

Global Knowledge Management for Policy: A Proposal

by
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If you were the World Bank, and decided to take responsibility for Global Knowledge Management, what principles might usefully guide your investments? This paper makes recommendations at two levels: the practical design of a global network of World Bank Resource Centers; and identification of five shared intellectual tasks that would benefit from a reflective and integrating role by the World Bank itself.¹

These are provisional recommendations: The best answers may not yet be known. A process to learn from experience is part of the initial design at both levels.

I. World Bank Resource Centers - A Global Network

The basic recommendation is that the World Bank identify an initial set of key problems and fund existing institutions to create a network of electronically-linked World Bank Resource Centers to manage knowledge in different domains. Specifically:

A. Distributed Processing

There is no necessity for the World Bank to make major increases in its personnel or library acquisitions in Washington. The rapid international growth of the Internet makes distributed processing feasible. A single Web site can integrate and access a virtual library and include links that, behind the scenes, connect an inquirer to different geographic locations.

B. Value-added purchasing, competition, and experimentation

The World Bank should solicit competitive bids from existing libraries and research centers to become World Bank Resource Centers in fields of interest (e.g., Renewable Energy; Desert Agriculture; Environmental Management), add resources for personnel, equipment, and expanded library holdings to give the new Resource Center the capacity to serve a global role effectively; and award grants to several applicants in each field. Grants

will be renewable through a competitive process every three years.

The support of several Centers in each field is designed to encourage experimentation and competition. A basic degree of electronic commonality should be required, to permit the work of each Center to be easily accessed by other Centers and end-users, but uniformity of knowledge indexing, storage, and retrieval systems will not be required.² The basic rule should be that any specific Centers on-line catalog and indexing aids can add identifiers to the common system, and organize knowledge in a variety of ways (some of them experimental or provisional³) that assist its purposes and users, but it cannot remove identifiers. In creating a global virtual digital library, summed across individual digital libraries, translation is sufficient; uniformity is unnecessary.⁴

C. User Reciprocity

A third guideline is that the World Bank should convey an expectation of reciprocity to users of World Bank Resource Centers. The key to efficient Global Knowledge Management is electronic availability, and users should act in good faith to support the benefits of electronic availability of information, and new communication technologies, for international science, health, and education. For example, scientific disciplines should be encouraged to make the scientific journals in each field available in electronic form. Governments should make their data and publications available in standard electronic form. The World Bank itself should take responsibility for achieving electronic availability of policy-relevant knowledge and, if appropriate, add resources to its grants for a transitional period to facilitate this objective.⁵

D. First-Contact Desks: Developing Knowledge about Serving Users⁶

World Bank grants should include funds to establish First Contact desks, and a professional cadre of experts who can facilitate the use of World Bank Resource Centers. Funds also should be supplied so that these First Contact officers are backed by networks of experts who have agreed, for a fee, to respond to a limited number of queries and to have their answers be circulated by the Center.

The basic reason for First Contact Officers is that refining questions, often, should occur before it is clear what information or knowledge is needed. Unless one knows the context of the question, and of the questioner, the search for useful knowledge may be unproductive. A government official who asks for copies of international agreements concerning water rights may really want this information. But he may be engaging in a project in which he really wants to know how to bring disputing parties into a process which eventually results in lasting agreement.

Too, many challenges related to sustainable development and other global problems

require local and voluntary initiatives.⁷ The First Contact Officers should be prepared, on the basis of experience with users, to support the work of NGOs and local groups with relevant knowledge of current projects, in addition to providing assessments of scientific literature and other published information to senior policy officials.

The growing experience of these First Contact professionals is a key to making the retrieval task more efficient. A list of Frequently Asked Questions can be developed; and First Contact Officers can build networks of personal contacts with a wide range of government officials, groups, and scientists in many countries to strengthen their ability to monitor what is happening worldwide. The job requires unique individuals, but it would be wise to include the budget to recruit them and support their work.

E. Self-Initiating Updates

A final principal is that a World Bank Center should be more engaged, and active, than a traditional library. It should have an advisory panel that commissions, subjects to peer review, and issues updates whenever the current cognitive maps or existing stock of conventional wisdom needs to be revised about important issues.⁸

II. Integration in Knowledge Management

Knowledge can be stored and managed by World Bank Resource Centers topic-by-topic. But there are five intellectual tasks that are common to policymaking across problems.⁹ In these areas, alert and rapid cumulation across fields and cross-fertilization may require individuals (and special teams) with unusual ability and training, and wide professional purviews, that are not readily obtainable by adding resources, at the margin, to existing libraries and research centers. Each of the tasks is, to a degree, a public good. The World Bank may want to do these in-house, to meet the needs of its own knowledge management work and to assure that grantee Resource Centers are working together to support this higher level of integrated knowledge cumulation.

A. Goal-setting

Community goal-setting is an intellectual (and political) task across all areas of policy, and the World Bank has recognized the importance of aspects of cooperative goal-setting in its current emphasis upon partnership development. Similarly, there are now a large number of processes (with different names) for aspects of this task: agenda-building; negotiation and conflict resolution; community development; regional planning; organizational development; the development of civil society, etc.

In this spirit, Lasswell and McDougal emphasize that knowledge cumulation about goal

setting should give priority to methods, including the development of shared vision:

It is precisely at times such as these that goal clarification, both within particular groups and across group lines, should eschew obsessive retrospectivity and develop methods for the re-evaluation and reformation of goals and the clarification of common interests. Disciplined imagination as well as a variety of other methods . . . may be necessary.¹⁰

It seems likely that collective goal-setting can be done better: For example, a continuing concern in public policy is to encourage individuals and institutions to act with greater degrees of abstraction and foresight. To be better informed (i.e., one of the goals of the knowledge-management activity of the World Bank). And often (e.g., in the case of human rights) advocates of humanitarian goals want to learn how to engage or increase moral, empathetic, and altruistic motivations and expenditures.

B.) Measurement, retrieval, and display of data

The second common task is measurement of trends in key indicators: economic, political, health, social and educational, environmental. Unless any policy process has accurate data about past experience and current circumstances, intelligent decision making is dead in the water. The World Bank has a compelling interest to assure the comprehensiveness and reliability of basic data, and it already plays a leading role in assembling a subset of desirable global measures.

For Global Knowledge Management in the information age, an emerging task is to assure that data from different sources can be retrieved quickly and integrated for display and analysis. This capacity is especially helpful for geographically-based data, where the ability to create map overlays can be critical for environmental science and for tasks of inter-organization cooperation in both routine planning and emergencies.¹¹

[Visual feedback mechanisms also may play a vital and unexpected role in creating and sustaining motivation to solve the problems. For example, the cooperation of NGOs and the private sector to assure fresh water in substantial areas of Africa might be aided by war-room like displays that show each site where a deep well, or another solution, is still needed. Or that displays a red X to indicate each village where infant mortality remains above a targeted level. Etc.]

C.) Causal Modeling

The third intellectual task is causal modeling. The World Bank probably does not need to assume a leading role in Global Knowledge Management concerning causation in the physical sciences or biomedical world, where the existing mechanisms of the scientific

community and academic institutions seem to work well.¹²

However, the same forecast is not true in the social and behavioral sciences. Refined analyses of causal mechanisms do not necessarily cumulate across boundaries of academic disciplines and the World Bank probably cannot trust the social and behavioral sciences to move as rapidly as the biomedical sciences to provide policy-relevant knowledge. Much more may be needed than simply supplying grants to existing university-based institutions.¹³

D.) Forecasting

The fourth common intellectual task is forecasting.¹⁴ There is a wide range of parallel, sometimes-communicating/sometimes-not-communicating methods in many fields. For international policy, the timeliness and credibility of forecasting methods will be vital because governments often are urged to make policy to prevent future problems that can be established only by these methods. (The growth of population; global warming; the identification of potential humanitarian emergencies; and the threat of emerging and reemerging infectious diseases are examples of current government policies that partly rely upon expert agreement concerning good forecasting methodology.)

One of the unanswered, self-reflective questions that the World Bank might wish to engage is whether there are warnings that are vital to human welfare which should be given, but are not being given.

E.) Alternatives - What s Next?

The fifth intellectual task is to design alternatives to current policies. If things are not on track, what do we do next? This is the arena of learning and creativity. It also is the opportunity for the World Bank and/or other Global Knowledge Managers to design experiments that are informative for the growth of science, for policy makers, or both.¹⁵

This design of new policy alternatives can be informed by the four other intellectual tasks in which the World Bank plays a reflective and integrating role. (For example, the rapid change in global communication technology - a trend that knowledge of the relevant causal processes suggests will continue - implies that the World Bank may want to invent and recommend experiments, across a range of policy areas, to cumulate knowledge about the new contributions these capabilities can make.)

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Endnotes

1. A wide range of classic discussions can be consulted in Mark Stefik (Ed.), Internet Dreams: Archetypes, Myths, and Metaphors (Cambridge, MA: MIT Press, 1996). For example, the still-excellent list of 25 criteria for developing procognitive systems by J. C. R. Licklider's Libraries of the Future project (1965) underwritten by the Ford Foundation, pp. 27 - 29.

2. A common system that permits an unambiguous reference to each item will be required (e.g., indexing each book by a unique ISDN number; including author, title, publication date, and other traditional information in standard form). But each Center would be permitted to add unique identifiers or configure its on-line catalog to meet the needs of its users: for example, a Report concerning economic planning for Central American development might also be classified, by different Centers with different purposes, by its strategies to improve rural health; by the methods used to forecast foreign investment to the region; by the organizing processes that were used to achieve the capacity for regional planning; as an innovative political and economic package for settling and preventing civil wars; etc. See Robert Kahn's and Vinton Cerf's discussion of electronic agents (knowbots) as an alternative to imposed uniformity across digital libraries in Stefik (Ed.), op. cit., pp. 34 - 37.

3. For example, the World Bank has undertaken experiments to query its own experts about the literature concerning transition from a state-planned to a market economy, indexing their personal libraries in exchange for their commentaries and schema (e.g., best review article about . . . et.c.). Such annotated reading lists, preserving alternative personal schema from different scholars, are the type of innovation and experimentation that should be encouraged.

For sustainable development, a model knowledge storage and retrieval system has been developed by Nazli Choucri at MIT: a participating research Center could experiment with Choucri coding, and evaluate the results, without excluding other systems.

Similarly, a Center might create hypertext links between books and reviews of the books, for on-line review. See for example, the excerpt from Vannevar Bush's classic As We May Think (1945) in Stefik (Ed.), op. cit., pp. 15 - 20.

4. Computers can operate, behind the scenes, on top of many different traditional, legacy systems - and new systems - for classification: Dewey Decimal, Library of Congress, UN document number, ISBN, etc. The observed capacity of government agencies - at least within the United States - to design, contract-for, and impose new, uniform data systems outside of military agencies also suggests it is an unrealistic goal. See Steven Kelman, Procurement and Public Management: The Fear of Discretion and the Quality of Government Performance (Washington, DC: AEI Press, 1990).

5. Governments might also should be encouraged to adopt electronic copyright requirements, assuring that all publishers over a specified size (and the government itself) will submit a version of any publication in a standard electronic form at before copyright is granted.

6. I am indebted to Lynn Etheredge for a discussion of these issues.

7. I am indebted to Roberta Klein and Ron Brunner for their emphasis upon these gaps and opportunities in Harvesting Experience: A Reappraisal of the U. S. Climate Change Action Plan. Unpublished xerox, 1997.

8. The Center also might experiment with Internet multicasting. The opportunity to see, hear - and question - advisers, as well as read their ideas, may assist knowledge transfer. A prototype of a regularly-scheduled global colloquium series for professionals, developed for evaluation by the international scientific community, may be viewed at Yale Medical School: <http://info.med.yale.edu/EIINet>.

9. This section draws substantially upon the contributions of Harold Lasswell and his associates. See for example, Harold D. Lasswell and Myres S. McDougall, Jurisprudence for a Free Society: Studies in Law, Science, and Policy. (New Haven: New Haven Press, 1992), vol. 1, pp 35 - 38, 196 - 201; Harold D. Lasswell, A Pre-View of Policy Sciences. (NY: Elsevier, 1971); Garry Brewer and Peter deLeon, The Foundations of Policy Analysis (Homewood, IL: Dorsey Press, 1983).

10. Op. cit., pp. 197 - 198.

11. For example, during humanitarian interventions in Africa, the ability of many governments and institutions to share information about locations and movements of refugees, locations of supplies and clinics, locations of fresh water, locations of disease outbreaks, etc. helps a wide range of international institutions.

12. For example, there has been a tenfold increase in the worldwide use of the National Library of Medicine (US) on-line databases since inhibiting fees were removed on June 26, 1997, and the current annual rate is 60 million hits/year. Assistance might be needed to provide full-text retrieval, but the core system appears sound and useful. Gratefully Yours, September/October, 1997, p. 1. The Web site is www.nlm.nih.gov.

13. American academic economists, as Solow notes, have become modelers, rather than being engaged in rapid knowledge cumulation based on astute observation and alert generalization, or the use of causal variables (e.g., cultural or psychological) that are deemed the province of other disciplines. This insularity may be especially unfortunate for the study of economic development. See Robert Solow, How Did Economics Get That Way and What Way Did It Get? Daedalus, 126:1 (Winter, 1997), pp. 39-58. And for a broader critique, Charles E. Lindblom, Inquiry and Change: The Troubled Attempt to Understand and Shape Society. (New Haven, CT: Yale University Press, 1992).

14. An example of integration across fields is William Ascher, Forecasting: An Appraisal for Policy-Makers and Planners (Baltimore, MD: Johns Hopkins University Press, 1978).

15. For example, testing ideological assumptions might be useful to the policy process worldwide, even if this is not the highest priority of academic scientists or some national governments.