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Social Capital and Social Learning in a Full World
Rod Dobell[1]

1. Preamble – Social Capital in Governance

This symposium poses the question "What are the contributions of human and social capital to sustained economic growth and well-being?" Inclusion of the word "sustained" forces consideration of possible ecological limits to human activity, and hence of the contributions of human and social capital to continuing well-being through the reconciliation of economic growth with such ecological limits.

The title for this session goes further, focussing on the role of social arrangements in promoting the sustained well-being of individuals, not just as economic agents but as citizens in a full world,[2] presumably through the reconciliation of continuing economic growth with both social obligations and ecological limits.[3]

The fact of a full world gives special weight to the role of social capital in governance, precisely because it forces appeal to explicit processes of deliberation and coordination, rather than reliance only on the unguided aggregation of uncoordinated individual decisions or actions, in containing the overall impacts of human activity. There are other social decisions where the necessity for deliberate coordination of human activities may appear to arise, but many of these are contested. In the case of human activities with serious impact on stocks of natural capital in complex and uncertain natural systems, the necessity is clear, and little questioned. In the full world, cooperation is essential; social capital, shared values and accepted ground rules are all important elements in building social arrangements which contribute to achieving such cooperation in pursuit of sustained well-being.

The significance of such questions can be illustrated by reference to a concrete local example.

As I left for this meeting, my email system was filling up with messages concerning the most recent crisis in the continuing "war in the woods" in British Columbia. Secret negotiations between forest companies and environmental groups about a possible logging moratorium

on the central and north coast of the province were somehow disclosed to various media outlets and strongly condemned by unions, workers and leaders in coastal communities. But the motivation for such negotiations is clear.

> Canadian forest companies stand to lose $600 million in annual sales from Germany alone unless those operating on the B.C. Coast reach an accord with environmental groups, Germany's two major paper industry trade associations said Thursday… . The impact could be immense. In both the U.S. Pacific Northwest and Clayoquot Sound harvests were cut by 70 to 80 per cent to end environmental conflict. (*Vancouver Sun*, March 17, 2000)

> Weyerhauser vice-president Linda Coady, who is chairing a committee of the six companies meeting with the green groups, said the industry realizes the conflict must end… . Greenpeace market campaigner Catherine Stewart said the eco-groups' markets campaign was responsible for the change in attitude by the companies. Coady said other stakeholders – from the government to local communities – have not been involved because the companies view the conflict as between themselves and the environmentalists. 'We recognize that we can't make decisions about public land in British Columbia … but we can … see if there isn't some creative way we can solve these problems.' (*Vancouver Sun*, March 16, 2000; see also a follow-up editorial, June 6, 2000)

Similar examples abound. For a couple of years recently, an academic panel in British Columbia explored concepts of sustainable forestry and implications for economic analysis; the resulting collection of papers was published by UBC Press 18 months ago (Tollefson 1998) as one more academic contribution in a continuing stream of commentary emphasizing problems of governance in an industry in profound upheaval. For close to four years, a panel of experts established by the Royal Society of Canada's Global Change Program examined the impact of global change on ocean systems and marine fisheries. That report has just been published by the National Research Council Press (de Young, Peterman et al. 1999), again in the context of massive upheaval and crisis in the industry and on all three coasts of Canada as economic interests clash with ecological limits and proposals for community-based management multiply. Since about 1990, an extensive 10-country, multi-university research project has been exploring the evolution, over four decades, of social capacity, especially at an international level, for management of global atmospheric risks. The resulting two-volume book on social learning in several arenas was published by MIT Press early this year (Social Learning Group 2001).

The link from social arrangements to economic growth, and more fundamentally to sustained well-being of citizens, cannot be more starkly illustrated than in any of these examples representative of dramatic institutional change everywhere.[4]

The reconciliation of all the conflicting interests and perspectives involved, or more generally the role of social capital in deliberative processes aimed at the resolution of such dilemmas, is a central issue in this review.[5]

Thus, sustained economic growth (and well-being in general) now depends crucially on social capacity to arrive in some reasonably timely way at reconciliation of many conflicting readings of the state (and nature) of our social (and natural) world system, and at consensus on collective action required to respond to the changing state of that system (usually through measures, collectively agreed upon, to influence or shape the behaviour of individual actors – people or agencies).

Such reconciliation depends pivotally on individual attitudes, values and beliefs, and on social arrangements and social processes such as deliberation and dispute resolution to bring coherence to those arrays of individual positions. It also depends on the presence of a whole range of individual and social resources which are in the nature of stocks or assets (capital) that can be built up, nurtured, drawn down or destroyed in various ways over various time scales (Dobell 1995).

2. Introduction and Outline

In this paper, I try to suggest a few key elements of a research program for the OECD to consider in studying the role of social arrangements in promoting the sustained well-being of individuals and communities, and offer a few pointers to literatures (on the fringe, or outside the usual bounds, of economics) which might contribute to such an examination. The discussion is speculative, in no way pretending to be definitive either empirically or analytically. It does, however, focus on links involving social arrangements and human well-being, suggesting some hypotheses that might lead to fruitful explorations, either analytical or empirical. As implied by the title, the paper seeks to underline the importance of the "full world" setting, with its need to take into account many forms of capital, many forms of social resources, and the importance of social learning as one route to nurturing and conserving social as well as natural capital.

Such a research program must be, first, comprehensively interdisciplinary. It must also be intrinsically a systems model, with explicit consideration of the key systems and complex dynamics of a full world. In that setting, complex human and social systems whose laws of motion we can hope to establish – or at least influence – for our own purposes must be seen as sub-systems of overall natural dynamical systems evolving according to laws of motion over which we as

humans have no control, or, at best, only very limited, often ill-understood, influence.[6]

Social arrangements may be studied in terms of either structure or process. Section 4 outlines a sketch of **structures** in which questions about social capital arise, and section 5 provides a sketch of social **processes** in which related questions about social capital also arise, although differently.

All these questions are posed against a backdrop of individual beliefs and values taken as given, shared to differing degrees by individuals in different communities. But a central question in thinking about social capital is precisely how processes of social learning shape both beliefs about the world and values guiding action in it, and drive convergence toward common sets of shared beliefs, again to differing degrees in different communities. The body of this paper closes with brief reference (in section 6) to this feature of social capital: how it might emerge from evolving experience with deliberation and shared decision making in formal systems of governance as well as less formal civic associations.

The story here is complex, trying to weave together a large number of distinct strands. Let me try to outline the central thread. In section 3, the case is made that the pursuit of well-being for the citizen demands attention not just to economic systems and economic resources or capital, and social systems and social capital, but also ecological systems and natural capital. The suggestion is made that ecological sustainability, along with social justice and economic prosperity, is a necessary condition for the well-being of citizens. All are essential to sustained well-being; the role of social arrangements in promoting well-being must be examined in that light.

In section 4, the key point is the emergence of a vast array of organizational arrangements and agencies, established for instrumental purposes, to serve the interests of people interacting in the context of a more personal civil society. It seems fruitful to identify the distinction between the former cluster of social contrivances constructed for instrumental purposes and the latter concept of civil society as the space outside such formal structures with the distinction proposed by Habermas (1984) between System and Lifeworld.[7] But in any case, the point is that the governance processes pursued in the former structures are quite different from the activities of individuals in their daily roles. In the former roles, people act officially, as agents, with positional responsibility. In the latter, they act individually, as principals, with personal responsibility. The bodies of experience built up; the manner in which that content is shared; and the expectations and norms of conduct (i.e. the accumulated stocks of social capital) might all be expected to be quite different in the two settings.

Section 5 offers a different perspective on the same idea. It suggests that it is necessary to distinguish citizen involvement in the abstract

processes of System from citizen engagement and commitment in the concrete processes of collective decision and community-based risk management in Lifeworld. It suggests that successful experience in Lifeworld builds bonding social capital, while successful experience in System builds bridging social capital. Addressing the dilemmas of ensuring faithful interpretation and realization of intentions in System through action in Lifeworld – pursuing subsidiarity down through all the cascades of responsibility in systems of tiered governance – entails what Woolcock elsewhere in this volume suggests we might call linking social capital. Empirical work might find hypotheses to discriminate among these different functions.

Section 6 suggests that it would be fruitful also to distinguish the building of social capital and confidence in institutions through experience with the dynamics of decision and capacity building in System from the emergence of cooperation and confidence in indirect reciprocity through repeated interaction in Lifeworld. Thus, as we think about governance and the pursuit of sustained well-being for citizens, we are led to ask whether the experience of reciprocity in neighbourhoods or nations can somehow be transferred to citizen confidence in their control of processes and decisions in abstract virtual communities and global System (embracing both global economy and global state as well as global non-state, non-corporate organizations).

Section 7 tries to draw together some conclusions for elements of a research program.

For present purposes, then, it is important to distinguish many different components of social resources:

- financial and physical capital (hardware)
- tradeable intellectual capital (information and explicit knowledge – software – intellectual property)
- human skills, tacit knowledge or wisdom (wetware), which are inherently embodied in a single person (which we might therefore call human capital)
- natural capital, a highly complex set of resources whose valuations must reflect the overall functioning of ecosystems
- social, cultural or institutional capital, here taken (following Putnam, Woolcock and others) to be not embodied in individuals but a property of relationships among individuals, agents and groups – a network property reflecting shared values, a convergence of beliefs and a degree of mutual confidence in generalized reciprocity that facilitates collective action.

The key point in this setting is that the social resource we wish to define as social capital should be considered an emergent property of the system as a whole. For purposes of this paper, at least, social capital

is thus clearly distinguished from human capital. Individual investment decisions govern the accumulation of human capital, whether this shows up as skills in the formal economy, commanding tangible monetary rewards, or individual skills in participation in networks and social structures, commanding tangible or intangible returns in terms of financial reward, political influence, social success or mating opportunities. (This idea that learning, over a lifetime, in formal and informal institutions, to be a citizen and a participant in the community as well as a worker or participant in the formal economy has both private and social payoff is, of course, not new.[8])

Thus, the issue of human capital is not only a matter of investment in occupational or professional skills and productive capacity; it is also investment in understanding and social skills – individual capacity to participate in ongoing social processes and cultural practices, perhaps particularly around reconciliation of risk perceptions. There is a substantial ongoing research agenda to be pursued in connection with this topic in itself, as the paper by Ed Glaeser in this volume makes clear (see also Tansey and O'Riordan 1999). The issue of social capital is distinct from even this social aspect of human capital, however, and relates to the features of a society which make it possible to arrive at collective decisions which will stick, which will be implemented, and which will command continuing allegiance and hence see continuing compliance.

The emergent character of social capital rests substantially on the importance of shared values, shared understanding, shared language, coherence of beliefs across individuals. Anthropologist Edward T. Hall has referred to "high context" and "low context" societies or groups (Hall 1976). Convergence through learning processes and social interaction to a "high context" institutional setting economizes on transactions costs, supports faster and more effective dispute resolution, and leads to greater support for community decisions. (Whether these are good or right or morally justifiable decisions is a different question.)

Thus, it is the formation of human capacity and cultural understanding, on the one hand, and social capacity to facilitate constructive interactions among individuals and to support continuing deliberation in a democratic and inclusive manner, on the other, that will prove essential to both continuing economic growth and ecological sustainability. The role played by informal continuing education and formal public education as part of social support for deliberative and inclusive social decision processes will be key in itself. The hypothesis is that differences in social and economic performance across countries will increasingly reflect differences in community capacities to arrive at timely decisions amicably, effectively and equitably, and to implement decisions speedily, with reciprocity, trust and confidence. Respect for a broadly interpreted "rule of law" extending

well beyond protection of formal property rights to embrace a full set of assurances as to voice and opportunity in social as well as economic systems will probably prove essential here. As we study the role and significance of social capital, we need to look more closely at these social structures and decision processes.[9]

This orientation entails emphasis on governance broadly interpreted, not on the quality of government services or the security of property rights. Indeed, to the extent that social capital facilitates effective social discourse in a changing world, it may be directed toward abridging and constraining the exercise of individual property rights. In a world of inevitably and profoundly uncertain natural systems, there cannot be certainty of tenure or secure property rights as conventionally understood – there can only be secure rights to participate in legitimate social discourse and deliberation around such rights. Thus, as noted above, we probably need to rethink what we should mean by "the rule of law" in a complex and changing world where many forms of capital matter are involved in shaping the future.

It is perhaps worth emphasizing explicitly that such decisions are inherently group decisions, not individual choices about participation, investment or other conduct. There are, of course, many theoretical and empirical challenges around such individual choice questions, but the focus here is on the inherently collective features of group decisions about measures or instruments to influence or regulate those individual decisions, and the extent to which there is a shared body of core values and common understandings to set the social context within which individual decisions are shaped and taken.

3. A Full World

The underlying preoccupation in the full world as described in note 2 can be formulated as concern with the continued integrity and health of the ecosystems which make up the biosphere, or in other words with stocks of natural capital. Much current debate can be seen as contesting whether the formal institutional mechanisms of the economy are appropriate for managing human activities with significant cumulative ecosystem impacts, or whether other social arrangements are essential. This paper reflects the view that a paramount feature of social capital, perhaps different from its manifestation in dense networks of civic association, is its link to accepted social processes for governing human activities within the limits of natural systems.

Thus, we are concerned here with social capital in governance broadly conceived. This interest entails seeking more general measures of government performance than the economic statistics that have usually been emphasized, but more fundamentally it leads to a concern with community success in managing dispute resolution, the reconciliation of conflicting perspectives both on the challenges facing com-

munities and on appropriate collective responses to them. The need is for continued individual action that leads toward realizing collective intentions in an uncertain and changing world; in particular, a key concern is with social capacity in managing the essential but wrenching transition to sustainability in human activity.

The particular lessons which the full world context dictates for study of social capital, then, are:

- Stocks of natural capital, webs of ecosystem structure and flows of ecological services are crucial in supporting human life and individual well-being. In general, these stocks, webs and services are unpriced and unrecorded in any conventional measures of economic growth; other social arrangements for monitoring and decision making are essential.
- The ecosystem structures that include natural capital and ecological services are complex, changing, uncertain and vulnerable. These features have to be reflected in social decisions attempting to contain the impacts of human activity within the limits of ecosystem capacity to absorb them, not just in aggregate but in activities at local or community levels.
- There is a special role for social capital, in the sense employed in this paper, in managing access to natural capital and shared ecosystems and in containing the extent of human impacts. Indeed, it is precisely this role which is the focus for much of the best-known empirical work on the formation of social capital and the role of institutions (Ostrom, Gardner and Walker 1994; McGinnis 1999).
- There are many forms of scarce and valuable social resources, and these are "owned" in many different ways; access, use, management or property rights relating to these resources are all important elements of social arrangements.
- In particular, there will be special burden on social arrangements which support the continuing adjustment of such rights of access in light of emerging new knowledge about ecosystem states and risks (Bromley 1991; Hanna, Folke and Mäler 1996).
- Social capital, in the sense above, relates to inherently group decisions, to the norms and shared understandings which set a social and economic context for individual optimizing decisions driven by self-interest as interpreted by the individual.

4. The Structure of Social Arrangements – Emergence of System

Structures of Governance

Social capacity demands instruments beyond the informal relationships of civil society. Figure 1 expresses the notion that formal organizations are created for instrumental purposes, in the service of people

and civil society. The diagram also suggests that it may be fruitful to distinguish institutions as norms, conventions or rules in use from the organizational shells in which they might be embedded. There is a need to distinguish the people from the structures, the personal Lifeworld from the formal System (Habermas 1984). In particular, it is important for us to separate the organizational reality from the romantic conceptions. Government agencies are not "democracy"; transnational corporations are not Smithian economic agents and the integrated global economy does not constitute a Smithian "market" with any optimality properties of the original Lifeworld counterparts. Similar concerns are arising with the large non-government organizations sometimes confused with the concept of networks which has emerged to complete the triad of major communications structures or organi-

Figure 1

Systems context and institutional structures
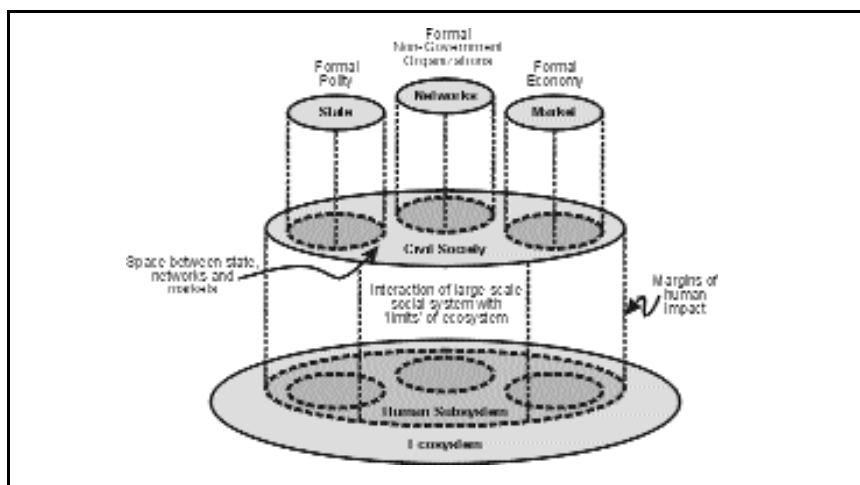
zational modes (Ronfeld and Thorup 1994).

These formal institutional mechanisms that were intended to serve an instrumental purpose can subsequently, in many different ways, assume a life of their own. Problems of agency arise everywhere (Dobell, Slaco and Longo 1999). (The "intrusion of System" refers to widespread loss of a sense of agency with respect to these instruments. Between individual intentions and individual action intervenes a whole apparatus of organizations in which people act officially, as agents, not personally, as principals, and these organizations increasingly seem to be beyond reach.) One key feature of social capital in this formal organizational setting might then be its contribution to restoring to the citizen the sense of agency lost in relation to these formal structures and the processes (globalization, technological change,…)

that are driven by the decisions made in these formal structures.

There is an important question here, dealing with parallel concerns about mechanisms of governance in each of these organizational or institutional settings (Williamson 1996). Research might fruitfully draw on the parallels in current discussion of problems of legitimacy, accountability and transparency in respect of government and quasi-government institutions, in respect of non-government institutions, and in respect of corporate governance.[10] With respect to the first, there is a tradition going back many years to Weber (1968) in recognizing the possible difficulties for citizens or their representatives to maintain control over their agents in the bureaucracy. With respect to the last, there is also a long tradition, going back at least to Berle and Means (1932), in worrying about the loss of control by owners to managers.[11] Concerns about the legitimacy of non-government networks or civil society organizations are more recent, but growing. See, for example, the questions raised about the "democratic deficit" by Smith and Naim in their popular booklet *Altered States* (2000, p. 63) or, in the special case of cyberspace, Fishkin (1999).

The point here is that we must distinguish between the formal organizations and their functioning on the one hand, and the norms and conventions that they are intended to represent, on the other. In contemporary discussions of governance, much reference is made to shifting modes of consultation, to involvement of stakeholders and non-government organizations in the decision processes of governments, corporations and intergovernmental organizations. These are important developments; in particular, establishing through governments the essential social frame around corporate conduct and commercial (trade) relationships is absolutely vital. But none of this is the same as effective involvement of civil society. Like "sustainable development," the expression "civil society organization" should perhaps be treated as a creatively ambiguous oxymoron. The formal non-government organizations, associations and networks that are the subject of so much current discussion are not fruitfully, in my view, to be considered part of civil society. They may remain closer to the instrumental roles for which they were designed; they may offer their principals a greater sense of involvement and agency than do either governments or corporations, but they are still formal institutions. Whether they constitute a proper link in the social coordination of individual activity on the ground or at sea depends on whether they are functioning properly as instruments for civil society.

Thus, to sum up this introductory scan, it can be argued that social decision processes face blockage or breakdown in formulating necessary responses to external shocks or internal change. With respect to the traditional institutions of the state, or formal polity, there is a loss of confidence and trust. Representative democracy seems to be in cri-

sis as the scale of governance challenges increases. Neither direct democracy nor deliberative democracy seems to offer a ready replacement; whether the information revolution will promote one or the other seems unclear. The role of social capital in facilitating such decisions is a key part of its contribution to the following questions:

- How might one distinguish operationally the rules, norms, values and other aspects of organizational culture from the shells in which they operate (Vincent Ostrom 1999)?
- How to make fruitful use of the distinction between civil society as Lifeworld and formal System as the sphere of action for agents, not citizens as ultimate principals?
- How to define the problems of agency which emerge and relate these to governance mechanisms within each category of organization?
- How to address and mitigate the measurement dysfunction problems that arise when public debate centres on the formal economic component of the system, particularly when its modes of operation are viewed as beyond control by civil society (or at least the technical issues of architecture and regulation displace the concern for values-based control by citizens)?
- How to distinguish fruitfully the personal relationships of civil society from the formal "civil society organizations" (CSOs) which are simply another form of social arrangement or institution created to serve human purposes as the prior forms (state and corporation) seem to slip out of control?
- How to track effectively the changing allocations of responsibilities among agencies and between Lifeworld and System?

Global Citizenship and National Difference
Tiered governance and subsidiarity complicate this common problem of linking global norms to local action. As deliberative processes recognize the importance of spillovers and interdependence, there is a tendency to escalate the scale (and the level of abstraction) at which issues are addressed. Membership in various groups, from kinship groups through neighbourhoods to nations and international coalitions, conditions entitlements to various bundles of rights. Claims of eligibility for membership thus become contested.[12] As we move from kinship claims toward group selection or nationhood claims and beyond, we move away from bonding social capital toward more general forms of interaction and recognition in a global or virtual setting. Conversely, as we move down toward more tightly defined groups, direct interactions, recognition and reciprocity grow; acceptance of mutual claims and mutual obligation increases. The dark side of social capital shows itself: membership implies exclusion just as surely as it implies inclusion. Study of social capital should address directly these

questions that arise as global cosmopolitanism contends with national differences. Can an appropriate radius of trust or radius of concern vary with the nature of the need expressed? Can there be reconciliation of universal values with distinctive community bonds? In the structures described in the previous section, civil society is the home of "nations"; formal System is home for states, including the global state, and for the global economy, and, increasingly, for civil society organizations. So it is necessary to look at different forms and functions of social capital in different components of the structures above.

Basic citizenship at the global level then might include core claims to assured fundamental human rights, fundamental democracy and fundamental economic freedoms (including perhaps individual entitlements to an equitable share of the returns to the increasingly scarce and valuable resources of the global commons, the common heritage of humankind). As one moves toward groups more tightly knit, with greater intensity of social networks of interaction, reflecting greater stocks of bonding social capital, there is greater acceptance of mutual claims and mutual obligations, as noted above, with corresponding exclusion of others outside the bounds of the group as it defines and perceives itself. So long, however, as these claims represent simply additional claims within the more tightly defined group, without compromising or jeopardizing the basic body of claims accepted within the less tightly defined group, there is perhaps no injustice, no downside to the increase of bonding social capital.[13]

There are many expressions of this idea of the essential distinction between the individualized, abstract, global system and the more bonded personal system. Dahrendorf emphasizes it on many occasions, for example:

> In one sense, democracy and the market economy are desirable precisely because they are cold projects which do not make any claims on the souls of men and women. But I appreciate, increasingly, perhaps, that so far as human society is concerned, this is not enough. We need conflict, we need change, but we are threatened with anomy. This threat cannot be averted by normal politics. People need ligatures as well as options to enjoy full life chances, and ligatures require the variety of autonomous associations that we call civil society. (Dahrendorf 1997, p. 48)

Charles Taylor has addressed the issue in many ways, asking, for example, "Why do Nations Have to Become States?" (Taylor 1979). Will Kymlicka's current work emphasizes the compatibility of what he calls Enlightenment cosmopolitanism – the global order in which individuals are organized for maximum freedom as citizens of the world,

bearing common basic rights – with culturally based nationalism under which a richer, but not necessarily incompatible, body of rights may be claimed (Kymlicka 2000).

In the early-to-mid 1970s period that gave rise to concerns about excesses of democracy and problems of ungovernability, as Berman reminds us, there was discussion of this same worry about the disjunction between an abstract and impersonal global view (what Berman calls biosphere politics) and a grounded, rooted neighbourhood view that Berman calls ecosystem politics (Berman 1984).[14]

5. The Policy Cycle as a Reflection of Social Arrangements

From the point of view of process, rather than structure, somewhat the same distinctions as in the previous section emerge. Figure 2 displays, without implying anything about observable stages or actual sequencing of events in a real world, the components of the standard policy cycle, conventionally understood. Again the intrusion of System is illustrated: only in the small portion of the diagram around 6 o'clock are we representing individual action and personal engagement; all the rest of the action is in one way or another in agencies, within formal organizations operating on the basis of authority. This more-or-less standard view of the policy cycle (as a conceptual framework through which to organize the literature, if not as a chronologically reliable model of the policy process itself) is here called the commitment-compliance cycle to emphasize the role of ideas as opposed to bureaucratic mechanism.

For expository purposes, four main phases in the cycle can be distinguished:

- Awareness and assessment of the state of the world and the consequences of action in it, leading to identification of an agenda for further action (the stage of evaluation and agenda formation, from 6 o'clock to 9). It is important to emphasize here the vast extent of current work on measures that might serve as a better basis than we presently have for assessing and reporting on well-being and progress toward sustainability, taking into account the much enlarged array of stocks and services to be considered in the full world (see Prescott-Allen (2000) or the extensive links listed by the International Institute for Sustainable Development (2000) as well as the references cited by Osberg and Sharpe in their paper in this volume.) An implication from this work is that it is not as important to have more precise measures of the impact of policy or investment on a subsidiary indicator like economic growth as it is to have some measure of impact on fundamental indicators of well-being, whether or not any single aggregate ("heroic") indicator can serve adequately

for this purpose.
- Development of consensus and formation of intent to respond to perceived problems through agreed action (the policy formation process, the traditional concern of policy analysis, from 9 to 12).
- Following the development of consensus on intent, or the declaration of intent, or the formation of a covenant to act, the process of refinement of intent into concrete operational mandates for organizational and ultimately individual action (the formal implementation phase, from 12 to 3).
- Realization of intent through individual action in compliance with

Figure 2

Commitment-compliance cycle
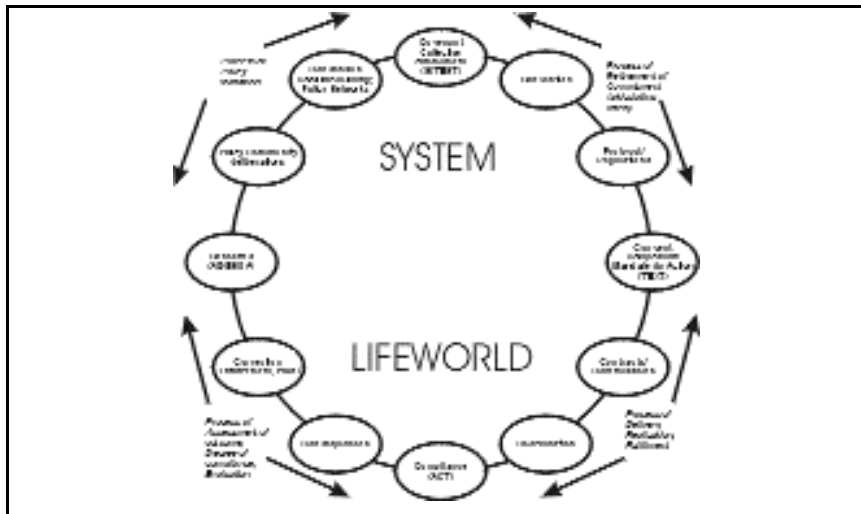
mandates (the delivery phase, from 3 to 6).

Again it is clear, as in the previous discussion of structure, that representative involvement in the formal processes and institutions of governance should be distinguished from individual engagement in action that complies with mandates and realizes the collective intent.[15]

The "cooperator's dilemma" is one version of the problem of achieving a cooperative optimum in the face of conflicting short-term individual incentives. A substantial literature explores this dilemma (see, for example, Lichbach 1996); resolution seems to rely upon notions of trust and reciprocity rather than formal structural innovations. The role of "linking" social capital may be central here, as one moves from abstract higher level argument and agreement to more local action.[16]

With a focus on individual interpretation of the degree of compliance

and the corresponding action necessary to realize collective intent (the "performer's dilemma"), there may be more emphasis on the more subjective aspects of interpretation of, and fidelity to, the text than on the more objective and structural issues of economic incentives, rewards or claims. This distinction between the subjective and objective issues in implementation and realization may be closely related to alternative cultural approaches to concepts of rationality. A recent speech by Deputy Secretary-General Seiichi Kondo of OECD picks up this question of discretion in interpretation (Kondo 2000).

But the intrusion of System, and the felt loss of human agency with respect to instrumental organizations and structures, make it difficult to achieve any recognized legitimacy for such variations or discretion in interpretation. Problems in achieving effective subsidiarity are inevitable. While it is clear that the abstract systems of individualized global civilization do not in themselves meet aspirations for well-being, for present purposes it is even more crucial that they are inadequate to deal with these problems of subsidiarity and implementation in the face of continuing uncertainty. One cannot draft clear and unambiguous rules or policies that will cover the full range of circumstances encountered in a changing world, as both Ashby's Law of Requisite Variety (Ashby 1952) and work on street-level bureaucrats (Lipsky 1971) or bureaucratic justice (Mashaw 1983) make clear. One has to rely on context and social capital.

The role of social capital and community norms in achieving loyalty to the intent, when fidelity to the text cannot be maintained, raises questions of incentive structures. Recognizing that all use of governing instruments may be viewed simply as alternative means to signal to individuals the social consequences of their individual actions, one is led to consider other means to communicate these consequences, and to ask whether ultimately "getting the incentives right" becomes redundant because the spillover consequences have been fully internalized in individual belief systems, so that "the motivations are properly aligned."

That is, everything from noon to 6 o'clock on the Commitment-Compliance Clock in Figure 2 is an attempt one way or the other to achieve the realization of policy intentions by shaping the discretionary actions of the individual. It is interesting how many ways this question of discretion and responsibility in the interpretation of texts arises. The choice of governing instruments can be interpreted as selection of alternative ways to communicate to individuals the social significance of consequences arising from their actions. Prices, taxes and subsidies signal directly the costs or returns that actions may bring. Regulations signal probabilistic costs, with the expected values dependent on the outcomes in a long chain of contingent events from detection of non-compliance through to prosecution and penalty.

Suasion, challenges and other campaigns for voluntary action all try to lead where sticks might not. But all such instruments work against a backdrop of norms and expectations built up from history and experience, and are not easily changed.

So while the "cooperator's dilemma" involves legitimacy; the "performer's dilemma" perhaps involves authenticity. In the more abstract setting, social capital entails confidence in institutions, built up through successful record in epistemic communities. Issues of shared language and bridging social capital dominate. At a personal level, in civil society, the concern is more with personal trust or bonding capital. But one may note the interesting feature that even at the more abstract level, issues of bonding social capital may arise – the appearance of increasing effectiveness in epistemic communities as experience accumulates may be one example. And communities of interest may also operate in formal economies, even as virtual communities or communities of interest, with bridging but not bonding. Edward T. Hall's work on "high context" communities (1976) is again relevant here.

Thus, another research question arises in assessing the role of social capital in governance. It may be easier to exploit creative ambiguity to achieve agreement by escalating conflicts to more abstract levels as argued above, but there one may have formal representation of parties emphasizing formal, short-term, conflicting interests, and only bridging social capital as a resource. On the other hand, though the concrete costs and risks of implementation may be more clearly seen by citizens directly engaged at the local level, there may also be a greater stock of bonding social capital to fall back on. It may be easier to see shared interests, relying on friendships and loyalties to overcome the recognized immediate costs and promote greater cooperation and greater engagement in service of a longer term vision. Where, in the end, is one likely to find the clearer sense of long-term enlightened self-interest?

6. Social Learning – Changing Beliefs and Changing Context

> Human intentionality is not optimally productive and effective until it has been acculturated through a long educational process, by which the capacity emerges for cooperative social action based on a high degree of shared perception and understanding, or knowledge. (Freeman 1999, p. 163)

We also need attention to the public space where ideas and beliefs themselves are disputed and evolve. It is important that we look to processes of reshaping the ideas and values which flow into forming collective intentions.

The previous two sections have examined structures and processes

that establish a social context for individual actions and individual decisions (including decisions about the formation of human or other forms of capital to improve participation in ongoing social processes). They assumed that individual action is shaped by bringing together individual beliefs about the nature of the world and how it works with individual norms to guide action and conduct within that world. One approach to assessing the stock of social capital might be to examine the extent to which such beliefs and norms are shared, held in common by individuals.

The context within which individual decisions are made can thus change in two ways: 1) as the proportions of individuals holding particular beliefs or norms vary within a particular population, the degree of sharing or consensus around particular values varies; and 2) as the particular values and beliefs of the individuals in that population themselves change.

So we may ask how social capital in a particular community may change through either of these mechanisms. On this question, the remarkable review of the concept of social learning prepared by Ted Parson and Bill Clark for the Social Learning Project (Parson and Clark 1995)[17] offers a good starting point.

That project (Social Learning Group 2001) documents specific cases illustrating processes by which evolving knowledge has moved into collective action to respond to changing perceptions of global atmospheric risks. Social learning reflects learning by doing through experience in successful group processes, inter-subjective communicative action (Habermas 1984).

A widening body of work on experimental economics (a recent article, Wedekind and Milinski (2000), cites a number of references), set in the growing understanding of the dynamics of complex systems, illustrates both the extent of differences in norms of conduct, and the dynamics of processes by which groups holding such norms or beliefs may "colonize" populations initially guided by shared allegiance to different norms or beliefs.[18]

This work on cellular automata seems to link interestingly with recent work portraying individual understandings of the world as captured in chaotic attractors in neural networks (Freeman 1999), and shared such understandings as memes (Aunger 1999). We then see the possibility of extending not only our process diagram to include the dynamics of evolving ideas driving changes in the formation of collective intention, but our structural or institutional diagram to include a universe of individual ideas, shared ideas (memes) and cultural evolution along with the natural world of genes and biological evolution. The link between the development of social capital and the effectiveness of the institutions by which we attempt to exercise agency then

becomes an obvious topic for research. We need to explore the way in which all of these institutional arrangements or social contrivances mediate between our beliefs and our actions in the world.

A particular question to explore is the shifting balance between belief in immediate exchange, direct reciprocity and legal contract on the one hand, and confidence in deferred return, generalized reciprocity and social contract, on the other, as the appropriate vehicle in the pursuit of enlightened self-interest. Reliance on the former leads to concern with explicit incentives and immediate rewards; reliance on the latter leads to less tangible motivations and confidence in the promise of returns through improved social functioning and future recognition of claims on a sustainable society.

Particular interest attaches to short-term versus long-term interpretations, with much of the interest in "taking the altruism out of altruism," recognizing that trust may be merely an informed calculation of self-interest based on confidence, formed by experience, in generalized reciprocity.

Educational activity, the promotion of public understanding, thus has two goals. First is a sharpened visioning and signalling of the likely longer term consequences of individual action in its collective context. Second is the development of an individual moral code which can serve to guide individual interpretation of collective intent as set out in the various texts and formal mandates emerging from global processes of policy formation. That is, individual beliefs, taking into account the anticipated responses of others, about the long-term consequences of adopting particular codes of conduct may be influenced both by experience and by conscious deliberation, with or without analytical support.

On this matter of social learning, I cannot resist reference to the problems of subsidiarity again, but in a substantially more speculative fashion. In his review of Susan Blackmore's book, *The Meme Machine* (Blackmore 1999), Robert Aunger of King's College Cambridge refers to the central role of neuronal networks and suggests:

> In effect, the physical network of neurons is trained by the environment rather than predetermined by genetic instruction [coding] … . [T]he larger the brain becomes, the more room there is for a second source of control of information processing, and hence of behaviour. As a matter of fact, it is not even in the interest of genes to control neuronal activity at such small spatial or temporal scales. If they did, learning would be ruled out, and so would the particular genius of the brain: its ability to respond more quickly to environmental changes than genetic mutation would permit. Thus, by handing over control of learning to neuronal networks, genes may have created the opportunity for a competitor to evolve … . But the gene-

meme conflict would also leave room for adaptive, independent decision making – human agency. That message should comfort just about everyone. (Aunger 1999, pp. 39, 40, 42)

It is standard imagery in economics and in the literature on spontaneously emerging or self-governing organizations to visualize "institutions" as mediating between individual preferences (exogenously determined) and the naturally determined dynamics of resource systems. In the present discussion, we see the possibilities for social learning to drive cultural evolution and reshape ideas (in the world of memes), which are then linked through complex processes to individual action (in the world of genes). Aunger's notions of the tension between the purposes of genes and those of the memes created as agents to manage the finer grained adaptations to a changing environment bring us back in intriguing ways to the questions of agency, and agency gone wrong, which have recurred throughout this note. Even more suggestively, perhaps, we might view Figure 1 as having added, through cultural evolution, a top layer, a world of memes. These we humans, as part of a complex social (including economic) system, have coded into much firmer structures, the organizations which we have called System, or bitsphere, intended as an instrumental institutional framework to facilitate interaction within the biosphere, and to mediate between ideas and action in the natural system, the world of genes. Instead of institutions to mediate effectively between our ideas (a generalization of the economist's exogenous preferences) and our actions in the biosphere (which determines potential, or production possibilities, and the evolution of the system), things have gone wrong: we have civil society condemned to shape action in Lifeworld to satisfy the demands of System. People are called upon to bear the costs of action in the biosphere to serve the imperatives of what should be their intermediaries or agents in the bitsphere.

So the basic challenge to be met through the formation of social capital and pursuit of social learning is to communicate consequences sufficiently clearly to engage enlightened self-interest, and to change beliefs, views and paradigms to arrive at an outlook which is compatible with ecological sustainability. The goal is to see the longer term consequences of individual action so clearly as to resolve cooperator's dilemmas, and ultimately to establish the necessary degree of unforced "constraint" on individual action through internal resolution, not external pressure. We could ask whether social learning is part of the process of building social capital in all the above senses, just as individual learning is the process of building human capital and skills (which are of course distinct from formal knowledge, intellectual capital and intellectual property).

Finally, therefore, as a third possible approach to the role of social

capital, we recognize that all this discussion of process is set within a context of perceptions, ideas and preferences which itself is changing and evolving. The significance of social learning, the role of advocacy coalitions, and processes of persuasion and argumentation in the evolution of ideas needs to be explored. Perhaps full realization of collective intent in the face of cooperators' dilemmas may demand a dramatic transformation in individual mind-sets or world-views of the sort Freeman emphasizes as "unlearning" (Freeman 1999). Or perhaps, as noted above, the "meme meme" needs to be more fully considered in understanding the cultural evolution necessary to achieve a soft landing to a sustainable economic growth path.

7. Conclusions

We live in a full world, in which the goal of sustainability must be central. That imperative demands a historically unprecedented degree of social coordination of individual action. This paper has suggested that a research program examining the role of social capital in social arrangements and governance processes to pursue the sustained well-being of citizens should examine at least the following questions and hypotheses:

1. **The contribution of (bonding) social capital to community processes aimed at adaptive management of individual action in complex and uncertain ecosystems as well as in complex social systems.** Such community-based management aims at achievement of compliance with collective decisions through coordination of individual action, the exercise of individual discretion within shared norms of conduct, the appeal to peer pressures and community influence in monitoring of action. Concerns with authenticity and performance practice are relevant here. One obvious hypothesis is that a discernible stock of social capital, contributing to more effective decisions, can be built up and nurtured through a history of successful experience with such direct, personal social engagement. These questions seem to be closest to the original Putnam (1993) concerns, resting on dense networks of civic association, and substantially focussed on a "service delivery" orientation. They relate to local dynamics, and find a place in what has been called "consensus organizing" and community economic development.

2. **The contribution of (bridging) social capital to more formal processes of deliberation, involving reconciliation of diverse views and interests.** One obvious hypothesis is that the degree of compliance achieved in community-based management with the collective decisions generated through more formal deliberations and institutions will depend on the extent of trust and confidence in these institutions, and on the perceived legitimacy of the decision processes

generating the collective decisions. More specifically, one might explore the hypothesis that the closer these processes come to meeting the criteria of communicative action, the greater will be the degree of compliance with the decisions emerging from such processes. One might also explore the role played by more personal experience in building bonding social capital even in epistemic communities or other virtual communities involved in deliberative processes to support formation of collective intent at more abstract level. Working together, even at long distance, may contribute to effective consultative processes, reconciliation of perceptions and integration of many ways of knowing in arriving at shared understandings.

3. **The contribution of (linking) social capital in achieving goals of effective subsidiarity in translating abstract covenants at large (possibly global) scale into realization through individual action at local scale.** One hypothesis is that the dark side of bonding social capital, which leads to exclusion and discrimination, can be contained through core guarantees of basic claims viewed as universal. In particular, fears of loss of agency may be reduced if minimal citizen control of the polity can be assured through the guarantees of democracy, and minimal control of economic power through the competitive forces of market capitalism within an accepted overarching framework of social principles. Shared agreement on universal assurances in the abstract global system of "enlightenment cosmopolitanism" can thus create the foundations for successively stronger membership claims or entitlements arising from bonding social capital in successively tighter definitions of communities (down to families).

4. **The importance of social learning in building and revising shared beliefs, norms and contexts in the face of new awareness and knowledge of the complex systems and uncertain settings within which collective decisions and individual actions must be taken.** One question to explore is the role of scenarios, visioning, simulation models or other decision support systems in building capacity, through advocacy, argument and learning, to change both beliefs about the world and values respecting conduct in it. Computer-mediated representation and communication of meaning may promote the building of shared context and norms (social capital) by facilitating reconciliation of differences or tensions along three dimensions (corresponding roughly to our distinctions between bridging, bonding and linking social capital):

   • beliefs about the nature of the world based on a synthesis of individual experience, traditional knowledge and expert understanding (as embodied both in models and in deliberation about results

from them)
- bonds linking felt individual obligations to respond to the needs of others in particular communities, now or in the future
- individual roles as a member of a range of different communities simultaneously, at different scales.

Social arrangements resting on computer-facilitated deliberation thus may contribute to sustained well-being by helping people to see more clearly the consequences for themselves of their actions generalized to aggregate outcomes. In other words, by providing a more vivid answer to the core ethical question – "What would happen if we all did that (behaved according to similar maxims)? – computer-supported citizen engagement may enable us all to surmount more effectively the problems of collective action and, therefore, move toward sustainability in a full world. Cooperation may be more clearly perceived as a practical strategy in the pursuit of individual well-being in the longer term. Altruism may be recognized, then, as simply self-interest properly calculated in a social context. This seems, at least, a hypothesis worth exploring.

In a full world, natural capital is a crucial determinant of limits to the pursuit of human well-being. The stock of social capital is a critical element in the reconciliation of human aspirations to well-being and consequent human activities with the unknown and probably unknowable ecological system which represents the limits on them. This paper has suggested that there may be a fruitful interpretation of bonding, bridging and linking social capital in terms, respectively, of engagement and commitment of citizens in Lifeworld; involvement of citizens in System; and interpretation of commitment in System to achieve compliance in Lifeworld. This discussion has also suggested that one may explore the evolution of social capital through social learning and growing social capacity in System, and in the emergence of cooperation through evolution and repeated interaction in Lifeworld.

Understanding the role of social capital and social arrangements in this context demands a vast research agenda, and a correspondingly vast hypertext structure to document the interdisciplinary span of ideas and languages. But would it not be a triumph for the OECD to be able to bring together its own diverse directorates within the framework of such a research program? Such a program would recognize that even the very specific goal of economic development demands reference back to the whole system of ideas and institutions, and the machinery of economic cooperation demands exploration of the role of individual action in formal organizations as well as in civil society.

Notes

1   The ideas in this paper have their origins in work with the Social Learning Group, coordinated by the Centre for Science and International Affairs at Harvard University, and the Georgia Basin Futures Project, coordinated by the Sustainable Development Research Institute at the University of British Columbia. While of course assuming personal responsibility for views expressed and for any errors, I would like to acknowledge my debt to colleagues in both groups.

2   There is no time, and indeed by now should be no need, to go into detailed arguments about the extent to which the scale of human numbers and economic activity may be pressing irreversibly against the limits of the natural systems which support life on this planet. (One can see Vernadsky 1945; Daly and Cobb 1990; Jacobs 1993; Grumbine 1994; Norgaard 1994, or any of many others.) The key point for present purposes is that in such a world, one faces inevitable congestion, spillovers and interdependence. Externalities spill off the pages of endnotes in economic exercises to become the outstanding feature of collective life in the real world. Market failure is seen to be ubiquitous. In addition, these systems are complex, if not chaotic; profound uncertainty is inevitable. They are also changing over many time scales. The social systems which coordinate individual action have somehow to take account, in the local processes and signals that shape individual behaviour, of this over-riding uncertainty at aggregate level.

   Living within the limits of a full world thus demands global-scale institutions, a capacity to coordinate decisions across nations and across geographic scales (see, for example, Haas, Keohane and Levy 1993; Young 1997; Ostrom et al. 1999). Our emerging capacity to monitor the state of ecosystems, and growing awareness of their possible vulnerability, lead to changing social understanding of limits on overall human activity, and hence to the necessity of constraint on individual action.

   The role of social capital in enabling communities to respond to these shocks, trends and new knowledge, to carry overall social intent cohesively into effective adaptive management on the ground, but taking into account the limits of a full world, is another way to pose the central question in the proposed conceptual framework outlined here.

3   In this setting, there is a strong identification of the role of social capital and social arrangements with the goal of sustainability. That goal of sustainability, however, is quite distinct from the existence of social capital as a feature of a society, or social arrangements as processes for pursuing such purposes. Social capital has to do with the capacity of groups to work effectively for an agreed purpose (good or bad); sustainability is only one such purpose – though one which, being inherently concerned with the aggregate impacts of collective decisions, highlights dramatically some important features of the concept of social capital.

4   The same is true as we look to the continuing negotiations on changing rules in the domain of international trade. In the aftermath of the failed negotiations at the OECD on a draft Multilateral Agreement on Investment, and the failed launch in Seattle of the WTO Millennium Round, it cannot be denied that the influence of individual civil society organizations (CSOs) in the global economy has become significant, and that global civil society in aggregate often has the capacity to establish, at least temporarily, "blocking coalitions" in the face of proposed collective actions – particularly economic initiatives – which are perceived to be unacceptable. The response of business leaders attempting, through groups such as the Trans Atlantic Business Dialogue and comparable domestic initiatives, to ensure that business perspectives remain dominant in global governance processes, has been swift. The need for institutional settings in which timely reconciliation of all these tensions can be constructively pursued is evident.

5   One particular feature of such processes should be noted. Increasingly, problems of "science into policy," or more generally "knowledge into action," encounter the critical task of integrating public perceptions with conventional science or expert opinion (Jasanoff 1992; Social Learning Group 2001, Chapter 21). The tensions between what is seen by

the public as "acceptable" and what is thought by experts to be "sound" are increasingly sources of conflict in public policy and barriers to economic progress (Leiss and Chociolko 1994). Many of these problems stem precisely from concerns about the environment or sustainability such as those just mentioned, and increasingly will do so in the future. But that is not their essential feature. The central problem is the conflict between broad public perception and specialized technical expertise in the formulation of intent to engage in collective action. In that conflict, I would argue both the concept of "sound science" and the idea of the "rule of law" have been co-opted. They have been interpreted so narrowly, in the context of such a particular vision of the systems under study, that they have become, in the hands of international trade tribunals and the like, a conservative force serving the interests principally of only one social group, the owners of financial capital and paper claims. This appeal to allegedly objective technical expertise comes at the expense of the interests, perceptions and interpretations of risks and hazards held by the community more broadly, the owners of the many other forms of capital we recognize here. It also forces a short-term, consequential focus onto communities in which longer term norms of fairness and justice may be more fundamental.

6   Robinson and Tinker (1995) pose the problem of achieving sustained well-being as one of reconciling the imperatives of three distinct prime systems – economic, ecological and social. In a simplified Markovian model, the state of the system at any moment can be thought of as defined by the stocks of all resources and – crucially – the character at each instant of the webs or networks which connect them. The evolution of these stocks is described by laws of motion which we might hope to understand. The determination of flows at any moment follows from some optimizing calculation or rules of conduct expressing flows as functions of these stocks. Thus, following Robinson and Tinker we might think of laws of motion for the economic system (reflecting the optimizing behaviour of individual agents) describing the accumulation of economic assets, including physical, human and intellectual capital, for the ecological system (reflecting competitive and evolutionary processes determining stocks of natural capital) and for the social system (reflecting the processes we are discussing here describing the changing state of social capital). The pursuit of sustained well-being of citizens then reflects three dimensions, the essential goals with respect to each of these three systems (e.g. economic prosperity, ecological integrity or health, and social justice). Reconciling the imperatives of these three systems then presumably entails simultaneous achievement of minimum thresholds with respect to each objective, as constrained by the distinct systems dynamics or laws of motion for each of the systems. Whereas we as citizens have choice only within the laws of motion for the physical world, we can hope, through collective decisions, to influence or control the laws of motion themselves in social and economic systems.

7   Without embracing all facets of the Habermas argument, and certainly without doing justice to the richness and subtlety of the Habermasian concepts, the underlying distinction emphasized in this proposed usage is that between the ideal of civil society as the informal setting in which people relate to one another personally and directly, linked through communicative action, and the construct of System as the apparatus of formal organizational structures in which people act in hierarchical relationships, mediated through the contrivance of money and the workings of political power, invoking not personal but positional responsibility or morality in so doing. (See the translator's commentary in Habermas 1984, pp. xxiii-xxxii, especially p. xxi commenting on Habermas' account of modernity.)

8   Features of social capital of particular interest in the present context are the ways in which trust, confidence in generalized reciprocity and social cohesion facilitate the reconciliation of conflicting perspectives and the building of consensus around collective action. Given what is said above, a key role is played by continuing education or lifelong learning in building human capital (and hence creating capacity to participate in deliberative processes). Interesting distributional problems arise then around rights of access

to, or standing in, decision processes – particularly decision processes mediated through sophisticated information and communications technologies to which access may be highly unevenly distributed, in ways which correlate strongly with inequities in income and wealth distributions. An even more key role is played by public education and deliberative processes in shaping public perceptions of complex and contested issues, perhaps moving those perceptions toward greater appreciation of scientific understandings and expert interpretation of technical issues, thus making possible reconciliation of conflicting perspectives on issues where consensus must be built in the formulation of collective intentions. Sustained economic growth will not be possible without social capacity to achieve such reconciliation. With the resurgence of power exercised through civil society and democratic institutions, economic decisions that have significant distributional consequences cannot be determined by strictly economic calculation or simply on aggregate benefit-cost analysis or other consequential criteria. Acceptability (legitimacy) in the eyes of an empowered civil society will be essential to social approval for economic action and the pursuit of economic growth.

9   The balance of this paper sketches a conceptual framework which emphasizes the contribution of social capital to the achievement of sustainability and well-being rather than to the intermediate or instrumental goal of economic growth as such. It argues that the pursuit of sustained well-being demands attention to natural capital and the need for dramatic social transformation as well as economic structural adjustment. Transition to, or progress toward, ecological and social sustainability demands resilient social systems and structures of social coordination which manage human activities within the uncertain carrying capacities of the Earth's life support systems, and which achieve widespread acceptance of the constraints on individual behaviour essential in doing so. Legitimate social processes providing an accepted means to adjust underlying notions of claims and property rights in light of emerging new understandings of these inevitably uncertain limits and constraints are particularly crucial.

Such an argument is, of course, highly controversial, hinging significantly on beliefs about the need for, or legitimacy of, social restraint on individual action. But there is also – and it is the point here – the substantive fact of changing understandings of the consequences and spillovers arising from individual action in complex ecosystems with uncertain properties of which we have only limited understanding. It is this fact which makes it essential to have accepted social processes that permit adjustment of individual rights and claims to property or access in the biosphere.

The role of social capital in governance – in supporting such processes, in facilitating the reconciliation of many interests and "ways of knowing" in the formation of collective intention, in addressing the "cooperator's dilemma" by linking such abstract collective intention to concrete individual action to realize that intention, and in monitoring compliance with it – is the focus of the argument here. That argument concludes with the suggestion that processes of social learning are a key element in building such social capital. In the end, processes of social learning will shape both how individuals come to visualize the consequences of their individual actions writ large in a full world, and how they evaluate or judge those consequences within a moral code which recognizes the need for willing, unforced constraint on individual action in social context and in a full world.

10   There are also some concrete statistical questions here. Important explanations of social phenomena may well be masked if action shifting from one institutional setting to another moves outside the domain of systems that monitor particular institutions only. For example, in tracking care-giving activities in the "third sector" it is important to take into account the significance of a shift of primary care from home to public institutions, then offloaded to voluntary organizations. Or to take account of disintermediation more generally as internal activities shift from within organizations to external market transactions. OECD should aim for a comprehensive accounting stance to ensure that such shifts are not misinterpreted as disappearing activities or trends in fundamental human

conduct. (One illustration, for example, is in the problem Robert Putnam faces in tracking transitions among different kinds of civic or social activity, from formal to informal.) This consideration may also be important as the locus of interaction among citizens shifts to increasingly greater scale and institutional formality: social capital viewed as reflecting more abstract relationships may simply be substituting for unrecorded local encounters (de Vries 2000). On the other hand, one may also see a shift away from heavy emphasis on technical issues treated in processes internal to large organizations and toward more public involvement in more diffuse processes as the pressure to "democratize" both policy formation and policy analysis continues.

[11] There is also a larger concern with respect to these corporate instruments, namely whether the public at large has lost the control initially implicit in the granting of corporate charters, the power to assure that the privileges granted are exercised in the public interest – or at least not contrary to it. The recent book, *The Living Corporation*, by Arie de Geus (1997) of Royal Dutch Shell underscores the issue dramatically, with the argument that long-lived corporations inevitably work for their own survival, not necessarily for any instrumental purpose in the interests of owners, customers or the public at large. An expression of concern over precisely that prospect can be found in Grossman and Morehouse (1995).

[12] Interestingly, three decades ago Douglas Hartle's efforts to develop a foundation on which governments could rationally address the pursuit of well-being led him to a conceptual scheme focussed on the present value of memberships and the entitlements they carry, and hence the key role played in public policy by the interpretation of eligibility conditions (see Hartle and Bird 1971 for an early formulation.)

[13] This is perhaps the goal of a more nuanced view of assimilation coupled with respect for diversity. One may seek assimilation for all in a global economy and global polity, or global citizenship assuring core economic and citizenship rights (agency with respect to instrumental organizations), while at the same time seeking to guarantee continuing respect for cultural diversity, language and "other ways of belonging" to neighbourhoods, communities or nations. The relevance for First Nations in Canada, seeking assurances of cultural survival while moving successfully into an overarching constitutional structure and competitive global economy, is evident.

[14] Ursula Franklin's (1999) terminology, identifying issues arising in the interplay between the bitsphere and the biosphere (which she identifies with what Berman would call the ecosphere) seems preferable, but the idea is similar.

[15] The importance of the distinction can be illustrated by reference to the anecdote about the distinct roles played by the chef, the chicken and the pig in formulating and implementing plans for the ham-and-egg breakfast: the chef is involved; the chicken is engaged; but the pig is committed. Given the unknown distribution of the risks involved in continuing economic structural adjustment and community transition, citizens participating in community-based action must be considered both engaged and committed.

[16] Looking a little more closely into these processes of linking collective intention to realized outcome, we see the problem of the "cooperator's dilemma" emerge clearly in many settings (see, for example McGinnis 1999 or Kaul, Grunberg and Stern 1999). We also see the idea of implementation cast, on one hand, organizationally, as co-production à la Elinor Ostrom, and, on the other, as interpretation, à la Vincent Ostrom (both in McGinnis 1999). As interpretation, interestingly, we recognize the "performer's dilemma" in much the same form as it has emerged in legal theory, anthropology, musicology and theatre, not to mention literary theory (Taruskin 1995).

[17] Sabatier's work on policy advocacy coalitions also suggests ways in which social groups may come together around shared understandings of common goals and potentially efficacious strategies for their achievement (Sabatier 1999). This process of changing the base of knowledge on which policy action might be built represents an extension of Figure 2 introduced in this paper, but a less extensive schema than the processes of

social learning discussed in section 6.

[18] An OECD program in social learning and social capital should take seriously into account this growing body of work in experimental economics, which tends to confirm how widespread the traditional knowledge about the efficacy of norms of fairness and sharing is, and how particular to a unique school of indoctrination the inculcated reliance on the notion of rational economic man pursuing a self-interest signalled only by immediate exchange and immediate gratification is. Such an OECD program should look at how market institutions and decentralized decision making can be used for more effective agency, and more accurate delegation of responsibilities, within a framework that recognizes social capital as high context shared norms about constraint in the face of the imperatives of social and ecological sustainability along with economic prosperity (see the brief summary offered by Nowak and Sigmund (2000) and the references they cite to the streams of fascinating work at the Santa Fe Institute and the International Institute for Applied Systems Analysis).

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