Scan Globally, Reinvent Locally:

Knowledge Infrastructure and the Localization of Knowledge

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> "Every alleged example of local implementation of central policy, if it results in significant social transformation, is in fact a process of local social discovery." [Donald Schön]

It is a great pleasure for me to be here to help inaugurate the Global Development Network. In my remarks this evening, I want to do two things: First, to explain why I think the Global Development Network is so important, and why it is that the World Bank has taken such an active role in acting as a catalytic agent in promoting it; and second, to develop some of the underlying epistemology that lies behind the creation of this new institution.

I. THE IMPORTANCE OF THE GLOBAL DEVELOPMENT NETWORK

Towards a New Relationship between the Developing and Developed Countries

It has been just over fifty years since the beginning of the end of colonialism, and just a decade after the end of the Cold War. Yet old ways of interacting persist, and it takes time for the evolution of new modes of behavior, new bases for relationships based on equality and respect.

I realize that it has become unfashionable to refer back to the dark days of colonialism, and yet, as we end this century and attempt to develop institutions to meet the challenges of the next, our success in doing so will depend, I believe, in understanding the histories, how we—both the developed and developing countries and the economies in transition—came to where they are today. Colonialism served to eviscerate existing institutions in the affected countries—which embraced almost all of the developing world. It tried to graft on to existing cultures foreign institutions and ideas, but in a process of imposition, in which control and authority lay outside and not within, it is not surprising that the graft did not take hold. What was left in its place was a void—the old was destroyed, but nothing really viable had been created in its stead. Worse still, in all too many countries, they were left without the human capital required to create an alternative, let alone to adapt to the rapid changes that have marked the latter half of the twentieth century. And too many countries were robbed of the dignity and self-confidence with which to address these imposing challenges that would have put strains on societies even in a far better position.

The colonial mentality has evolved. While no one today speaks, like Kipling, of the White Man's Burden—I have too often sensed a paternalism that is but a close cousin. Gone are the days of gunboat diplomacy, forced signing of unfair trade treaties, the Opium Wars, forcing Egypt into being a protectorate because of bad debts. But no one would claim that the playing field—in the international trade negotiations, debt restructuring, and any of the other multitude of arenas in which the developed and developing countries interact—is a level one. Economic power relationships play out with potentially no less disastrous consequences for the developing countries. This point was brought home forcefully by the terms and conditions imposed on the countries receiving bail-outs in the East Asia crisis, which, as Martin Feldstein pointed out, went far beyond what was required for addressing the concerns of the crisis. Democratic processes were undermined, as countries were forced to sign agreements changing the basic mandates of central banks and previously negotiated trade agreements were overturned, as new founded bargaining powers based on the weakened positions of the affected countries were exploited.

So long as the Cold War persisted, there was neither time nor opportunity to address these fundamental issues. That conflict—a battle of competing ideologies, values, economic systems—was all-consuming. And the impact of that conflict on the developing countries was profound. Too often, they took the view the enemy of their colonial enemy was their friend, and embraced their socialist ideology. They saw some of the successes of Russia, its rapid emergence from feudalism to a world superpower, and underestimated the costs it had imposed and overestimated the underlying strengths. The end of the Cold War, the failure of the Communist system, thus forced the developing world to re-examine fundamental beliefs.

In the meanwhile, the world was changing rapidly. A new generation of leaders was emerging in the developing world, partially freed from the scars of colonialism, highly trained, with a new sense of self-confidence. Globalization brought prospects of integration into the world economy—with access to technology, markets, and capital. Global competition offered the prospect of a new relationship between developing countries and multi-nationals, with more of the surplus accruing to the developing world.

But many of the ways of interacting between the developed and developing world did not take full cognizance of these changes. Conditionality—while ostensibly based on freely negotiated terms of agreement—went far beyond what could be justified by fiduciary responsibility and democratic accountability on the part of the developed countries and the international financial institutions. With the end of the all-consuming Cold War, there ensued a new emphasis on democracy and democratic processes, and it came to be recognized that the way conditionality in practice worked often undermined these democratic processes and institutions. New perspectives on development focused on development as a transformation of society, a change in minds and mindsets, and it came to be recognized that such transformations could not be imposed, and indeed, the attempt to do so could often be counterproductive. Thus, the subsequent econometric results suggesting that conditionality was ineffective in promoting development came as no surprise.[1] In response to these changes, the World Bank evolved a new framework for thinking about development, which was both more comprehensive in its approach and more inclusive in its involvement. At its center was, as President Wolfensohn expressed it, "putting the country in the driver's seat."[2]

This brings me to why I think the Global Development Network is so important. If the developing countries are really to be "in the drivers' seat" they have to have the capacity to analyze the often difficult economic issues which they face. Local researchers, combining the knowledge of local conditions—including knowledge of local political and social structures-- with the learning derived from global experiences, provides the best prospects for deriving policies which are both effective and engender broad-based support. That is why locally-based research institutions are so important.

I have, on several occasions, also spoken of the importance of democratic institutions for successful development. To be sure, we should value democratic institutions as an end in themselves, not just as a means to more successful development. But the lessons of this century have been clear: authoritarian regimes have caused untold human suffering. Amartya Sen has argued forcefully that famines themselves can be checked by democratic processes; it is not the shortage of food, but its distribution, and democratic processes would simply not tolerate such outcomes. Think tanks, policy institutes, play a vital role in promoting the informed public discussion that is absolutely essential for meaningful democratic processes and the generation of a political consensus. These institutions, and the associated institutions of a free and vibrant press and independent universities, provide an important check on the abuse of power— including abuses of majorities against minorities and the widespread corruption which has been shown to have not only a corrosive effect on society, but to undermine development efforts themselves.[3]

This century has seen the battle between two ideologies; but the end of the Cold War does not mark the end of ideology. Ideological battles continue to be fought, sometimes on a grand scale,

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[1] See World Bank 1998b.

[2] The "country in the driver's seat" theme is one of the central themes in the Comprehensive Development Framework (CDF) outlined in Wolfensohn 1997, 1998, and 1999a,b and in Stiglitz 1998.

[3] See World Bank 1997 or Transparency International and IBRD 1998.

more often on a minor scale. Recent discussions of capital market liberalization is illustrative of the former. Many strongly advocated this, in spite of the absense of evidence suggesting that, for most developing countries, it would promote their growth or investment; indeed there was some evidence suggesting that it would not do so, and that it would in fact increase the risks which they faced—risks which they were ill-prepared to undertake and which would inevitably increase the extent of poverty in their countries. Unfortunately, the predictions of the critics of capital market liberalization have been more than borne out. How can we explain the strong advocacy of a major change in the international economic architecture—other than by ideology, and/or capture by certain special interests? But the strongest antidote to both is science—theory and evidence. "Science" –at least the word—can, of course be abused; as the word has undertaken positive overtones, ideologies claimed to find justification for their tenets in "science." Yet the foundations of the scientific methodology have managed to withstand such abuses, whatever form they take.

We in the ideas business should never forget the power of ideas. Keynes put this forcefully when he said that: "Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back." [4] The scribblers of America's Declaration of Independence themselves surely did not know either the power or the reach of their ideas when they wrote, "All men are created equal…." They may have had in mind "all property-owning white males are created equal…." But the force of the idea came from its appeal to deep principles, and once articulated, they took on a life of their own—a life which brought within its embrace first blacks, then women. And that same force lives on: It does not stop at America's border. The same force of argument that led the American colonialists to declare their independence from Britain doomed the end of colonialism more generally. And today, its reach is broadened, to attack neo-colonialist mentalities and economic imperialism. Indeed, as an economist, I find it remarkable how often the force of the arguments can overcome the logic of self-interest and become an important agent for reform and change.

Recent discussions of transparency arising from the East Asia crisis help illustrate what is at issue. Originally, Western bankers and their governments contended that the underlying problem giving rise to the crisis was a lack of transparency—in a thinly veiled attempt to explain how the Western banks could have engaged in such bad lending practices themselves (every loan needs both a borrower and a lender, and the lender is fully as much at fault for a bad loan as the borrower) and, for the international institutions and western governments which had pushed premature financial and capital market liberalization, to evade responsibility for their misguided policy advice. But the concept of transparency took on a life of its own, spreading its ptentially disinfecting sunlight to areas that were far from the original intentions—a demand for transparency on the part of the hedge funds and the off-shore banks, and ultimately on

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[4] Keynes 1936, 383. In the same vein, the early 19th century poet Heinrich Heine (1797-1856) pointedly remarked: "mark this, ye proud men of action: ye are nothing but unconscious hodmen of the men of thought who, often in humblest stillness, have appointed you your inevitable work." [Heine 1959, 106] (A "hodman" carries bricks or mortar for a mason.)

governments, central banks, and the international financial institutions themselves. This demand for transparency is now joining forces with basic concepts of equality, in demands for a re-examination of the very process of governance of the international institutions.

I have lauded the virtues of the kind of think tanks and research institutions which are gathered here today. It is my hope, and the World Bank's hope, that by bringing these institutions together into a global development network, they will add strength to each other, not only through the exchange of knowledge, but through a common understanding of the importance that they play in promoting sustainable, democratic, and equitable development. Let me be clear: in many parts of the world, there are substantial obstacles confronting these institutions—from the ubiquitous financial constraints, to the shortage of those with the requisite skills, both in research and in articulating key ideas in ways which allow their widespread dissemination and facilitates public debate. But in too many countries, there are further, artificially created barriers—hostile governments, trying to suppress democratic debate, worried about the consequences of public scrutiny of their actions. And here, I believe, is one arena where, standing together, we can exert international social pressure: there are basic core standards which all countries need to adhere, institutional principles that constitute the *sine qua non* of meaningful democratic debate. The basic human rights of a free press and free speech can be undermined by the exertion of economic pressures, which is why these institutions need to be independent of the government with assured independent sources of funding, and why the individuals within the institutions need to be protected by academic freedom.

We should not be surprised at either the vehemence or the subtlety with which these institutions and the individuals within them may be attacked, or at attempts to undermine their credibility, especially so by governments whose political legitimacy is questioned. And the same holds true at the international level, and perhaps more so. For we must recognize that while international institutions can take or promote actions which have huge effects on the economic fortunes of millions and the political fortunes of many, their governance has a certain lack of representativeness along numerous dimensions—the developing countries and their billions of people are underrepresented; while the voice of financial interests is heard loudly and with clarity, it is not clear that other voices—the workers, who risk losing their jobs or seeing real wages plummet as a result of misguided policies, or the small businesses forced into bankruptcy by what in any other context would be viewed as usurious interest rates—are heard at all.

Within nation states, there are some governments who derive their legitimacy not only by the electoral process but also by their ability to build a national consensus—a consensus based on trying to find a shared sense of values, a broad sense of equity, and a common understanding of the underlying economic processes. In such cases, the success of the policies adopted –including the sense of equitable sharing of the fruits of growth or the pain of contraction—is often a prerequisite for the maintenance of that legitimacy. By contrast, policies based on ideologies not widely shared, especially when those ideologies are seen to serve the self-interests of special interests and to result in inequitable burden sharing, undermine the creditability of the institution, and when the institution's effectiveness in part depends on its credibility, then there is a downward viscous cycle. No wonder then that such institutions find open discussion and public debate about the appropriateness of policies—even months or years later—an anathema.

Today, no one is upset at the debate over whether Roosevelt's New Deal policies had much impact in bringing the U.S. economy out of its depression; such understanding is essential if we are to craft policies designed to address economic downturns in the future. But within the international community today, there are still many who are greatly upset at revisiting the question of the appropriate response in the global financial crises of 1997 and 1998. The argument seems to be: The emperor may have no clothes—but mentioning that fact risks global economic instability! I, at least, have greater faith in our global economic architecture than that.

But this does raise some fundamental issues: when the governance process of any public institution is subject to questioning, when there is a lack of representativeness, a failure to establish consensus, a reliance on ideology rather than science, and especially an ideology closely linked to the interests which are disproportionately represented in its governance; a clear evidence of lack of equitable burden sharing, and a record of failure—it is time to rethink basic premises. Many institutions are learning to become learning institutions, adapting to changing circumstances. At the World Bank, this is precisely the course that President Wolfensohn set five years ago. I raise these issues here, not because this is necessarily the appropriate forum for their discussion, but because I believe that you and your institutions have a vital role in raising these questions and demanding answers that are responsive to the perspectives and concerns of the developing world.

More generally, the world is embarking on an experiment—a closely integrated global economy which is striving for global governance without global government. If this experiment is to be successful, it will be based on a process of global consensus building, in which institutions and individuals that are coming here this week for the first time, in the Global Development Network, will be pivotal.

II. EPISTOMOLOGICAL FOUNDATIONS

Knowledge Infrastructure and the GDN

Let me now to the second topic of my talk this evening, concerning the nature of knowledge and the role of knowledge in development. The World Bank's initiative in fostering the Global Development Network is part of the idea of the Bank as a "Knowledge Bank." We have come to appreciate the transformative power of knowledge in development [World Bank 1998]. Yet we must be wary of simple analogies between a "knowledge bank" and a "money bank."

Disembodied knowledge has the characteristics of a public good (non-rivalrous and, once public, non-excludable)[5] while money is the quintessential private good. Thomas Jefferson, the third President of the United States, described knowledge in the following way: "He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at

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[5] See Stiglitz [1995], Economic Report of the President [1997]. While the public good properties of knowledge had long been noted [Arrow, 1962], early articulations of knowledge as a public good (in the sense defined by Samuelson [1954]) include that of Stiglitz [1977] and Romer [1986]. For an early textbook discussion, see Stiglitz [1986].

mine, receives light without darkening me."[6] In doing so, Jefferson anticipated the modern concept of a public good.[7] Thus disembodied knowledge for development is indeed a global public good and, like other public goods, it would be undersupplied if left entirely to private initiative.

The internet has in practice brought knowledge access closer to the ideal of a global public good. The communication revolution has made great strides in facilitating communication within countries and has also enhanced the ability of developing and transitional countries to tap into the global pool of (codified) knowledge. The internet should prove to be a tool of immense power in sharing knowledge within our network of GDN institutes.

Today, developing countries face both great risks and great opportunities. Internet growth has been most rapid in the United States, and not surprisingly, slowest in the less developed countries. The enhanced ability to share and acquire knowledge in the advanced industrialized countries may increase the knowledge gap, resulting in the less developed countries becoming even more disadvantaged.

At the same time, they can tap into a larger knowledge pool than they ever had access to before. Today, a child anywhere in the world who has access to the internet has a modern "Alexandra Library" at her fingertips. It is too soon to see how these opportunities and forces—for convergence or divergence—will play out, whether the knowledge gap between developed and developing countries will be widened or narrowed. But it is clear that it is incumbent upon the developing and transitional countries to do everything they can to enhance their ability to tap into the reservoir of global knowledge. The GDN partners are local nodes in that emerging global knowledge infrastructure.

Knowledge has a number of characteristics which differentiate it from ordinary goods. We have already noted several of these—including the global public goods nature of knowledge. The peculiar characteristics of knowledge makes it incumbent on us to think anew about how we can effectively promote the transformative power of knowledge. In particular, what is the role of local knowledge institutions such as the policy and research institutes of the GDN in the broad process of democratic social learning?

I see a role far more subtle than just the technology-driven visions of "downloading" global knowledge–as useful as that may be. I want to argue three main theses:

1. the overwhelming variety and complexity of human societies requires the **localization of knowledge**,

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[6] See Jefferson 1984 (1813).

[7] As did Augustine (354-430) who said in one of his sermons: "The words I am uttering penetrate your senses, so that every hearer holds them, yet withholds them from no other.... All of you hear all of it, though each takes all individually. I have no worry that, by giving all to one, the others are deprived. I hope, instead, that everyone will consume everything; so that, denying no other ear or mind, you take all to yourselves, yet leave all to all others." [Augustine quoted in Wills 1999, 145]

2. practical know-how is largely **tacit knowledge** that needs to be learned by horizontal methods of twinning, apprenticeship, and seconding, and
3. each society, through its knowledge institutions, should take the **active role** ("in the driver's seat") in the local learning process.

That is, one size of "clothing" does not fit all societies, a society learns to be a "tailor" partly by apprenticeship—it is hard to write down all that needs to be known about tailoring in a book, and even were it possible to do so, it may not be the most efficient way by which information can be transmitted from one individual to another—and a society should be its own "tailor" to find the best fit.

Types of Development Knowledge

General versus Local Knowledge

We will analyze knowledge along two dimensions, the general-local dimension and the explicit-implicit dimension. Global public knowledge exemplifies knowledge that is general and explicit. As we move along these dimensions, we will see the different roles of central as well as local knowledge institutions. We start with the general-local dimension.

Money "travels" better than knowledge. General knowledge is knowledge that holds across countries, cultures, and times; local knowledge takes account of the specifics of place, people, and time. "Every man is mortal" is general knowledge, while "Drive on the left" is a best practice in London but not in New York. A "best practice" might work well in some countries but fail miserably when recommended in other contexts.

In questions of institutional development, it is very difficult to know *a priori* just how general is a "best practice." Robert Cole studied the diffusion in industry of quality circles and Japanese-style quality methods. The process of local adaptation was so extensive and creative that it amounted to a local reinvention of the "global best practice."

> The significance of this point of view is that contrary to the simplistic use of the term by many economists, there is, in principle, no such thing as diffusion of best practice. At best, there is only the diffusion of best practices, practices that evolve in the course of their diffusion. Contrary to popular wisdom, there are times when it pays to reinvent the wheel! [Cole 1989, 117]

Donald Schön in a study of social learning concluded that "Every alleged example of local implementation of central policy, if it results in significant social transformation, is in fact a process of local social discovery." [1971, 161] Prudent counsel is to scan globally for best practices but to test them locally since local adaptation often amounts to reinventing the "best practice" in the new context. The Knowledge Bank can "scan globally"; the GDN partners have to "reinvent locally."

Many "visiting economists"[8] have painfully discovered that the "devil is in the (local) details." It is the local component of knowledge that requires adaptation–which in turn requires the active participation of those who know and understand the institutional environment. Local adaptation cannot be done by the passive recipients of "development knowledge"; it must be done by the "doers of development"[9] in the course of their activities.

There are two points here: the necessity that knowledge be made locally applicable and that the adaptation be done by the local "doers of development" (not given as a gift or imposed as a conditionality from the outside). It is by the local selection, assimilation, and adaptation of knowledge that local doers "make it their own." Even by taking a machine or device apart and putting it back together again, one can more "make it one's own" even if there is little adaptation or redesign. Those of us who have been teachers are familiar with this principle: successful teaching requires active learning.

In the context of development, where what is involved is "social learning" and adaptation, more is entailed: it is not just a matter of being "open" or "closed" to outside knowledge; it is a matter of being open to outside knowledge in a way that reaffirms one's autonomy. For Gandhi, this was intellectual *swaraj* (self-rule or autonomy).

> I do not want my house to be walled in on all sides and my windows to be stuffed.
> I want the cultures of all lands to be blown about my house as freely as possible.
> But I refuse to be blown off my feet. [Gandhi, quoted in Datta 1961, 120]

Only by remaining "on one's feet" from an intellectual standpoint can the local doers have the self-confidence to select, assimilate, and adapt the external knowledge–instead of being overwhelmed and rendered intellectually dependent and subservient.

Considerable effort is required to adapt development knowledge to local conditions and culture. The research institutes and policy institutes ("think tanks") of the GDN are examples of local knowledge institutions that can play that important role. In the developed countries and increasingly in developing countries, think tanks have proliferated and have become important agents to introduce and adapt new policy initiatives.[10] Think tanks or research institutions are no less needed to transplant social innovations to new contexts. The Japanese use a metaphor based on the gardening technique called *nemawashi* of slowly preparing and wrapping each root of a tree in order to transplant it.[11] The chances of a successful transplant are much larger than if the tree is simply pulled up in one place and planted in another.

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[8] See the classic article by Dudley Seers 1962.

[9] Quoted from President Mkapa of Tanzania in Wolfensohn 1999.

[10] See Smith 1991, Langford and Brownsey 1991, Ostry 1991, Telgarsky and Ueno 1996, Stone et al. 1998, and Struyk 1999.

[11] "It is a time-honored Japanese gardening technique to prepare a tree for transplanting by slowly and carefully binding the roots over a period of time, bit by bit, to prepare the tree for the shock of the change it is about to experience. This process, called *nemawashi*, takes time and patience, but it rewards you, if it is done properly, with a healthy transplanted tree." [Morita 1986, 158]

Development institutions have sometimes tried a "quicker" transplant method. After a quick trip to a country, the standard wisdom (in earlier days, typically the Washington consensus), is conveyed, often with little attempt even to nuance it to the economic, political and social situations of the country. The policy advice would frequently be backed up by conditionalities on policy-based lending to motivate the country to implement the best-practice recipes—indeed given the lack of broad-based buy-in, and often the unsuitability of the advice to the country's situation, conditionality was the only way of having the advice followed. Occasionally, in an attempt to achieve broader based support, experts might come in to give a longer senior policy seminar to local government officials; the experts then return home hoping that their sound advice will take root. Yet, this policy reform process is designed to promote neither active learning nor lasting institutional change. As these reforms were externally imposed rather than actively appropriated by the country, there was often little "ownership" of the reforms. Compliance might be only perfunctory; the "quick" transplant might soon wither and die.

Here is an illustration. Foreign advisors would never have the power of an occupying army. Yet the American Army in post-war Japan showed the limitations of trying to change institutions by imposing new laws and statutes.

> When SCAP [Supreme Commander for the Allied Powers] broke up the Mitsui and Mitsubishi trading companies into hundreds of fragments–213 successor companies in all–..., the employees loyally rallied round the new fragments formed by their old section or subsection chiefs..., who in turn adhered to the companies organized by their old division chiefs... and director, and all of them recombined as soon as they could. Within five years, like droplets of mercury coalescing into ever bigger drops on contact with each other, both the Mitsubishi and the Mitsui trading companies were substantially reconstituted as before. Two hundred thirteen became two again. Their staffs had been held together by personal relations in the meantime. [Cohen 1987, 358]

Those personal relationship and social habits are part of the "invisible root structure"–the social embeddedness of institutions–that requires more subtle methods of transformation than just issuing decrees or passing new laws.

By the same token, Japan was "given" anti-trust laws that were similar to those that have worked so effectively in the United States; yet these laws never really took root, with an evolving competitive structure far different from that of the U.S.

Local policy and research institutes can be seen as *nemawashi* organizations who carefully adapt and prepare a transplanted policy initiative to survive and perhaps thrive in the local environment. It takes longer, but the roots are better prepared for the local soil. The political process of changing policies and implementing new ideas is usually rather messy and in need of "high maintenance" support. The officials or parliamentarians constantly need more information and advice–more "backup," more thinking about how best to adapt the policies to local

circumstances–in order to carry out the policy reforms. As a result of this process of adaptation, which often involves virtually reinventing the idea perhaps by finding and emphasizing local antecedents, the government officials see the policy reform not as a foreign imposition but as a local product which addresses their needs and which they can sponsor.

Advisors from developed countries or international organizations may not always fully appreciate these problems. The "knowledge business" has its own political economy. Those who are legitimated in their expertise, prestige, and privileges by the "universality" of their messages are disinclined to recognize limitations or subtleties in the local applicability of their technical expertise.[12] Novel complexity, genuine uncertainty, conflict of values, unique circumstances, and structural instabilities are all down played or ignored since they might diminish the perceived potency of the expertise and undercut the client's faith in that potency. On the other side, the client may want the security and comfort of being in the hands of the professional expert who will solve the perplexing problems.[13] These are some of the strong institutional forces to under-appreciate the subtleties of local knowledge, to hamper the growth of autonomous client ownership, and to stymie the development of indigenous local knowledge institutions.

Codified versus Tacit Knowledge

Now we move to the explicit-implicit or codified-tacit dimension of knowledge. Explicit or codified knowledge is knowledge that can be spoken, written, and codified to be saved on a computer disk or transmitted over a telephone line. But we know more than we can say. We know how to ride a bike, to recognize a face, or to tell a grammatical sentence in our native language, but we would be hard put to turn this knowledge into explicit or codified knowledge to archive in a database for dissemination over the internet. Michael Polanyi [1962] pioneered the distinction between tacit (or personal) and explicit knowledge in the philosophy of science, and the distinction has since proven important to understand problems in the transfer of technologies, not to mention the "transfer" of institutions.[14]

A technology is sometimes identified with blueprints and instruction books.

> But in fact technology consists of complex "bundles" of information—both codified and tacit—as well as physical capital. Because tacit information is not readily transferable among firms and countries, technological blueprints do not contain inherent performance characteristics (such as set productivity levels). Instead, these blueprints have to be translated into specifications and procedures

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[12] James Scott [1998, 339] quotes an illustrative passage from Sinclair Lewis' *Arrowsmith*: "They said ... that he was so devoted to Pure Science...that he would rather have people die by the right therapy than be cured by the wrong."

[13] See Schön's treatment [1983] of the technical expert in contrast with reflective practitioner.

[14] See Ryle 1945-6 for the earlier distinction between knowing how and knowing that, Oakeshott 1991 for a treatment of practical knowledge versus technical knowledge, Schön 1983 for a related treatment of professional versus instrumental knowledge, and Scott 1998 on *metis* versus *episteme/techne*. The tacit/codified distinction looms large in Nonaka and Takeuchi 1995, and they note that Larry Squire 1987 gives a dozen labels for similar distinctions.

that are specific to particular applications—an uncertain creative process that can result in highly variable levels of performance. [Bell and Pavitt 1995, 74].

The same holds *a fortiori* for "social technologies" or institutions. In a codified description of a "best practice" case study, the uncodified tacit knowledge is often "the rest of the iceberg."[15] Some tacit knowledge might be transformed into codified knowledge [see Nonaka and Takeuchi 1995] so that it could be transferred by conventional methods. But the remaining tacit knowledge needs to be transmitted by special methods such as apprenticeship, secondments, imitation, study tours, cross-training, twinning relations, and guided learning-by-doing. These methods of transferring tacit knowledge will be called "horizontal" methods of knowledge transfer–in contrast to "vertical" methods where knowledge can be codified, transmitted to a central repository or library, and then accessed by interested parties.

We have seen two reasons why the theory of "downloading the best practice" fails: the best practice needs to be localized and much of the best practice may be in the form of practical know-how that cannot be "downloaded." But there is still an important role for international development agencies (global knowledge): Even concerning that tacit dimension of the best practice, the central agency may know who knows X without knowing X itself. It is "second-order" knowledge of where the practical knowledge is; it is a "pointer" to the practical knowledge. A central agency can fruitfully play a match-making, facilitating, and brokering role in horizontal learning–not a direct training role. In particular, the Knowledge Bank is in a good position to "scan globally" to identify good practices, and then it can play a *brokerage role* to facilitate a horizontal learning process between the developing countries facing certain problems and the countries with successful practices.[16] . It can perform another role: certifying the quality of the messengers and messages; in a noisy world, with many alternative theories vying for center stage, there needs to be some ways of sorting through the cacophony, establishing credibility

The various methods of horizontal learning differ substantially from those employed in traditional classroom settings, where what goes on is "vertical" teaching and training in explicit codified knowledge.

- Study tours arranged by local knowledge institutes allow people to "see how it is done" in nearby societies. The Marshall Plan for the postwar reconstruction of Europe involved many horizontal techniques such as study tours of business leaders ("business to business") and government officials.
- Cross-training is being "shown how to do it" by those who have already "done it" particularly in nearby societies. It is the implicit knowledge alternative to being explicitly "told how to do it" by an international expert.
- Twinning or secondments pair together similar organizations or institutions for a horizontal transfer of know-how.

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[15] Even the codified part may suffer from the "*Rashomon* effect" (different people giving very different descriptions of the same phenomenon) described in Schön 1971.

[16] That is the brokerage model of the Knowledge Bank [see Sundquist 1978] which is sometimes juxtaposed to the storehouse or library model. Since explicit knowledge of the best practices (and of the pointers to tacit know-how) can be "downloaded," each model has some applicability. It is a question of emphasis.

- Foreign direct investment might also be viewed as a method of horizontal learning. For instance, a major source of learning about lean production methods and their adaptation to American culture was Japanese direct investment in production facilities in the United States.

Due to the tacit component in the practical development knowledge, few of the real reasons for the success might be captured in the codified knowledge of the "best practice" case study. In addition there would be much variation due to *Rashomon* effects, academic predilections, and ideological precepts in the best-practice case studies. [17]

> The architect of social change can never have a reliable blueprint. Not only is each house he builds different from any other that was built before, but it necessarily uses new construction materials and even experiments with untested principles of stress and structure. Therefore what can be most usefully conveyed by the builders of one house is an understanding of the experience that made it at all possible to build under these trying circumstances. [Hirschman 1970, 243; quoted in Scott 1998, 328]

For instance in one World Bank Institute program, local institutes arranged for government officials, law-makers, and business people from an African country to learn directly and horizontally from a nearby East Asian country which faced similar economic and ethnic problems not too long ago–all of which was undoubtedly more effective than seminars based on codified case studies taken as blueprints.

Summary of Knowledge Dimensions

The general versus local dimension and the codified versus tacit dimension can be used to generate a 2 x 2 table.

	Codified Knowledge	Tacit Knowledge
General Knowledge	Global public goods. Generally applicable and "downloadable," i.e., can be transferred by conventional vertical teaching methods--but "rediscovery" improves ownership.	General tacit knowledge (e.g., implicit grammatical rules of English) could be learned by horizontal methods (e.g., natural language learning) or might be (partly) codified and taught.
Local Knowledge	Localized explicit knowledge. Even if hypothetically available from center, should be locally "reinvented" to have ownership.	"The hard stuff." Combines horizontal learning and local reinvention.

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[17] For instance, if the chief policy-maker of the IMF and I each wrote up a case study of the Malaysian capital controls, the cases would probably look rather different.

III. Active Social Learning

Negative Effects of Passive Learning

My third thesis is that the knowledge institutes and policy-makers of developing countries should play an active role in reappropriating and adapting knowledge for development (even if the center could through some sort of "flexible specialization" make a local adaptation and transmit it to the locality).

The contrasting "standard view" (usually held implicitly rather than espoused explicitly) sees a central authority transmitting universal messages and best practices formulas along a transmission belt to passive clients who are encouraged by aid and constrained by conditionalities to "get the message." Rather than encouraging clients to develop their analytical and research capacities, the process of imposing conditionalities undermines both the incentives to acquire those capacities and clients' confidence in their ability to use them. Rather than involving large segments of society in a process of discussing change—thereby changing their ways of thinking—excessive conditionality reinforces traditional hierarchical relationships. Rather than empowering those who could serve as catalysts for change within these society, it demonstrates their impotence. Rather than promoting the kind of open dialogue that is central to democracy, it argues at best that such dialogue is unnecessary, at worst that it is counterproductive.

That standard view of delivering knowledge for development leads to an impairment in the self-confidence, self-esteem, and self-efficacy of the clients.[18] The message behind the "main messages" is that the clients are unable to take charge of their own learning process and to find out these things in their own way. They need to be "helped"—to be shown the way. New forms of intellectual colonialism are masked as "quality control." But these ways in which the standard methodology "shows them the way" only reinforces the clients' passivity and perceived lack of self-efficacy.

In addition to lacking self-confidence about the efficacy of their actions, a party might lack self-confidence in their own intelligence, judgment, and other cognitive skills. In an extreme state of dependency, they might be like a marionette not only in their "actions" but also in their opinions, views, and "knowledge." This cognitive aspect of dependence is clearly very relevant to understanding the detrimental effects of passive learning and tutelage.

The cognitively dependent recipients of the main messages will also often play a role in perpetuating the dynamics of stifling critical reason in favor of bureaucratic "reason" in the development agencies. As such countries have become cognitively dependent, they might be distressed if they should hear the "authorities" arguing among themselves about "development knowledge" and development strategies. They are accustomed to being told the "best practices" to follow, so it weakens their faith in the prestigious authorities if there is any public disagreement. How can the patient have faith in "warring doctors"? Thus the complaints (real or imagined) of the cognitively dependent clients are used as arguments within the international

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[18] See Lane 1991 and Bandura 1995.

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agencies to keep any real debate about development strategies well behind the closed doors of the major development organizations. (To be sure, there may be other reasons for the international agencies wishing to stifle open discussion: public scrutiny of failed policies within the developed countries could not only undermine the support for these agencies, but induce more accountability and improved governance, weakening their current sense of autonomy. And there is a real risk that such public scrutiny could force changes in their policies and practices.)

The obvious corollary of the traditional mode of operation is that there will be very little learning in the sense of correcting mistakes at the level of the development agency. Once there is a public commitment of the agency to a certain view, then the agency's prestige and "brand name" is on the line. Any untoward consequences of the policies *must* be due to flawed implementation on the part of the clients. Criticism from outside the agency can usually be ignored, and criticism from within the agency must be suppressed because it would weaken the franchise value of the brand name and "confuse" the clients. But note that in defending their own autonomy, they undermine the autonomy of the very countries they are supposed to help; even the language they use to defend the "no debate" position is one which connotes an aura of benevolent paternalism—but one which demonstrates a complete lack of faith in the country to make its own decisions.

IV. Social Learning, Consensus-Building, and Other Democratic Processes
Learning How to Learn
We now turn to the positive virtues of active learning, and to the broader vision of democratic processes as active social learning writ large.

George Bernard Shaw insightfully quipped: "if you teach a man anything he will never learn it." [1962, 174] Ortega y Gasset wisely suggested: "He who wants to teach a truth should place us in the position to discover it ourselves." [1961, 67] Thus if a global knowledge-based institution wants a country to learn a "truth" about development, then it should help the local knowledge institutes and policy-makers to carry out the requisite research, experimentation, and social dialogue to learn it themselves–to make it a "local social discovery." Creating this local knowledge infrastructure and practice entails "learning how to learn,"[19] that is, creating the capacity to close the knowledge gap, an essential part of a successful development strategy. This process of autonomous social learning is not a "feel-good frill"; it is a key part of developing local democracy.

Social learning and effective change cannot be imposed from outside. Indeed, the attempt to impose change from the outside is as likely to engender resistance and barriers to change as it is to facilitate change. At the heart of development is a transformation in ways of thinking, and individuals cannot be forced to change how they think. They can be induced to take certain actions, or even to utter certain words; but they cannot be forced to change their hearts and minds. To impose a model without a self-directed local learning process would be to "short

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[19] I developed the concept of "learning to learn" and its implications for economic growth in Stiglitz 1987.

circuit" and bypass the active learning capacity of the local policy-makers and to promote a state of passivity, dependence, and tutelage.

This process of encouraging autonomous local social learning is closely connected with the whole process of promoting democracy. Some social thinkers—with John Dewey perhaps foremost among them—have emphasized that active social learning writ large provides a social philosophy for democracy as government by discussion and consensus-building.

> To foster conditions that widen the horizon of others and give them command of their own powers, so that they can find their own happiness in their own fashion, is the way of "social" action. [Dewey 1957, 270]

> For all alike, in short, the chief thing is the discovery and promotion of those activities and active relationships in which the capacity of all concerned are effectively evoked, exercised, and put to the test. ...This cooperation must be the root principle of the morals of democracy. [Dewey and Tufts 1908, 303-4]

Beyond Technocratic Development Models

Predominant currents of development thinking in the past have usually been more narrowly technical—at least in economics. It has been almost an article of faith that if certain technical allocation issues were solved, economic development would inevitably follow. The problem of development was seen as a technocratic problem of increasing capital investment and allocating resources more efficiently–not as a process of democratic social learning.

As an illustration, consider two of my predecessors as Chief Economist: Hollis Chenery in the 1970s and Anne Krueger in the 1980s. The two came at the development problem from very different perspectives: Chenery from the planning perspective, Krueger emphasizing the need to "get prices right" and to leave markets to work their magic. But both approaches saw develop-ment as a technical problem requiring technical solutions: better planning algorithms, better trade and pricing policies, better macroeconomic frameworks. Neither approach reached deep down into society, nor did either one emphasize the participatory nature of the development transformation.

Poland has in recent years implemented particularly effective policies for their post-socialist transition, and India has likewise found an effective development path. In spite of many changes in government, those countries have stayed their course. The reason for their effectiveness is not just some technical "correctness" of the policies but the ownership the countries have for policies arrived at through their own participative processes of democratic discussion, consensus-building, and *swaraj*. Outside agents, including donors, can encourage ownership through persuasion—that is, through presenting evidence, both theoretical and empirical, that particular strategies and policies are more likely to bring success than other approaches. But the degree of ownership is likely to be even greater when the strategies and policies are developed by those within the country itself, when the country itself is in the driver's seat.

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Consensus-Building and Democracy

Inside a country, the ability to resolve disputes in a "democracy friendly"[20] manner is an important part of social and organizational capital. Reforms often bring advantage to some groups while disadvantaging others. There is likely to be greater acceptance of reforms—a greater participation in the transformation process—if there is a sense of equity, of fairness, about the development process, a sense of ownership derived from participation, and if there has been an effort at consensus formation. Numerous examples (such as Ghana) have showed the importance for instance of consensus formation in achieving macroeconomic stability. By contrast, a decision to, say, eliminate food subsidies that is imposed from the outside, through an agreement between the ruling elite and an international agency, is not likely be helpful in achieving a consensus—and thus in promoting a successful transformation.

Charles Lindblom [1990] contrasts the technocratic model for governing society with the alternative model of a self-guiding democratic society based on the use of "reflective intelligence" (Dewey), the competition of ideas, and government by discussion. To quickly see the distinction, Lindblom suggests to "compare Marx with Franklin Roosevelt or Jan Tinbergen with Saul Alinsky." [216] In the technocratic (Marx-Tinbergen) model, the "correct solutions" are already defined but may be unknown. If "scientific" techniques could uncover those answers–even localized answers–independent of any political process then the answers could be whispered into the ear of the Prince and disseminated from the central authority to passive citizens. After severely criticizing technocratic development paradigms, Hirschman counsels "a little more 'reverence for life,' a little less strait-jacketing of the future, a little more allowance for the unexpected–and a little less wishful thinking."[21]

In the model of a self-guiding democratic society, preferences and self-determined actions are endogenously transformed in the social/political process. Social "democracy friendly" dialogue—lead by local knowledge institutions as in the GDN—builds consensus; it does not "discover" or "impose" consensus. Those who participate in the consensus-building process then have an "ownership" of the resulting policies, and thus *that* policy knowledge will be transformative.

Concluding Remarks

We are embarking here on an enterprise of potentially immense importance—creating a new global institution, the Global Development Network, devoted to enhancing democratic governance at the local, national, regional, and global levels, to promoting dialogue, and to strengthening the processes of consensus-building. Underlying all of these efforts is the pursuit of knowledge—global knowledge about general principles, local knowledge about how those general principles play out in the multitude of local contexts over our vast globe—knowledge based on well-constructed theories and meticulous analysis of the empirical evidence. I believe it is only through such open discussion and active research that we shall break free from the chains

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[20] See Hirschman 1991, p. 168 for a contrast of consensus-building dialogue with the adversarial "rhetorics of intransigence."

[21] See Hirschman 1970, p. 239; quoted in Scott 1998, p. 345.

of ignorance, the traps of poverty, the grip of elites, and the blinders of ideology and self-interest—in our quest for a more democratic, equitable, and sustainable transformation of societies.

Bibliography

Arrow, K. 1962. The Implications of Learning by Doing. *Review of Economic Studies.* 29: 155-173.

Bandura, Albert, Ed. 1995. *Self-Efficacy in Changing Societies*. Cambridge: Cambridge University Press.

Bell, M. and K. Pavitt 1995. The Development of Technological Capabilities. In *Trade, Technology, and International Competitiveness*. I. u. Haque Ed. Washington, World Bank**:** 69-101.

Cohen, Theodore 1987. *Remaking Japan: The American Occupation as New Deal*.   New York: Free Press.

Cole, Robert E. 1989. *Strategies for Learning*. Berkeley: University of California Press.

Datta, Dhirendra Mohan 1961. *The Philosophy of Mahatma Gandhi*.   Madison: University of Wisconsin Press.

Dewey, John 1957. *Human Nature and Conduct: An Introduction to Social Psychology*. New York: Modern Library.

Dewey, John and James Tufts 1908. *Ethics*. New York: Henry Holt.

Economic Report of the President. 1997. United States Government Printing Office. Washington.

Heine, Heinrich, 1959. *Religion and Philosophy in Germany*. J. Snodgrass tr. Boston: Beacon Press.

Hirschman, Albert O. 1970. The Search for Paradigms as a Hindrance to Understanding. *World Politics.* 22 (April).

_____. 1991. *The Rhetoric of Reaction: Perversity, Futility, Jeopardy*. Cambridge: The Belknap Press.

Jefferson, T. 1984 (1813). No Patent on Ideas: Letter to Isaac McPherson, August 13, 1813. In *Writings*. New York, Library of America**:** 1286-94.

Keynes, J.M., 1936. *The General Theory of Employment, Interest, and Money*. New York, Harcourt, Brace & World.

Lane, Robert E. 1991. *The Market Experience.* New York: Cambridge University Press.

Langford, John W. and K. Lorne Brownsey eds. 1991. *Think Tanks and Governance in the Asia-Pacific Region*, Canada, Institute for Research on Public Policy.

Lindblom, Charles. 1990. *Inquiry and Change*. New Haven: Yale University Press.

Morita, A. 1986. *Made in Japan.* New York: E.P. Dutton.

Nonaka, I. and H. Takeuchi 1995. *The Knowledge-Creating Company.* New York: Oxford.

Oakeshott, Michael 1991. *Rationalism in politics and other essays.* Indianapolis: Liberty Fund.

Ortega y Gasset, Jose 1961. *Meditations on Quixote.* New York: Norton.

Ostry, Sylvia, Ed. 1991. *Authority and Academic Scribblers: The Role of Research in East Asian Policy Reform.* San Francisco: ICS Press.

Polanyi, Michael 1962. *Personal Knowledge: Towards a Post-Critical Philosophy.* Chicago: University of Chicago Press.

Romer, P.M. 1986. Increasing Returns and Long-Run Growth. *Journal of Political Economy.* 94:5. 1002-1037.

Ryle, Gilbert 1945-6. Knowing How and Knowing That. *Proceedings of the Aristotelian Society.* XLVI: 1-16.

Samuelson, P. 1954. The Pure Theory of Public Expenditure. *Review of Economics and Statistics*, 36, 387-89.

Schön, Donald A. 1971. *Beyond the Stable State.* New York: Norton.

_____. 1983. *The Reflective Practitioner: How Professionals Think in Action.* New York: Basic Books.

Scott, James C. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed.* New Haven: Yale University Press.

Seers, Dudley 1962. Why Visiting Economists Fail. *Journal of Political Economy.* 70 (4, August).

Shaw, George Bernard 1962. *The Wit and Wisdom of Bernard Shaw.* Stephen Winsten Ed. New York: Collier.

Smith, James A. 1991. *The Idea Brokers: think tanks and the rise of the new policy elite.* New York: Free Press.

Squire, L.R. 1987. *Memory and Brain.* New York: Oxford University Press.

Stiglitz. Joseph E. 1977. Theory of Local Public Goods. In *The Economics of Public Services*, M.S. Feldstein and R.P. Inman (eds.), MacMillan Publishing Co. 274-333.

_____. 1986. *Economics of the Public Sector*, New York: W.W. Norton.

_____. 1987. Learning to Learn, Localized Learning and Technological Progress, In *Economic Policy and Technological Performance*. Dasgupta and Stoneman (eds.), Cambridge University Press. 125-153.

_____. 1995. "The Theory of International Public Goods and the Architecture of International Organizations," *United Nations Background Paper 7*. Department for Economic and Social Information and Policy Analysis, July.

_____. 1998. *Towards a New Paradigm for Development: Strategies, Policies, and Processes.* Given as Raul Prebisch Lecture at United Nations Conference on Trade and Development (UNCTAD). Geneva. October 19. Internet Access: http://www.worldbank.org/knowledge/chiefecon/index.htm.

Stone, Diane, Andrew Denham and Mark Garnett. eds. 1998. *Think Tanks Across Nations: A Comparative Approach*, Manchester University Press

Struyk, Raymond. 1999 *Reconstructive Critics: Think Tanks in Post-Soviet Bloc Democracies*, Washington DC. Urban Institute Press.

Sundquist, James 1978. Research Brokerage: The Weak Link. In *Knowledge and Policy: The Uncertain Connection*. Laurence Lynn Ed. Washington DC: National Academy of Sciences**: 126-44.

Telgarsky, Jeffrey and Makiko Ueno. 1996. *Think Tanks in a Democratic Society: An Alternative Voice*, Washington DC., Urban Institute.

Transparency International and IBRD. 1998. *New Perspectives on Combating Corruption*. Washington DC: World Bank Institute.

Wills, Garry 1999. *Saint Augustine*. New York: Viking.

Wolfensohn. J. D. 1997. *Annual Meetings Address: The Challenge of Inclusion.* Hong Kong: World Bank. www.worldbank.org/html/extdr/am97/jdw_sp/jwsp97e.htm

_____. 1998. *The Other Crisis: 1998 Annual Meetings Address*. Given at the 1998 World Bank/International Monetary Fund Annual Meetings. Internet Access: http://www.worldbank.org/html/extdr/am98/jdw-sp/index.htm

_____. 1999a. *A Proposal for a Comprehensive Development Framework.* Washington: World Bank.

_____. 1999b. *Annual Meetings Address: Coalitions for Change,* Given in Washington DC, September 28, 1999.

World Bank, 1997. *World Development Report: The State in a Changing World*. New York: Oxford University Press.

World Bank 1998a. *World Development Report: Knowledge for Development.* New York: Oxford University Press.

World Bank 1998b. *Assessing Aid: What Works, What Doesn't, and Why*. Washington.