis "engines," computer software packages for all of the social sciences, with capabilities for these new tasks of inference similar to the investment in SAS, SPSS, and related technologies for numerical quantitative data. The Centers should be established with competitive and renewable grants: applicants might be invited to specialize - e.g., a consortium of research libraries might develop options and initial projects for online resources; a multi-disciplinary center of social and computer scientists, and humanists, might work on the design of powerful and flexible software.

Most social science research makes inferences from an analysis of communications, but doing such tasks rigorously will require the solution of many difficult problems. We know that the earlier technological barriers have been mitigated; we probably can infer that, even if it is done with the simple frequency counts of an earlier generation, quantitative content

analysis is likely to draw new researchers. But we do not know what we can learn, only that we are dealing with a combination of opportunities and needs that should be part of NSF's infrastructure investment across the next decade.

Earlier, I discussed the changing image of the US and Americans: this is one dependent variable that might be observed and understood, to our benefit, with the help of new content analysis technology. Especially so during the next decade when, limited by undergraduate enrollments and a changing age structure, there are a very limited number of social scientists to study these questions and whose time can be used more efficiently by shared online resources. We also can use this technology to begin to monitor and understand the psychological/subjective component of globalization. Globalization can be studied by economists (e.g., as flows of money or products - blue jeans and Coca Cola are ubiquitous). But the problem of cultural change is more complex: Are traditional ways of being Arab or Chinese changing fundamentally? Is there rapid convergence toward a secular, cosmopolitan sensibility? Or - just as new cable television channels in the US led to the rise of televangelists and the organizing of a new Religious Right - is there a retreat into tribalism? The Lexus and the Olive Tree is the title of a book about these opposing tensions and trends by a remarkable observer, Thomas Friedman of the New York Times.[3]

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[3] Thomas L. Friedman, The Lexus and the Olive Tree: Understanding Globalization (New York: Farrar, Straus, Giroux, 1999).

Yet we need observations by more than one man; and just as physical scientists can benefit from knowing if a hole in the ozone layer above the South Pole is growing, or if the orbits of the planets are changing, so thoughtful and serious people in all countries can benefit from good data and deeper understanding of a globalizing and uncertain world.