

What s Next?

The Intellectual Legacy of Ithiel de Sola Pool

by

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Good afternoon. It is a pleasure to return to MIT and speak about my former colleague, Ithiel de Sola Pool.

A discussion of Ithiel Pools intellectual legacy is a large task. He was a pioneer in the development of the social sciences who continued to grow and explore new issues with new methods across more than 45 years of professional work. He wrote, coauthored, or edited two dozen books and several hundred articles. He seldom repeated himself.<sup>2</sup>

This afternoon I will proceed in two steps. First, I will discuss Ithiels major enduring contributions to the development of the social sciences. Then I will address Ithiels legacy as a pioneer who always was engaging the question What s Next?, and I will discuss what

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<sup>2</sup> And he had a secret edge - at least in the eight years I knew him as a member of the MIT faculty, Ithiel was blessed with the most remarkably efficient secretarial staffs I have ever seen in universities.

I think he would be doing today.

## I. Contributions to the Social Sciences

Ithiel contributed to almost every field of political science and to the broader development of the social sciences. In the early 1970s the late Karl Deutsch assembled a list of 60+ "Major Advances in Social Science Since 1900." Ithiel was cited for his contributions to three major advances (Figure 1).<sup>3</sup> I once discussed the list with Ithiel, and he said that he agreed with Karl Deutsch's judgments. It is a good place to begin.

The three contributions were research methods that Ithiel helped to pioneer and where his sensible discussions and early examples remain touchstones:

1.) The quantitative analysis of communications content - which he helped to pioneer, with Lasswell and others, during World War II in the study of Nazi and Communist propaganda and symbols of freedom in the speeches of political leaders.

2.) The rigorous analysis of political elites, who gets in to power, from what backgrounds,

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<sup>3</sup> Deutsch, Karl W., Platt, J. & Senghaas, D., Conditions Favoring Major Advances in Social Science. Science, 171 (1971): 450 - 459.

## Figure 1

### Ithiel Pool s Major Contributions to the Social Sciences

#### 1. Karl Deutsch s list

- Content analysis
- Elite studies
- Computer simulation of social and political processes

#### 2. Additions (Possible)

- Contact nets
- Technologies of Freedom and Politics in Wired Nations analysis  
of impacts of new communication technologies

by what routes.

3.) The computer simulation of social processes, including the first computer simulation of decision making in international crises - the outbreak of World War I ( The Kaiser, the Tsar, and the Computer ) and the first major computer simulation of the American electorate based on public opinion data and used to advise President Kennedy s

campaign for the Presidency in 1960.<sup>4</sup>

I think there are two possible additions to this list:

4.) Contact Networks and Influence.

Ithiel pioneered the rigorous study of contact networks and influence, a line of work that become known as the small world phenomenon.<sup>5</sup> One way to pose the question is to ask the probability that any two people, selected at random from a population, will share at least one acquaintance. Another version of the problem is to ask how many steps it would take a person to get a message to the President of the United States (or another target person) through chains of personal relationships. Ithiel's original work inspired a play and a movie *Six Degrees of Separation* and more recently an Internet Web site and game, *The Six Degrees of Kevin Bacon*.

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<sup>4</sup> Pool, Ithiel de Sola, *The Kaiser, the Tsar, and the Computer: Information Processing in a Crisis*. *American Behavioral Scientist* 8, no. 9 (May, 1965): 31-39; Abelson, Robert; Pool, Ithiel de Sola; Popkin, Samuel, *Candidates, Issues, and Strategies: A Computer Simulation of the 1960 and 1964 Elections*. (Cambridge, MA: MIT Press, 1965).

<sup>5</sup> Kochen, Manfred, (E.d.), *The Small World: A Volume of Recent Research Commemorating Ithiel de Sola Pool, Stanley Milgram, and Theodore Newcomb*. (Norwood, NJ: Ablex Publishing Company, 1989.)

Ithiel began this work, with the mathematician Manfred Kochen, in the 1950s when the standard view of political influence was group-based. American politics, for example, was seen as an arena of interest groups and organizations like political parties, who interacted to set the political processes. Today, the verb to network has become standard at the Kennedy School, or Yale's School of Organization and Management, and throughout the professional and policy world. We speak readily of policy networks

Right now, social scientists are still lagging in the formal study of these new realities. As they begin, specify dependent variables, and this research becomes more prominent, I think Ithiel's conceptual and mathematical foundation will be seen as a major advance.

5.) The last possible entry is Ithiel's analysis in Technologies of Freedom, and his broader work on the social and political impacts of new communication technologies that will be drawn together in an edited volume, Politics in Wired Nations, this fall.<sup>6</sup>

The key claim is Ithiel's argument that (Figure 2) . . . *people who think about social change in traditional political [even radical] terms cannot begin to imagine the changes that lie ahead.* If Ithiel is right, and his work does offer a reliable guide to the effects of communications

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<sup>6</sup> Harvard University Press, 1983; Etheredge, Lloyd S. (Ed.), Politics in Wired Nations: Selected Papers of Ithiel de Sola Pool. (New Brunswick, NJ: Transaction Books, in press).

## Figure 2

### Ithiel Pool as a Communication Technology Theorist and Science-Based Revolutionary

*Most movements that are self-described as radical are highly urbanistic, or nationalistic, or oriented to obsolete class structures, or to central bureaucratic planning. The changes that we can see on the horizon are much more drastic than that . . . People who think about social change in traditional political terms cannot begin to imagine the changes that lie ahead. Conventional reformers cast their programs in terms of national policies, or in terms of laws and central planning. But in the end, what will shape the future is a creative potential that inheres in the new technologies . . .*

- Ithiel Pool, Development of Communication in the Future Perspective in S. Aida (Ed.), The Human Use of Human Ideas (NY: Pergamon Press, 1983), pp. 237 - 238

*With each passing year the value of this 1983 book (Technologies of Freedom: On Free Speech in an Electronic Age) becomes more evident. Like no one before or since, Ithiel de Sola Pool saw the world of communications whole and with up-to-the-second knowledge in depth. . . Technologies of Freedom . . . provided a theme - freedom of speech and press is core - which I took up with relish. . . I've seen this book convert liberals away from government control of broadcast media toward a guided marketplace approach . . . I've seen technology skeptics . . . begin to get a gleam in their eye.*

- Stewart Brand. Review, 9/89, <http://www.gbn.org/BookClub/Technologies.html>

technology on social, political, and economic life, then his work will have fulfilled, rather splendidly, the dream of the pioneers of the social sciences to provide an independent, steadier, truer, and more realistic alternative to the frameworks and choices (e.g., ideologies, election speeches, or policy argument television) that the political world

provides. Clearly, it is an achievement that would be featured prominently on a list drawn a hundred years from now.

Actually, Ithiel's work may rate a double billing, since Karl Deutsch gave separate entries for revolutionaries who created new political movements. In this respect, I draw to your attention the quotation from Stewart Brand (Figure 2, also), a leader from the counterculture left of the 1960s.

If Stewart Brand is correct, then Ithiel pulled-off an almost unequaled historical feat of consensus building for worldwide public policy. The AT&Ts of the world were enrolled (from enlightened self-interest), and almost everybody else.

In suggesting a double-nomination, I want to draw to your attention one of Ithiel's last writings that discusses the unnatural institutions that he expects - with the communications policy changes underway - now will begin to change.<sup>7</sup> It is a remarkable list - the nation-state, large hierarchical bureaucracies, the unnatural entrapment of human beings into megacities, etc. I am reminded that Ithiel was a passionate student leader and Trotskyite in his youth, and at this point I just want to draw to your attention that (surface appearances notwithstanding) I am not sure, in some ways, how much he

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<sup>7</sup> In Aida (Ed.), op. cit.

changed. Any leftist revolutionary would be thrilled by the hit list.

And of course if we consider Ithiel's legacy, there are the obvious points in his favor that he might be more effective than Mao or Lenin and that his science was better than Marx. Time will tell.

At this point, I list this achievement as a maybe because Ithiel did not live to write the equivalent of Das Kapital. I do not think people fully understood, even in his own Department, the pieces that were coming together. And we still need to see how many predictions and causal pathways turn out as forecast.

Let me just illustrate this legacy. On my desk is an announcement from Yale Medical School discussing a new global Internet research colloquium that our foundation has helped to develop that is connecting to desktop PCs of educators, public health professionals, students - and anybody else who is interested - in 110+ countries.<sup>8</sup> It is

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<sup>8</sup> The URL is <http://info.med.yale.edu/EIINet>. The subject concerns emerging infectious diseases, a problem that has both scientific and organizational challenges. An early source of inspiration was Ithiel Pool's work concerning the potential contribution of satellite technology to the creative process in international agricultural research. See, for example, Pool, Ithiel de Sola and Corte, A. B. "International Data Communication Capabilities and Information Revolution." Proceedings of the American Society for Information Science 12 (1975): 1-2; Pool, Ithiel de Sola, Freedman, Elliott H., and Warren, Colin John, Low Cost Data and Text Communication for the Less Developed Countries: A Study With Special Reference to the Needs of the International Agricultural

designed to take a global framework and to accelerate scientific innovation worldwide. The public domain technology for compressed audio and graphics (Real Audio and QuickTime) is good enough to begin, and it is obvious that it will continue to improve quickly.<sup>9</sup>

For most of world history, this would have seemed almost inconceivable. Global, user-initiated and user-controlled television channels? Across national boundaries, without a licence and without asking for permission? And building common frameworks for international cooperation to solve urgent global problems, with many of the people in the loop who could make this happen?

The Medical School initiative is about global organizing and influence, in addition to scientific information. The first global seminar in the Yale series was given by Dr. Ruth Berkelman, MD from the US government's Center for Disease Control. She was able, so to speak, to address the troops (3,500+ leaders in international public health) worldwide and begin to explain new leadership in US policy: the audio and video technology began to create relationships that writing an article alone could not have achieved and saved her

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Research Centers. A study completed for the US Agency for International Development. (Cambridge, MA: MIT Research Program on Communications Policy and others, 1976).

<sup>9</sup> Once a lecture series is organized, the added cost to Yale to make it available globally also is remarkably small: after a lecture is recorded by conventional means, it requires about 1.5 hours of a technician's time to digitize one hour of audio, and about 0.5 hours to digitize 20-30 slides, at \$65/hour (Yale Medical School rates).

months of jet travel.

And once you begin to use this new global, interactive, user-controlled, and low-cost technology, contact networks become even more vividly alive as a new mechanism of policy cooperation and influence. Contact networks are not just sociological phenomena of people Dr. Ruth Berkelman (for example) has met, but the people she can interact with and work with - on a daily basis - wherever they are in the world.

## II. What Ithiel Pool Would Be Doing Today

Ithiel was a pioneer who believed that he and his students should be creating the future. I think that this spirit and commitment were his greatest legacies. Forecasting what he would be doing today is easier than it may seem: Ithiel planned what he was going to do next, there is a written record of his criteria, and here are several major themes (Figure 3).

Even with these questions to call forth a list there are many hazards to this kind of enterprise. As a preface it may help to recall Ithiel's own comment on forecasting, in a famous essay *The Art of the Social Science Soothsayer*. Ithiel wrote that if an analyst was faced with three possibilities, with probabilities  $p(A)=0.3$   $p(B)=0.3$  and  $p(C)=0.4$ , he would

### Figure 3

#### Ithiel Pool's Operational Code as a Pioneer

- 1.) Focusing upon the most important emerging trends, especially affecting freedom;
- 2.) Addressing questions that were, jointly, of scientific interest and civic relevance for government and citizen decision making;
- 3.) Assessing where he, given his background, could make the greatest contribution;
- 4.) [Neat technology. Unstated, but probably relevant, was that Ithiel liked the challenges of developing new technology, especially for research.]

predict option C (i.e.,  $p(C)=0.4$ ) as the most likely. But he also would predict that he would be wrong, that the probability was 0.6 that the actual outcome would be either A or B. The remark will, I think, introduce you to something about Ithiel - his intelligence, his capacity for self-reflection, his honesty, his humor. And although I was never entirely convinced that Ithiel believed he would be wrong, I will press forward in the same spirit (Figure 4).<sup>10</sup>

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<sup>10</sup> Pool, Ithiel de Sola, 'The Art of the Social Science Soothsayer' in Nazli Choucri and Thomas W. Robinson (Eds.), Forecasting in International Relations: Theory, Methods, Problems, Prospects (San Francisco: W. H. Freeman, 1978), pp. 23 - 34.

## Figure 4

### What Ithiel Pool Would Be Doing Today

- I. Developing the communication framework as a formal and systematic framework in the social sciences
  - Measurement of trends
  - Experiments to clarify and evaluate creative potentials (e.g., scientific innovation)

- II. Nailing the Huntington Thesis

[Intermission: What Ithiel Pool Would Not be Doing]

- III. Building Capacity for Empirically-Based Policy

- Domestic
  - The battle for social science in domestic policy
- International
  - Using the independence of the academic world to strengthen government analysis

- IV. Travel (Japan, Russia)

1.) Developing the communications framework as a formal and systematic field in the social sciences.

Ithiel believed that the study of communication systems could be as powerful as the

study of economic systems.<sup>11</sup> He and several other pioneers (e.g., Karl Deutsch) worked in this direction - for example, in American Business and Public Policy: The Politics of Foreign Trade, Bauer, Pool, and Dexter created a model of scientific research to examine, with an anthropologist's astute observation and alert generalization, the details of a particular communication system.<sup>12</sup> Ithiel edited the Handbook of Communication to begin codifying the field.<sup>13</sup> And with Inose, Takasaki, and Hurwitz he began to develop a set of measures to monitor trends toward a global information society.<sup>14</sup> But the vision needs more work and refinement to develop the equivalent analytical power of the field of economics and other disciplines.

For example, there are flows of communication, just as there are flows of money. But we also can ask about the productivity of communications or of expenditures, about whether anything is happening or whether we are experiencing 3% - 5% annual growth in the

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<sup>11</sup> E.g., Pool, Ithiel de Sola, Political Communication in David Sills (Ed.), International Encyclopedia of the Social Sciences. Vol. 3 (New York: Macmillan-Free Press, 1968), pp. 90-96.

<sup>12</sup> Bauer, Raymond; Pool, Ithiel de Sola; Dexter, Lewis A., American Business and Public Policy: The Politics of Foreign Trade. (New York: Atherton Press of Prentice-Hall, 1963).

<sup>13</sup> Pool, Ithiel de Sola; Schramm, Wilbur; with others, (Eds.) Handbook of Communication. (Chicago: IL: Rand McNally, 1973).

<sup>14</sup> Pool, Ithiel de Sola; Inose, H.; Takasaki, N.; Hurwitz, R., Communication Flows: A Census in the United States and Japan. (Tokyo: University of Tokyo Press, 1984).

intelligence and wisdom in what is being said; or the systems of feedback and government learning<sup>15</sup>; or citizen learning or intelligence as a result of the flows of communications in the mass media. Etc.

There are many directions for the development of the field. My guess is that Ithiel would be updating and expanding his early measures of trends toward a global information society. And almost surely would be engaged in experiments to develop creative potentials of new communication technologies such as designing global discussions on the World Wide Web and expanded contact nets to aid the creative process in science. (Given his earlier interest in scientific creativity, communication technology, and international agricultural research, he might be drawn to this field for initial projects.)<sup>16</sup>

## 2.) Nailing the Huntington thesis.

Samuel Huntington at Harvard has recently written about the clash of civilizations as the new, emerging trend in world politics - especially the clash between Islam and the West. If

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<sup>15</sup> E.g., E thereedge, Lloyd S., Can Governments Learn? American Foreign Policy and Central American Revolutions (NY: Pergamon Press, 1984); idem., Government Learning: An Overview in Samuel Long (Ed.), Handbook of Political Behavior, vol, 2 (NY: Plenum Press, 1981), pp. 73 - 181.

<sup>16</sup> While the World Bank has not made a formal announcement, I met earlier this month with Ismail Serageldin, Vice President for Sustainable Development. He has agreed to begin a global Internet colloquium to accelerate agricultural research (including biotechnology). Especially, I want to mention his decision at this forum because the groundwork for it reflects inspiration from the work of Ithiel and his associates.

true, these trends are important.<sup>17</sup> But I think that Ithiel would be drawn to studying these global processes for three additional reasons, especially because there is related work he began earlier in his life and that he set aside.

a. ) As you will recall, I mentioned that Ithiel and others pioneered the quantitative analysis of communication content. Eventually, they came to their senses and stopped because even inputting the data was taking too much time and they recognized that the deeper questions they wanted to ask were more sophisticated than their available technology to manipulate large data sets. For example, Ithiel worked on one study that coded 19,553 editorials from elite newspapers in 5 countries across 60 years. And each of the 19,553 editorials was coded by hand, word by word, for 416 symbols. . . In 1959 they called a temporary halt and Ithiel edited a volume that was a summary report in a time capsule, to scientists in the future, when the cause could again be picked-up with newer technology. Now, almost 40 years later, with scanning technology and the expanded capacity of computers, the time is arriving when renewed progress may be possible.

b.) Ithiel was fascinated by cultures and tried to formulate an operational code that would capture and compare the deeper logic of political cultures. The passion was inspired by

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<sup>17</sup> The Clash of Civilizations and the Remaking of World Order. (New York: Simon and Schuster, 1996).

Nathan Leites, who fascinated his colleagues at Rand by The Operational Code of the Politburo and A Study of Bolshevism.<sup>18</sup> Ithiel started to do the same analysis for India, and in his basement is a trunk filled with note cards detailing classic Indian texts, stories of monkey kings, learned discussions of how the categories of Indian logic differ from Western logic, and other inputs into the creative process of explicating what made Indian sensibility distinctive.

(One of the most interesting contents are letters describing his bafflement at Indian movies - they are uniquely Indian because they are greatly beloved in India, but there is almost no market elsewhere in the world. And Ithiel could never quite grasp why Indian audiences were so drawn to the stories - and he was fascinated that he could not predict the plots!)

Ithiel never solved the problem, but he hooked himself on it. And this is a second reason why I think Ithiel would be engaged by the problem that Huntington has posed. He already would see a way - using operational code analysis - to make a deeper analysis of whether (for example) the Islamic world was becoming more Western in its sensibilities.

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<sup>18</sup> Operational Code of the Politburo (NY: McGraw-Hill, 1951) and Study of Bolshevism (Glencoe, IL: Free Press, 1953).

c.) There is a third reason why Ithiel might be drawn to the problem and think he could do a better job of empirical grounding: 40 years ago, he had already anticipated that there were many more interesting stories to be told about cultures than an analysis of traditional religious/ethnic cultures as the organizing principles in global human affairs. He wrote, for example, about different languages and cultures that might be cross-cutting universals:

Formal language, colloquial language, rude language, mothering language, upper-class language, lower-class language, men's language, women's language, children's language. .

.<sup>19</sup> It would not escape Ithiel's notice that MTV is now a global channel and that a global teenage culture would be a consequential phenomenon to recognize, even if its current relevance is beyond the ken of national security elites. The study of global cultures could reveal a much more interesting and pluralist world, and perhaps - rather than a clash of cultures - a much more interesting set of interactions. And I think it is a story he might like to begin to tell.<sup>20</sup>

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<sup>19</sup> Pool, Ithiel de Sola, Trends in Content Analysis Today: A Summary in Ithiel de Sola Pool, (Ed.), Trends in Content Analysis; Papers. Chapter 7, 189-233. (Urbana, IL: University of Illinois Press, 1959), p. 233.

<sup>20</sup> Just to suggest a couple of elements: Baywatch is the most popular television series in the world and this (coupled with the prominence of X-rated Web sites) suggests a cross-cultural universal (one of the questions that engage social scientists). And Aladdin was a charming Islamic folktale until it was transformed by Hollywood and the Disney Studios into a planetary mega-hit. Not all interactions among cultures are clashes, in other words. Although even if Huntington is wrong generally, he may be right about the simple dramatic stories of zero-sum clashes that power-oriented national security elites begin to tell one another - and, if so, it may be especially important to have a more complex and refined picture, with an empirical base, available as a counterweight.

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## INTERMISSION

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At this point, I just want to take a brief intermission and suggest one thing that Ithiel would not be doing. He would not be writing a single word about Israeli or Middle Eastern politics or about Israeli-Palestinian relations.

On its face, this may seem unexpected, coming from a political scientist whose ancestors, on both sides, included centuries of distinguished rabbis. In fact Ithiel's father, Rabbi David deSola Pool, was the spiritual head of the Sephardic synagogue in New York City and his mother was a passionate Zionist.<sup>21</sup> But across two dozen books and several hundred articles there is a loud silence about Israel and the Middle East.

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<sup>21</sup> Also, Ithiel would not be doing experimental studies involving undergraduates. He worked with distinguished scientists, like Robert Abelson, who used much of their professional lives to build what they viewed as the foundation of social science by careful experimental studies. Ithiel, by contrast, viewed the real world and the laboratory as two distinct social contexts. He always was delighted by happy convergences of results between the two settings, but in his view you would never really know what was happening in the real world unless you studied behavior in the real world. For him, field work was the priority.

3.) A third prediction is that Ithiel would be involved in research to improve decision making by governments and citizens concerning important issues.

a.) The battle for social science in domestic policy

In domestic policy I think his priority would be easy to predict. Ithiel belonged to a generation of pioneers who believed that ideology was on the decline, being steadily replaced by social science, and that we were entering a period of empirically-based, rather than belief-based, public policy. Ithiel was passionately committed to free speech and democratic processes, and he also believed that the schema of hypothesis and evidence, introduced by our scientific institutions into democratic processes, could save us from the endless recycling of similar ideological arguments, give us real historical leverage, and genuine progress. The aggressive resurgence of ideologues such as Ronald Reagan or Newt Gingrich was completely unexpected.

In this regard, Ithiel shared the views of his Harvard colleague Daniel Bell, whose famous pre-Reagan and pre-Gingrich book was The End of Ideology. Ithiel, for his own part, believed that the American people were not highly ideological and the policy differences between Republicans and Democrats often could be resolved, in practice, by testing empirical claims. He wrote:

The interesting issues in normative political theory are in the end generally empirical ones. Only rarely do arguments over policy turn on irreducible conflicts of values. More often they are arguments about the facts of situations to which the values are applied. Most men agree in valuing freedom and also equality, and order and also progress. . . . {There is a fundamental problem, clarified by Arrow and others of value mixes but] for the rest, when men differ in their policy conclusions it is usually because of differing empirical judgments about how a chosen package of values may be achieved. <sup>22</sup>

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<sup>22</sup> Pool, Ithiel de Sola, The Public and the Polity in Ithiel de Sola Pool (Ed.), Contemporary Political Science: Toward Empirical Theory. (NY: McGraw-Hill, 1967), pp. 22 - 52, pp. 23 -24.

## Figure 5

### The Retreat of Social Science, 1954 - present

**A number of criteria should be applied in the selection of research projects, among them the criteria of scientific merit and political significance (sic).**

- Speier, Hans; Bruner, Jerome; Carroll, Wallace; Lasswell, Harold D.; Lazarsfeld, Paul; Shils, Edward; Pool, Ithiel de Sola (secretary). "A Plan of Research in International Communication." Condensation of the Planning Committee Report, Center for International Studies, MIT. World Politics 6, no. 3 (April, 1954): 358-377, p. 359.

**I very much doubt that a cleaned up version [of the proposal to restart the testing of ideological assumptions] would be acceptable in the near term even if it came from another source and were backed by a number of Academy members.**

- R. Duncan Luce [Co-Chair of the National Academy of Sciences agenda-setting Commission for the social and behavioral sciences in the 1980s and early 1990s that (without public disclosure) quietly killed recommendations for restarting progress in testing ideological assumptions on the grounds that the research would have too much political significance. Letter to the author, May 14, 1992.]

The difficulty, as you may know, is that we made good progress in evaluating liberal assumptions of the Great Society until the first election of Ronald Reagan. Then David Stockman launched a pre-emptive strike to zero-out all behavioral science research in the

federal budget and our major agenda-setting institutions in science suddenly shut-up. And the accommodations have become permanent.<sup>23</sup>

I think that Ithiel would have fought back for social science, and I think he would have reacted strongly to test theories of the political right, on an equal footing with evaluations of the Great Society programs, and to preserve an independent and respected role for empirically-based social and economic policy. And I think he would have been outraged that distinguished scientific panels (such as the Luce Commission quoted from private correspondence in Figure 5) were quietly compromising the political independence of science and university-based inquiry, a challenge that he fought fiercely when the Department of Health and Human Services sought to impose requirements for prior review of research involving human subjects.<sup>24</sup>

[Concerning Figure 5, let me add a current illustration from the new President's Council of Advisers on Science and Technology. They have recently discussed the question of restarting progress in testing ideological assumptions. The meeting to discuss these issues

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<sup>23</sup> E.g., Lloyd Etheredge, Commentary: The Scientific Scandal of the 1980s Political Psychology, 15:3 (1994), pp. 531 - 539 and Problems of Scientific Integrity that Affect Unfunded Research. Testimony to the US Commission on Research Integrity, April 10, 1995. Harvard Medical School. Boston, MA. Xerox.

<sup>24</sup> E.g., Pool, Ithiel de Sola, Human Subjects Regulations on the Social Sciences. Annals of the New York Academy of Sciences 403 (26 May 1981) 101-110.

acknowledged the distinction between belief-based rather than empirically-based social and economic policy, but the members expressed doubt about the relative important of these issues to the broader public. And they decided to continue the de facto policy of quietly deferring initiatives to obtain evidence that might be too politically significant.<sup>25</sup>

Here is an example of the current breakdown: if you listened to the televised selection from the Markle Foundation s experiment during the last election (bringing a sample of American voters together to discuss the issues), it was striking to hear the citizen group ask an expert panel of economists to address their concern of how much government should do for people versus how much people should do for themselves? In answer, Lester Thurow of MIT - one of the experts - changed the subject and said that the citizens were asking the wrong question - the real question is not what people (v. government) should do, but the total amount of investment made by both.

. . . And the questioner nodded politely and, five minutes later, another member of the citizen group persevered and said, still politely: Yes, we understand Professor Thurow s point, but what we really wanted him to talk about was how much government should do for people versus what people should be expected to do for themselves. . . ?

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<sup>25</sup> Letter on behalf of Norman Augustine from Angela Phillips Diaz, Executive Secretary, October 26, 1995. Three votes on PCAST are by members of the MIT faculty: President Charles Vest, and Profs. Mario Molina and Philip Sharp.

What is involved in this non-exchange is a narrowness of social science. Academic economists assume autonomous individuals with fixed motivation - there is no group psychology or capacity of government to energize people or otherwise affect their personality, motivation, or moral character by its size, subjective prominence, or the comprehensiveness of its responsibilities. But I think there is very suggestive evidence - which is beyond the scope of this discussion - that Ronald Reagan and a core of other Republicans (and members of citizen panels) worry about the possibility of a clinical-like, hierarchical relationship to a prominent government that induces dependency and affects motivation and responsibility in a zero-sum fashion. As government takes more responsibility, people take less . . .

In candor, Lester Thurow mis-answered the question, and he should have said that he and his colleagues had no scientific basis to give advice about economic policy if you framed the question this way. Economic theory and econometric measurements have - and I intend this as a technical comment - no imagination. When Ronald Reagan was asked about economic policy, he talked about how alive and wonderful it felt to ride the open range on horseback: He was not talking in metaphors. Rather, he was trying to change a sense of reality that originates in a different universe than Lester Thurow and his colleagues inhabit.

I think that Ithiel would have gone after the challenge to social science by broadening an

empirically-based dialogue and starting to test the truth claims of these models. Especially, Republican beliefs that they can change (and have been changing) national modal personality by their policies.<sup>26</sup>

There is another reason Ithiel would have done this. He went through psychoanalysis and was engaged by the study of imagery as a way to incorporate depth psychology into policy analysis. In fact, one of his most original and gifted studies was *Newsman s Fantasies, Audiences, and Newswriting* - using terms like fantasy, audiences, and reference groups to discuss projection and transference in a more acceptable vocabulary. I think he would have been especially interested to develop the study of hierarchical imagery to help evaluate the concerns and claims of ideology.<sup>27</sup>

b.) Improving government international policy: forecasting

I am quite sure that Ithiel would be actively engaged by issues of international policy,

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<sup>26</sup> I.e., reducing dependency and increasing achievement motivation by cutting back the size and subjective prominence of government, a backward linkage between events in the public sphere and individual personality that is not measured by standard macroeconomic models that deny hierarchical group psychology and assume autonomous individuals with fixed motivation. See Etheredge, Lloyd S., *President Reagan s Counseling*, Political Psychology, 5:4 (1984), pp. 737 - 740.

<sup>27</sup> Pool, Ithiel de Sola; Shulman, Irwin, *Newsman s Fantasies, Audiences and Newswriting*. Public Opinion Quarterly 23, no. 2 (Summer, 1959): 145-158.

both intellectually and because the engagement could contribute to the continued strength of a political science program at MIT.

A word of context: As many of you know, the Political Science Department at MIT was always an unnatural institution. The Center for International Studies, the Research Program in Communications, and the Political Science Department were created when James Killian from MIT was science adviser to President Eisenhower, and then Jerome Weisner was science adviser to President Kennedy. They were created during the Cold War to build national capacity and demonstrate the contribution that first-rate social science might make to understanding the major forces of change in the world. The original research program was created by a distinguished Ford Foundation-supported panel of which Ithiel was the secretary before being hired to implement the agenda.<sup>28</sup> The quid pro quo for a Political Science Department at MIT has always been that first-rate scientific analysis of global trends and international policy questions should be the defining agenda.

Ithiel also believed strongly that foreign policy was too important, and the assessment of reality required too much capacity for independent thought, to be left to the kinds of people who chose careers as spies, KGB or FBI operatives, or diplomats. He campaigned very hard

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<sup>28</sup> Speier, Hans et al., A Plan . . ., op. cit.

to open-up the CIA's analyses to rigorous vetting by outside science-based research.<sup>29</sup> If you look at the structure of the new National Intelligence Council at the CIA - which had, as its first directors, Joseph Nye and Richard Cooper from Harvard - it is the kind of institutional innovation and meeting ground that his writings would support.

Just to indicate briefly: I think he would pick forecasting as a critical focus for this dialogue. He was interested in the development of the methodology and - like international communications - it is a wide-ranging entrée and seems devoid of a partisan agenda. And he would surely have credibility, as he was one of the only social scientists to forecast the breakup of the Soviet Union and the resurgence of nationality- and ethnicity-based conflicts as part of this extraordinary development.<sup>30</sup>

Concerning specific forecasting: Ithiel almost surely would be interested in ethnicity-based conflicts, since he had been involved in the programs of Radio Free Europe/Radio Liberty and Voice of America to affirm, among minorities in the USSR and in Eastern

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<sup>29</sup> E.g., Pool, Ithiel de Sola, *Approaches to Intelligence and Social Science* in Robert Pfaltzgraff Jr. et al. (Eds.), Intelligence Policy and the National Security (Hamden, CT: Archon Press, 1981), chapter 3.

<sup>30</sup> Pool, Ithiel de Sola, *The International System in the Next Half Century* in Daniel Bell (Ed.), Toward the Year 2000: Work in Progress (Boston, MA: Houghton Mifflin, 1968), pp. 318 - 323. Originally published in Daedalus, vol. 96. (1967): 930 - 935. See also his *The Changing Soviet Union: The Mass Media as Catalyst* excerpted in Current 67 (January 1966): 12 - 17.

Europe, that their true, natural, and healthiest identity was their ethnic or national identity - i.e., and sought to encourage the breakup of the Soviet Union and the Warsaw Pact as part of this strategy. Having helped to turn the dial in one direction, I think he would be especially engaged by the possibility of communication technology that could turn the dial in the other direction.

My guess, too, is that he might be interested in the study of contact nets and the remarkable growth of a cluster of global humanitarian politics movements - environment, human rights (including women's rights), and support for humanitarian interventions in Africa and elsewhere - as an expression of new communication networks and organizational patterns.

IV. My final thought is that Ithiel did like to travel. And I suspect that he would manage to be developing projects in Japan, which he was beginning to know and admire greatly at the time of his death. And Russia, since the political transition there is surely one of the most interesting and consequential processes in world politics and reality-based policy would be very helpful.

## Appendix A

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### Ithiel de Sola Pool

Ithiel de Sola Pool (October 26, 1917 - March 11, 1984), a pioneer in the development of social science and one of its most original thinkers, was the son of two distinguished parents, Rabbi David deSola Pool (Heidelberg, Ph.D.), an Englishman who was the spiritual leader of the Sephardic Congregation in New York City; and Tamar Hirshenson (Hunter, the Sorbonne), the Palestinian born daughter of a rabbi.

Ithiel Pool was educated at Fieldston, an Ethical Culture School in New York City and the University of Chicago of the 30's (BA, 1938; MA, 1939; Ph.D., 1952), in the era of Hutchins and Merriam and the economic and political tumult of the Depression, when it was the birthplace of American social science. During WWII he joined two of his teachers, Harold Lasswell and Nathan Leites, in Washington, DC to research Nazi and Communist propaganda. Subsequently his major positions were at Stanford University and MIT, where he spent 30 years, having initially joined the new Center for International Studies to direct a research program on communication technology and its effects on global politics.

Pool's early scientific reputation was built on the study of symbols of democracy, a rigorous analysis of political speeches by leaders in democracies and totalitarian states. His subsequent work contributed to almost every field within political science. For example: Bauer, Pool, and Dexter's American Business and Public Policy: The Politics of Foreign Trade (1963) has remained the best case study of Congress and public policy and memorable for many findings, including that many individuals and groups in American politics - seeking to pursue their self-interests rationally - often are unsure how these interests can best be defined or served. Pool's own psychoanalysis made him comfortable with depth psychology, which informed contributions to political psychology such as Newsmen's Fantasies, Audiences, and Newswriting (1959). His essay on "Deterrence as an Influence Process" (1969) was regarded highly in the Harvard-MIT arms control community and prophetic. The Handbook of Communication (ed., 1973) defined the scope of the field (and included his chapter on Public Opinion, an area in which he was an expert.) He became an authority on the social and political impacts of new communication technology (e.g., his retrospective technology assessment, Forecasting the Telephone (1983)) and took a leading role to identify and measure the trend to a global information society in his co-authored Communication Flows: A Census of Japan and the US (1984).

Ithiel Pool also developed innovative methods in the social sciences, e.g.: 1.) The quantitative analysis of communications. 2.) Mathematical and computer models of political

behavior - e.g., the first computer simulation of decision making and distorted perception in international crises ( The Kaiser, the Tsar, and the Computer, 1965); the first national computer simulation, based on poll data, used for campaign advice (J. F. Kennedy's 1960 Presidential campaign); and the simulation of communication in closed, totalitarian societies; 3.) the mathematical analysis of personal networks, which became a new field. (This "small world" inquiry concerned the probability that any two individuals selected at random would know one another; or have a common acquaintance; or be connected by a chain of acquaintances.)

At MIT he became the first Chairman of the Political Science Department and built it to be one of the finest Departments in the world, remarkable in the diversity and excellence of its faculty and in their professional commitment to teaching. The growth of political science at MIT reflected the post WWII increase of Cambridge-based academic involvement in international and domestic policy and Pool and his colleagues were frequent advisers to governments.

Pool was a pioneer and explorer who continued to grow and research new fields. He had the discipline, energy, and motivation to engage large problems. He was a man of strong character, dignified in person, with a fierce belief in what he thought was right, and quick and sharp of intellect. But he also was gracious in manner, gentle in his responses, and truly

compassionate. His work and personality inspired several authors of fiction (e.g., Eugene Burdick's The 480, Saul Bellow's "A Theft," John Guare's play and movie, "Six Degrees of Separation.") He spent his leisure with his family and loved to walk in the world's mountains with his sons, as he had done with his own father. He felt at ease quickly in foreign surroundings. He conducted research with colleagues in India and Japan (especially) but also Turkey, Vietnam and Egypt.

Pool's life expressed, in many forms, a passionate commitment to human freedom. As a young man, at Chicago, he was a campus leader and passionate Trotskyite. With others of his generation he later believed that revolutionary leaders often manipulated idealistic symbols and images but established restrictive regimes. He was a member of the Council on Foreign Relations and advised the US government during the Cold War in several capacities, e.g., through a long-standing association with RAND; research to improve the effectiveness of Radio Free Europe/Radio Liberty; as a public defender of the Vietnam War, while organizing and conducting research in Vietnam to change how it was fought. Before his early death from cancer, Pool led an historically important, successful fight to defend academic freedom against government efforts to require prior review of research involving human subjects.

The classics of social and political thought did not address the effects of improved

communication technology. Pool contributed an extraordinarily wide-ranging map of this emerging dimension. He came to believe that such changes offered new, genuine opportunities to expand human freedom. His analysis of new communication technology and legal doctrines, Technologies of Freedom (1983), was his most influential book in shaping historically important government policies.

Ithiel Pool was the father of three sons: Jonathan and Jeremy from Dr. Judith Graham, and Adam from Dr. Jean MacKenzie. They became a university professor (the politics of language), the founder of a computer graphics company, and an international banker.

Lloyd S. Etheredge

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