Social Capital

A Multifaceted Perspective

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Preface

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A number of essays in this volume were presented at a workshop organized at the World Bank in April 1997. The workshop was an outcome of a series of meetings convened over time beginning in autumn 1993 with a group drawn from various parts of the world. The group, which acted as an Advisory Council to the Vice Presidency for Environmentally Sustainable Development at the World Bank, consisted of academics and leaders of nongovernmental organizations.[1] The idea in creating the Council was to help identify and formulate those societal problems that are likely to be the most telling as we enter the new millennium, and to indicate the various directions in which progress could be made in our understanding of them.

It will come as no particular surprise to anyone that the group felt that poverty, the environment, and the ability of communities to live with one another would remain the dominant themes of societal concern over the coming decades. Members of the group observed, however, that even though these particular themes have been explored for many years, the way questions that have a bearing on them are framed has changed considerably over time. They noted that our understanding is deeper today than in the past. And they added that while this does not necessarily mean that solutions to the concomitant social problems are within easy reach, it does mean that we know better today where to look for solutions and what to avoid. If in earlier days social

[1] The members were Nancy Birdsall, Kamla Chowdhry, the late Jacques-Yves Cousteau, Partha Dasgupta, Kathryn Fuller, Clifford Geertz, Saad Eddin Ibrahim, Yolanda Kakabadse, David Pearce, Robert Putnam, Edward Said, Amartya Sen, Hari Shankar Singhania, Maurice Strong, M. S. Swaminathan, Alain Touraine, and Mohammad Yunus.

scientists looked for policies to shape social outcomes for the better, their focus today is more on the character of institutions within which decisions are made by various parties in society. But if policies that read well often come to naught in dysfunctional institutions, the study of institutions on their own is not sufficient: good policies cannot be plucked out of the air. There is mutual influence here, and the task before the social scientist is to study it.

Even though economists have traditionally been much engaged in the study of markets, political scientists in the study of the State, and anthropologists and sociologists in the study of interpersonal networks, in recent years each group has begun to peer into the others' publications to see whether they can better understand the links connecting their particular objects of interest. One of the outcomes of this enterprise, since especially the publication of a classic 1987 article by the late James Coleman (reprinted here), has been the development of "social capital" as an organizing concept in the social sciences. It is difficult to think of an academic notion that has entered the common vocabulary of social discourse more quickly than the idea of social capital. Not only do academic journals devote special issues to discuss the concept, journalists make frequent references to it and politicians pay regular homage to it. The reference to "capital" suggests that all who use the term see it as an ingredient of resource allocation mechanisms. Thus, whatever else social capital may be, it is emphatically an economic good. And yet, while the term has gained wide currency, it has not found favor among economists.

Some authors have identified social capital with such features of social organizations as trust. Then there are those who think of it as an aggregate of behavioral norms. Some view it as social networks, and there are those who think of it as a combination of them all. So it would seem that social capital means different things to different people. What is not uncommon, however, is the temptation among those who are enthusiastic about the concept to use it as a peg on which to hang all those informal engagements we like, care for, and approve of. Thus, one frequently hears the view that if a society harbors widespread opportunistic behavior, such as free-riding, rent-seeking, and bribery and corruption, it is because citizens have not invested sufficiently in the accumulation of social capital. But if the concept is to serve any purpose, this particular temptation should be resisted. Indeed, the reluctance of economists to embrace the term even when engaged in similar research endeavors as those who make use of it may well be because of a certain lack of intellectual discipline in some of the more popular writings on social capital. Terminology is not the only issue—neither, in particular, is the fact that social capital refers to something intangible. A firm's goodwill is intangible too, but economists are comfortable with the notion. The problem with social capital is that the concept has not been nailed

down sufficiently to be useable in quantitative research into the character of societies.

One way to try to pin it down would be to explore the issues that the concept was designed to illuminate, with an attention to both theoretical and empirical detail. The workshop at the World Bank in April 1997 was devoted to such an exploration. Inevitably, the occasion was interdisciplinary, but participants were encouraged to study the concept of social capital by peering through their own disciplinary lenses. It meant that even though the workshop had a very sharp focus, the papers presented were heterogeneous, not only in the way authors formulated their common concerns, but also in the style in which the arguments were conducted. The resulting combination of commonality and differences gave the workshop an unusual form of intellectual vitality: the contributions were all of a probing nature, none pretended to be definitive. In the event, the workshop was found by all who took part in it to be so interesting that we joined forces to edit the proceedings for publication.

The literature on social capital is highly dispersed. It soon became apparent that we could aim at a comprehensive collection of essays, one that would provide a reasoned account of our current understanding of the concept, if we were to include articles on aspects not covered at the workshop. This meant reprinting a few articles. In addition, Elinor Ostrom and Robert Solow wrote their thoughts for us even though they had been unable to attend the workshop. The present volume is the result.

The volume covers both theoretical and empirical studies and it has been divided into such sections. While most of the contributions fall exclusively into one or the other of the two categories, several contain both theory and empirics (the subject would seem to lend itself to a combined treatment). Empirical studies on social capital come in two shapes. One consists of studies of particular institutions (otherwise known as "case studies") and relies on the powerful way examples can illuminate our understanding. The other makes use of statistical information, be it spatial or temporal, to identify and to make sense of the links connecting key socioeconomic variables. But just as empirical findings discipline theorizing, theory disciplines empirical work. The mutual influence is striking in the present collection. It helps explain why the literature on social capital has been so rich and fast-moving.

Inevitably, when concepts are discussed, methodological reflections creep in. The present volume is no exception. But the contributors have kept such reflections to a minimum; not because they are unimportant or uninteresting, but because in studies that explore concepts, there is a danger of falling prey to what one could call "concept fetishism." The danger could have been especially prominent in the present context because of the widespread use of the term "social capital" in contemporary writings. In fact, however, there was never much risk of that at the

April 1997 workshop. Reflections on social capital are no mere academic matter, because the issues involved in it—the ones the contributors to this volume are addressing—are momentous: their explorations are a part of a permanent inquiry into the character of those institutions that would enable people to have a good chance of pursuing well-lived lives.

We would be remiss if we did not acknowledge the group of people who contributed their time and wisdom to the workshop and to this publication. Deserving mention and sincere thanks are the many distinguished academicians who attended the 1997 workshop: Francis Fukuyama (George Mason University), Geoffrey Heal (Columbia University), Saad Eddin Ibrahim (American University, Cairo), Robert Klitgaard (University of Natal, South Africa), Mancur Olson (University of Maryland), Martin Paldam (University of Aarhus, Denmark), and Michael Woolcock (Brown University). Most of the authors in this book and many World Bank economists, social scientists, and executive directors Michael Cernea, Gloria Jean Davis, John Dixon, Alan Gelb, Jean-Daniel Gerber, Leonard Good, Tariq Husain, John M. Page, Jr., Robert Picciotto, Jan Piercy, Joanne Salop, Andrew Steer, Vinod Thomas, and John Williamson also participated in the workshop and continue to contribute to the ongoing dialogue. Special thanks go to Paul Nielson, then Minister of Development, Denmark; Jacques Baudot, senior advisor to the Danish Foreign Ministry; and the Danish Trust Fund for providing the resources that made the workshop and this publication possible. Our sincere gratitude go to the staff of the World Bank Publisher's Office, Lisa Carlson, Sarwat Hussain, and Sheldon Lippman for organizing the minutiae that ultimately resulted in the fashioning of this provocative book.

Defining social capital: an integrating view[1]

Ismail Serageldin and **Christiaan Grootaert**
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The paper argues that different, but mutually reinforcing, types of social capital coexist in society. Consequently, an integrating view is needed on the definition and measurement of social capital that bridges the distinctions in the literature between micro- and macroinstitutional social capital in formal and informal institutions, and in horizontal and vertical associations. The paper also argues that, for a given country at a given time, there exists an "appropriate" level and composition of social capital, based on complementarities with other forms of capital.

Social capital and sustainability

Social capital is best studied in the context of the contribution it makes to sustainable development. Building on this view, this paper puts forth two propositions that will hopefully help integrate the widely different definitions of social capital and facilitate the measurement and operational application of the concept. The immediate advantage of seeing social capital in this context is that sustainable development is a widely accepted concept. It appeals to the public at large and conveys a sense of continuity and concern for the environment and for children—but it does not imply that the economy must stagnate or living standards need to fall.

The first formal definition saw sustainable development as "[meeting] the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission 1987, p. 43). While philosophically attractive and simple, this definition raises difficult operational questions. Given the variations in living standards within and across countries, defining needs in a meaningful and coher-

[1] This paper draws on earlier work on social capital by the authors. See especially Serageldin (1996a) and Grootaert (1996).

ent way is virtually impossible. We have therefore tried to operationalize the definition by referring to the *stock of capital* that underlies the generation of income and welfare.

In an earlier paper, Serageldin (1996b) puts forth an especially promising approach that views sustainability as opportunity. This notion leads to a second definition: "Sustainability is to leave future generations as many opportunities as we ourselves have had, if not more" (Serageldin 1996b, p. 3). This approach views opportunity, in economic terms, as expanding the capital stock. In economics and finance, the idea of depleting capital to create an income stream is simply unacceptable, because income based on capital depletion is unsustainable.[2] Capital and capital growth are the means of providing future generations with the opportunities we have had—provided that capital is defined on a per capita basis to account for the needs of the burgeoning global population. Sustainability as opportunity thus means that future generations must be provided with as much or more capital per capita than the current generation.

The composition of the capital left to the next generation can differ from the composition of the current stock, however. Thus, defining sustainability as opportunity highlights the importance of looking at a stock variable (wealth) as well as a flow variable (income). The approach requires distinguishing among different kinds of capital (produced assets, natural capital, human capital, and social capital) and recognizing that they are both complements and substitutes.

Key features of "sustainability as opportunity"

Defining sustainability as opportunity requires looking beyond traditional measures of sustainability to existing stocks of wealth, genuine saving rates, and human and social capital. It also posits three levels of sustainability—weak, sensible, and strong.

- *Existing stocks.* Income measures have traditionally focused on flows. But no corporation runs its affairs using only cash flow and income statements, ignoring balance sheets and net worth. Countries need to behave more like corporations and analyze existing stocks.

- *Genuine saving.* Adjusting national accounts for depreciation of all classes of assets has little effect on trends in traditional income measures. However, similar adjustments to gross investment data pro-

[2] This notion goes to the heart of the definition of income given by Nobel Laureate Sir John Hicks: "The maximum value a person can consume during a week, and still expect to be as well off at the end of the week as at the beginning."

vide important signals on saving and investment. A measure based solely on gross investment as a percentage of GNP can mask major variations in genuine saving. For example, a constant level of gross investment of 15–18 percent of GNP for Latin America translates into a positive genuine savings rate of 7 percent in 1969 but a negative rate of 2–3 percent in 1982 (Pearce and Atkinson 1993).

- *Human and social capital.* "Back of the envelope" calculations show that in 192 countries (except for a few raw materials exporters), human and social capital equals or exceeds natural capital and produced assets combined (World Bank 1995). (See figure 1.) Produced assets, or human-made capital, represents only 16–20 percent of the wealth of most of the countries. Yet most current economic policies focus on this small group of assets. A more recent comparison based on better data and using purchasing power parity conversion factors provides stronger evidence of the importance of human and social capital, although it found a smaller gap between rich and poor countries (World Bank 1997).

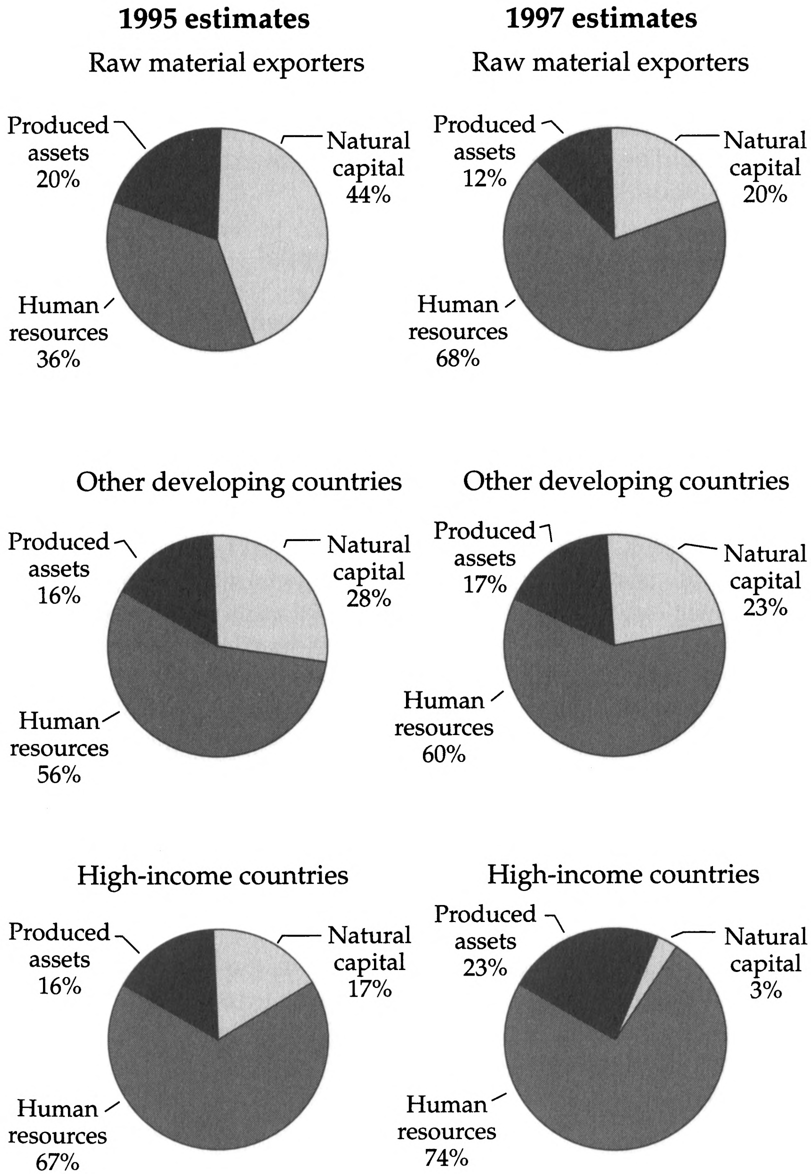
- *Level of sustainability.* Sustainability as opportunity has several levels—weak, sensible, and strong—depending on how strictly the concept of maintenance, or nondeclining capital, is applied (Pearce and Atkinson 1993).

    1. Weak sustainability means maintaining current levels of total capital without regard to its composition (natural, human-made, social, or human). This scenario implies that the different kinds of capital are perfectly interchangeable, at least within the boundaries of current levels of economic activity and resource endowment.

    2. Sensible sustainability means maintaining capital intact while also considering its composition. Thus, oil may be depleted as long as the receipts are invested in another type of capital (human, for instance). Under this scenario, countries seek to set the minimum level of each type of capital that is necessary to allay concerns about substitutability. Monitoring ensures that development does not promote the decimation of one kind of capital in favor of another. This recognizes that human-made and natural capital are to a large extent substitutes but also that they are complements—and that, to function fully, a country requires a mix of all four types.

    3. Strong sustainability means maintaining the different kinds of capital separately, keeping the stock of each intact. Thus, re-

Figure 1: Composition of World Wealth by Income Group (Percentage of Total)



Source: World Bank 1995, 1997.

ceipts from oil (natural capital) are invested in sustainable energy production rather than in another asset. This scenario assumes that natural and human-made capital are not really substitutes but rather complement each other in most production functions. For instance, a sawmill (human-made capital) is worthless without a forest (natural capital). The same logic argues that reductions in one kind of educational investment should be offset by investments in another, not by investments in roads.

Definitions of social capital

The previous section showed that the sum of human and social capital exceeds that of produced and natural capital in many countries (figure 1). But while the concept of human capital is by now well accepted, the concept of social capital is not. A "glue that holds societies together" (Serageldin 1996a, p. 196) is generally recognized as necessary to a functioning social order, along with a certain degree of common cultural identifications, a sense of "belonging," and shared behavioral norms. This internal coherence helps to define social capital. Without it, society at large would collapse, and there could be no talk of economic growth, environmental sustainability, or human well-being—as Somalia, Yugoslavia, and Rwanda painfully illustrate. More positively, social capital can be identified indirectly in countries where similar stocks of natural, produced, and human capital have turned in very different economic performances. It can also be seen in regions or cities within the same country and even in communities within regions or cities. The examples that follow show how social capital contributes to economic growth.

East Asia. Conventional factors such as investments in human and physical capital and technology only partially explain the high growth rates of the East Asian "miracle" economies. These governments have also invested in social capital by creating policies that provide an enabling environment for growth. Institutional arrangements and organizational designs that enhance efficiency, facilitate the exchange of information, and promote cooperation between government and industry characterize this environment (World Bank 1993; Stiglitz 1996).[3]

Northern Italy. In a study of Italy, Putnam, Leonardi, and Nanetti (1993) argue that the large number of voluntary associations among people in

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[3] There are dissenting views on the role of social capital in the growth rates of the East Asian economies. Some authors argue that increased mobilization of resources—that is, increases in labor force participation rates, education, and investment in physical capital—explain most or all of the growth (Krugman 1994). Other observers, relying on endogenous growth models, argue that low income inequality (which characterizes the East Asian economies) has been an important stimulus to growth (Birdsall, Ross, and Sabot 1995). For a recent review and interpretation of the evidence, see Stiglitz (1996).

Northern Italy explains the region's economic success. These associations provide the north with the social capital that the south, where the associations are far less common, does not have.

Somalia. After the fall of Somalia's government in 1991, the country was plagued with civil disorder and declining incomes. An exception was the port city of Boosaaso, where a local warlord supported by local residents organized a security force and a council of clan elders. With this investment in social capital, trade flourished and incomes increased (Buckley 1996).

India. In the state of Gujarat, violent confrontations between local people and government officials over forest management led to economic stagnation. But once the communities were mobilized and joint forest management was instituted, conflicts declined and land productivity and village incomes rose (Pathan, Arul, and Poffenberger 1993). In this case, the investment in social capital was a joint effort by local governments and communities.

Examples of social capital are easier to provide than one specific definition. The term is used differently depending on the field of study, for instance. In the literature of political science, sociology, and anthropology, *social capital* generally refers to the set of norms, networks, and organizations through which people gain access to power and resources that are instrumental in enabling decision-making and policy formulation.[4] Economists add to this focus the contribution of social capital to economic growth. At the microeconomic level, they view social capital primarily in terms of its ability to improve market functioning. At the macroeconomic level, they consider how institutions, legal frameworks, and the government's role in the organization of production affect macroeconomic performance.

The most famous and in some ways most narrowly defined concept of social capital is Putnam's (Putnam 1993; Putnam, Leonardi, and Nanetti 1993). Putnam views social capital as a set of "horizontal associations" among people who have an effect on the productivity of the community. These associations include "networks of civic engagement" and social norms. Two assumptions underlie this concept. The first is that networks and norms are empirically associated; and second, that they have important economic consequences. In this definition, the key

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[4] Coleman (1988) has been attributed with introducing the term "social capital" into the sociological literature. He defines it as a "social structure [that] facilitates certain actions of actors within the structure" (p. 598). Similar to this definition is Etzioni's (1988) concept of "social collectivities," or "major decisionmaking units, often providing the context within which individual decisions are made" (p. 186). In economics, Loury (1977) introduced the concept of social capital in an analysis of racial inequality to describe the social resources of ethnic communities. More generally, economists have argued that aspects of social capital, such as institutions, have always been present in economic analysis.

feature of social capital is that it facilitates coordination and cooperation for the mutual benefit of the members of the association (Putnam 1993).[5]

Coleman (1988, p. 598) puts forth a second, broader concept of social capital. Coleman sees social capital as "a variety of different entities, with two elements in common: they all consist of some aspect of social structure, and they facilitate certain actions of actors—whether personal or corporate actors—within the structure." From the outset, this definition broadens the concept to include vertical as well as horizontal associations and the behavior of other entities, such as firms.[6] This wider range of associations covers both negative and positive objectives. Coleman states explicitly that "a given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others" (Coleman 1988, p. 598). In fact, this view of social capital captures not only social structures at large but the ensemble of norms governing interpersonal behavior.

A third, still more encompassing view of social capital includes the social and political environment that enables norms to develop and shapes social structure. In addition to the largely informal horizontal relationships included in the first concept and the vertical hierarchical organizations of the second, this view encompasses formalized institutional relationships and structures, such as governments, political regimes, the rule of law, court systems, and civil and political liberties. (See box 1.)

The impact of this more broadly defined concept of social capital on macroeconomic outcomes has been investigated by North (1990) and Olson (1982). They argue that differences in per capita incomes across countries cannot be explained by the per capita distribution of productive resources (land and natural resources, human capital, and produced capital, including technology). Institutions and other forms of social capital, along with public policies, determine the returns a country can extract from its other forms of capital. Olson argues that low-income countries, even those with a large resource base, cannot obtain large gains from investment, specialization, and trade. These countries are limited by a lack of institutions that enforce con-

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[5] While this concept of social capital was originally limited to associations having positive effects on development, it has recently been relaxed to include groups that may produce undesirable outcomes, such as rent-seekers (for instance, the Mafia in Southern Italy, and militias).

[6] This concept of social capital is closely related to the treatment of firms and other hierarchical organizations in institutional economics, which sees the organization's purpose as minimizing transaction costs (Williamson 1985, 1993). Vertical associations are characterized by hierarchical relationships and the uneven distribution of power among members.

Box 1. Three Views on Social Capital: Common Features

The three views on social capital progressively broaden the concept. The first includes mostly informal and local horizontal associations, while the second adds hierarchical associations. The third interpretation builds on the first two, adding formalized national structures such as government and the rule of law. The three views have several common features:

- All link the economic, social, and political spheres. They share the belief that social relationships affect and are affected by economic outcomes.
- All focus on relationships among economic agents and the ways in which formal and informal organizations of these agents can improve the efficiency of economic activities.
- All imply that desirable social relationships and institutions have positive externalities. Since individuals cannot appropriate these externalities, agents tend to underinvest in social capital, creating a role for public support.

All recognize not only the potential social relationships create for improving development outcomes but also the possibility that these same relationships can have negative effects. The outcome depends on the nature of the relationship (horizontal versus hierarchical), preexisting norms and values, and the wider legal and political context.

tracts impartially and secure long-term property rights—and by misguided economic policies.

The effects of social capital

There is growing evidence that social capital can have an impact on development outcomes, including growth, equity, and poverty alleviation (Grootaert 1996). Associations and institutions provide an informal framework for sharing information, coordinating activities, and making collective decisions. Bardhan (1995) argues that what makes this informal model work is peer monitoring, a common set of norms, and sanctions at the local level.

Sharing information

Formal and informal institutions can help avert market failures related to inadequate or inaccurate information. Economic agents often make

inefficient decisions because they lack needed information or because one agent benefits from relaying incorrect information to another. (Credit or employment applications are good examples of the latter.) In other circumstances, optimal decisions may be difficult to make because of uncertainty and the response of other agents to that uncertainty. Institutions can help disseminate adequate, accurate information that allow market players to make appropriate, efficient decisions. Group-based lending schemes are a case in point. These schemes—from tontine (informal saving circles) in West Africa to the Grameen Bank in Bangladesh—work because members have better information on each other than banks do.

Information problems can be particularly severe in capital markets. Japan and Korea have responded to such problems by developing "deliberation councils," which manage competition among firms for credit and foreign exchange. The process is transparent, encouraging cooperative behavior and information sharing among firms by removing incentives for rent-seeking behavior (World Bank 1993; Campos and Root 1996). The rule of law and a well-functioning court system (elements of social capital in its broadest definition) also help reduce uncertainty in capital markets by enforcing contracts. The contracting parties thus receive advance information about the penalties for noncompliance. In the absence of effective courts, many informal associations internalize this policing role for their members. Diamond merchants, who often base deals involving millions of dollars worth of diamonds on a handshake, present a striking example. Failure to deliver on a deal irrevocably leads to expulsion from the group, and all members are aware of this fact. Unfortunately, this mechanism also works for groups pursuing undesirable outcomes, so that mafias function efficiently as well.

Coordinating activities

Uncoordinated or opportunistic behavior by economic agents can also lead to market failure. Such behaviors lie behind the failure of many irrigation projects. Because these projects often lack formal or informal (social) means of imposing equitable agreements for sharing the water, some farmers use water needed by others or fail to contribute to maintenance. Effective social capital in the form of water user groups can overcome such problems (Meinzen-Dick and others 1995; Ostrom 1995). These associations reduce opportunistic behavior by creating a framework within which individuals interact repeatedly, enhancing trust among members (Dasgupta 1988).[7]

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[7] This *backward-looking* motivation for trust has been discussed in the social psychology literature. Trust can also be *forward-looking,* based on the perception of retaliation for untrustworthy behavior.

Making collective decisions

Collective decision-making is a necessary condition for the provision of public goods and the management of market externalities. It is one of the basic rationales behind the notion of government. But like governments, local and voluntary associations do not always effectively maximize their ability to make collective decisions. The extent to which they do depends not only on how well they address the problems of information-sharing but on the degree of equity that prevails. Local institutions are more effective at enforcing common agreements and cooperative action when the assets are distributed relatively equitably and benefits shared equally. On the local level, then, efficiency and equity go together. Sharing provides an incentive for improved coordination in the management of local public goods, increasing productivity for everyone.

This microeconomic focus on markets is only part of the story. Market outcomes are also influenced by the macroeconomic environment and the political economy. The latter can be enabling, enhancing the effects of formal and informal civil associations (as has arguably been the case in the East Asian success stories). But the macro environment can also damage or undo the effects of local-level social capital. Where there are good governance, well-functioning courts, and freedom of expression, local associations thrive and complement the functions of macroinstitutions. But where these are absent or function poorly, local institutions may try to substitute for them, resulting in more stress and fewer economic benefits. Just as it makes little sense to assess an investment project without looking at the sector and relevant macroeconomic policy environment, it makes little sense to consider local associations in isolation. What is needed is a balanced view of the role of the central state and local-level institutions. This point suggests that the three definitions of social capital are not really alternative views but complementary aspects of the same concept.

Social capital: an integrated view

The distinctions drawn in the literature among the three definitions are largely artificial and unnecessary. We argue that an integrated view of social capital is an important step toward measuring and operationalizing the concept. Such a view is based on the recognition that the four types of capital can coexist and are in fact needed to maximize the impact of social capital on economic and social outcomes. This complementarity applies not only across but within the types of capital. Physical capital provides a good example. The production process depends on different types of physical capital that work together (for example, machines that produce goods, factories that house machines, and

roads that transport workers to factories and goods to market). Likewise, limited substitution possibilities exist across and within types of capital.

Stone, Levy, and Paredes (1992) illustrate the complementarity between micro- and macrolevel social capital and the limits to substitution in their comparison of the garment industries in Brazil and Chile. Brazil has a complex regulatory system, with laws that are often inconsistent and very expensive courts. Businesses have learned to rely on informal alternatives in their day-to-day transactions with customers and suppliers, especially when credit is involved. Brazilian garment entrepreneurs have worked out an effective informal credit information system that places a premium on an untarnished reputation. Nevertheless, contracts remain insecure and are frequently renegotiated, even up to the moment of delivery. The entrepreneurs have therefore adopted risk-reducing strategies—such as producing only standard items and reducing the size of orders—that ultimately hinder expansion.[8]

In contrast, Chile's relatively simple legal system and consistent enforcement of contracts have made the contracting process more secure, so that few contracts are renegotiated and the default rate on loans has dropped. The comparison suggests that the extent to which informal associations can replace the rule of law and a formal court system is limited, underscoring the importance of the role of macrolevel social capital in making business possible and especially of the government's role in providing an enabling environment that is simple, transparent, and consistent.

Complementarity between micro- and macrolevel social capital not only influences economic outcomes but has a mutually strengthening effect. Macroinstitutions can provide an enabling environment for microinstitutions to develop and flourish. In turn, local associations help sustain regional and national institutions and give them a measure of stability. The key measures of successful interaction between the two levels of institutions are shared values and norms and mutual trust. These can be expressed in the recognition and acceptance, at both levels, of a common entity (which could be the state itself) or a common objective (such as peace or economic progress) (figure 2a). Switzerland, where the cantons joined in a confederation that supported the common objective of creating a sovereign state, offers an example of successful micro- and macrolevel interaction—in fact, the modern Swiss state may well be represented by figure 2b. Local institutions are not initially required

[8] A study of Peru shows that the sheer complexity of laws and regulations can undermine their effectiveness and provide economic agents with strong disincentives to adhere to formality (Soto 1989). In Peru, the complexity of the legal framework has led to the shifting of economic transactions to an informal sector that is not protected by formal law but is functional, thanks to informal substitutes.

to share norms among themselves, other than the norm that is also common to the macro institution. But cohesion is likely to improve (through bonding and overlapping norms at the local level) as institutions work toward a common objective. This mutually reinforcing interaction between the micro- and macrolevels increases the stock of social capital.

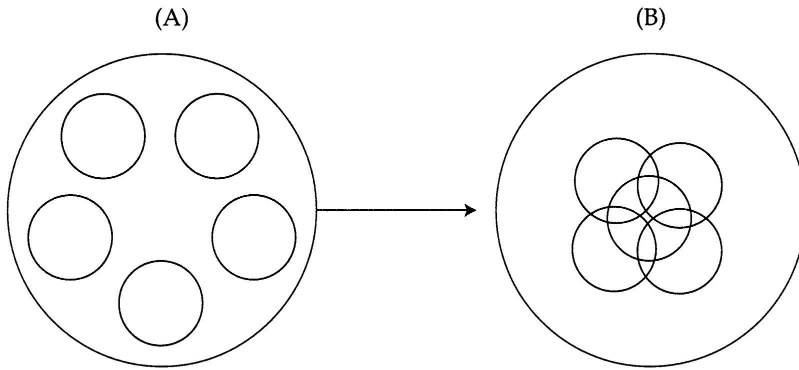
Sometimes micro- and macrolevel institutions fail to develop shared norms or overcome distrust (figure 3a). Such a situation is likely to be unstable and to deteriorate until all bonds are broken (figure 3b). If the key norm in question relates to basic human respect, the outcome is civil strife or war, as in Yugoslavia. If the distrust is in the economic sphere, the result is economic setback, as in Québec.

Among the factors that determine whether a positive (figure 2) or negative (figure 3) scenario prevails is the macroscale framework and the extent to which it is both enabling and perceived by the microscale institutions to be legitimate, representative, and fair. The relationship between formal and informal institutions also needs to be considered. At the local level, formal government and other institutions interact with a dense set of informal networks, associative frameworks, and voluntary associations. These interactions help define the constraints on and the scope of individual, household, and group activities.

The quality of the institutions themselves is also important. The abilities and effectiveness of the institutions at the macro- and microlevels (and in the formal and informal spheres) influence outcomes. Institutions need values, but they also need organizational and management capacity and communication and technical skills in order to act effectively upon these values. This observation provides an entry point for donors, at least in the positive scenario portrayed in figure 2. Support for capacity-building and training can improve institutions and promote social capital to make the positive interaction more efficient.

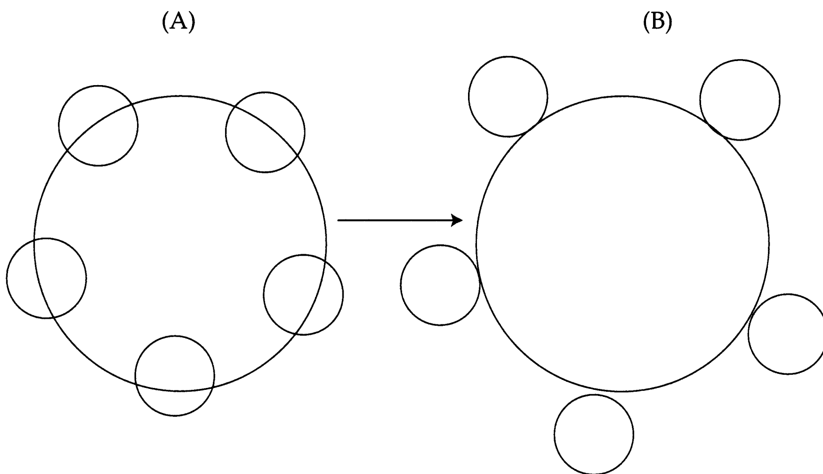
The transition economies of Eastern Europe and the former Soviet Union provide a dramatic instance of the importance of constructive interaction between macro- and microlevel social capital and the costs of the absence of such interaction. The sudden disappearance of government from many social and economic functions has eroded trust, forcing people to rely on local networks and informal associations. Rose (1995b) creates the "new democracies barometer" to measure this phenomenon. He notes that people have withdrawn from the "official" economy and begun to rely on multiple informal economies to satisfy most needs. Informal activities include growing food, repairing houses, and helping friends in return for needed assistance. In a well-functioning market economy, these activities may be hobbies (and helping out may reflect friendship), but in the transition economies, this "social economy" has developed out of necessity. In Ukraine, for example, three-fourths of the households are involved in such activities (Rose 1995a). In Russia, the transition has led to what Rose calls an "hourglass society" (Rose

FIGURE 2: POSITIVE INTERACTION BETWEEN MACRO- AND MICROINSTITUTIONS



Source: Authors.

FIGURE 3: NEGATIVE INTERACTION BETWEEN MACRO- AND MICROINSTITUTIONS



Source: Authors.

1995c). At the base is the "rich" social life of most Russians, consisting of strong informal networks based on trust among friends and face-to-face interactions. At the top is another "rich" social life and the political life of the elite, who compete with each other for power and wealth. The links between the base and the top are limited and characterized by a general distrust of the elite. Not even one in three Russians expects fair treatment from the police or their municipal offices (the post office is the most trusted institution). Sustainable development is unlikely in

Russia without a change for the better in the linkages between micro- and macrolevel institutions.

The process by which interactions between micro- and macrolevel social capital develop is dynamic. A good example is the gradual replacement, in the course of successful development, of informal associations and networks with formal administrative structures and impersonal market mechanisms. Large anonymous markets are more efficient than networks because the "best" buyer or seller may not be part of a network. If the development path is supported by a solid court system and a mechanism for enforcing contracts, anonymous markets will over time replace the "named" transactions within networks (that is, whereby the number of agents in each network is small and they know each other by name). In this situation, all participating economic agents gain.[9]

We suspect that, in principle, complementarity among different levels and types of social capital can be recognized and readily accepted. Capturing this complementarity empirically is not so straightforward, however. Should the shift from informal to formal networks be registered as declining or increasing social capital—or as a steady total amount, with one-for-one substitution among "units" of social capital? An initial step in measuring social capital could be to aggregate the indicators that have been developed at the micro- and macrolevels in an index that resembles the Human Development and Physical Quality of Life indexes. For microindicators, there are the Putnam-type examples of associational activity used by Narayan and Pritchett (1996). For macroindicators, there are the cross-country analyses of Knack and Keefer (1995, 1996) and Klitgaard and Fedderke (1995) and the macroinstitutional and trust indicators used by Rose (1995a, 1995b, 1995c). Indicators for the same country can in principle always be aggregated (abstracting from the usual issue of weighing component indexes).

Measuring complementarity or the feedback process between social capital at the micro- and macrolevels—particularly determining whether the process is additive or multiplicative—is even more difficult. The index suggested in the previous paragraph assumes an additive process. Conceptually, it is not difficult to describe a multiplier- or exponent-type process in the context of a production function, and social capital can be factored into the equation in much the same way as technology. In this case, certain types of social capital enter the process additively, but others have multiplier effects. The

[9] Under the narrow definition of social capital, this phenomenon registers as a decline in social capital. But using the broader concept, the same phenomenon emerges as the substitution of one form of social capital (the rule of law) for another (horizontal associations).

empirical estimation of such a function is still a distant objective, but a conceptual start can be made by thinking through what mathematical form the function will take. Theoretical conceptualization then guides the empirical investigation, and the results of the empirical research feed back to the theoretical constructs and help validate, reject, or refine them.

Appropriate social capital

The recognition that all different types of social capital are necessary to produce optimal results (and can in fact be mutually reinforcing) has a further implication—namely, that an "optimal mix" of types of social capital exists. This paper posits that the optimal mix is defined in terms of an objective function and that the obvious candidate is the maximization of economic outcomes—a process described by the macroeconomic production function and constrained by resource endowments.

This proposal is akin to arguing that we can identify an "appropriate technology" for a given country that will maximize returns to the other factors of productions. It takes into account the nature of complementarity and substitution across these factors. A nuclear reactor, for instance, is not appropriate technology in a country that lacks the human capital to manage and maintain it. In practice, appropriate technology is not identified with formal economic models but is based on ad hoc insight and a thorough knowledge of a country The same is true for appropriate social capital, which also enhances the efficiency of the combination process of the other factors of production. In Putnam's words, "Social capital enhances the benefits of investment in physical and human capital" (1993, p. 36). In other words, it is not just an input into the production function but, like technology, a shift factor (or exponent) of the entire production function.

The key to determining what constitutes appropriate social capital is data—on both the composition and the level of the total stock. This information needs to be assessed in light of the other types of available capital in a country. We think that the most useful way to advance this notion is to undertake case studies in selected countries where a good bit of information on microinstitutions is already available. These case studies would investigate the interaction of the institutions with other organizations and levels of government and determine which economic processes they affect (as well as the levels and types of human, physical, and natural capital involved). However, to be truly useful in the context of this discussion, the case studies must be guided by a methodological framework that facilitates the measurement and analysis of findings and assesses testable hypotheses.

Summary and conclusions

This paper argues for an improved understanding of social capital by putting forth two propositions. First, it suggests that the distinctions drawn in the literature by competing definitions of social capital are largely artificial and unnecessary. They detract from the fact that different types of social capital coexist and can be mutually reinforcing. We propose an aggregate formulation (if not a single index) of social capital and a continuing investigation into the additive and multiplicative nature of the interactions among the different types of social capital. Second, we argue that there is an appropriate level and composition of social capital for a given country at a given time. This level takes into account complementarities with other types of capital. Its composition is likely to change over time, but the total should increase through accumulation.

We hope that the discussion of the two propositions advances our understanding of how social capital contributes to economic and social outcomes. While these proposals introduce new demands on both conceptualization and measurement, they also open the door to bringing together data sources and approaches to data collection.

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ISBN 0-8213-4562-1