

Society's forms of capital: a framework for renewing our thinking

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Introduction

“Dundurriga valuable farming lands represents most of the communities environmental and financial capital. On some farms land decline is evident as farmers work harder and consume their environmental capital in an attempt to stay ahead. The community is getting old and has not been able to maintain its community hall. Roads and other capital infrastructure are declining through a lack of investment of financial capital. The human capital of the area has declined as the population has grown older and the skills and educational levels drop through out-migration and people becoming out of date with the knowledge component of their human capital. Everyone in the community knows everyone and there are strong social networks. This high level of social capital makes it difficult for strangers to operate in the area and people are increasingly suspicious and fear the outside world. It has been suggested that the strength of Dundurriga's social capital could be a source of collective action, like the very effective local fire brigade, but how can one start on the road to the future without offending people you like?”

Most environmental and community development issues require the crossing of the disciplinary and language boundaries that are barriers to learning and adapting to complex and changing environments. My hypothetical Dundurriga is no exception.

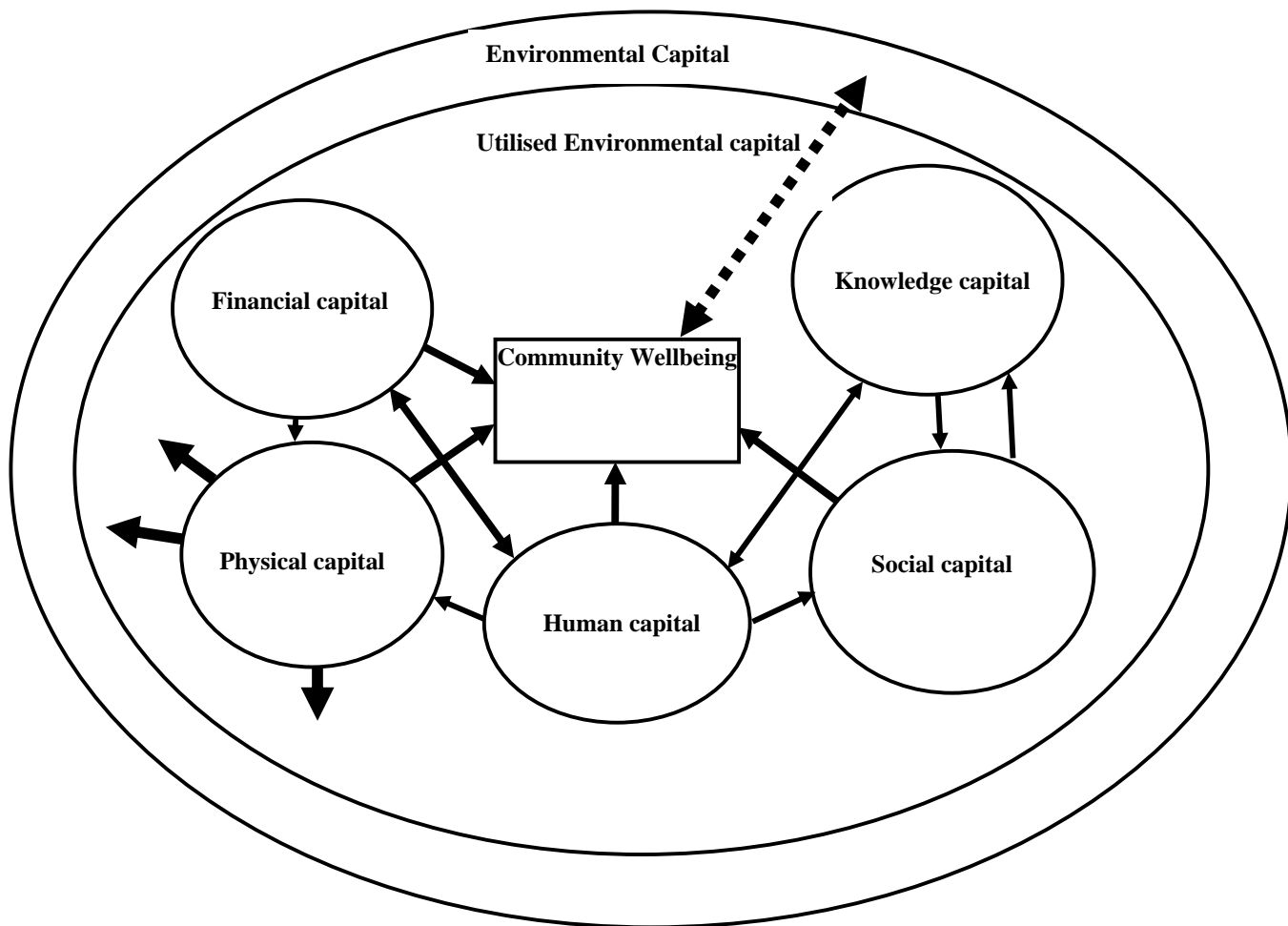
Historically, human post hunter gatherer cultures have regarded the environment as essentially unlimited and freely available to build other capital stocks. In most places, nature and its functions have been depleted by a culture of growth. The challenge now is to redirect our accumulated capital to build sufficient wealth for all, and to restore natural capital in the interests of sustaining humanity long-term. We need to marshal human, economic and social resources to protect extant natural capital, to restore natural capital where nature remains partially intact and, where it is greatly disrupted, make the residual system at least sustainable. This leads to the communities controlling much of the land; they can do something positive for the environment if they have the resources, capacity, will and motive.

Society's forms of capital and their implications

All communities embody the various forms of capital with the mix and interactions between them adapting to an evolving world. Community development theory demonstrates that success and sustainability ultimately depend on the ability of a community to appreciate, access and utilise the many forms of capital (Flora et al 1992, Ostrom 1993, Putnam 1993, 1995 and 1996, Flora and Flora 1995, Onyx and Bullen 1997, Nahapiet and Ghoshal 1998, Napier and Sidle 1998, Bebbington 1999, Baker 2000, Hogan and Owen 2000, Onyx and Leonard 2001, Pretty and Ward 2001, Woolcock 2001).

Current discourses are typically led from narrow perspectives that separately address specific environmental issues or social issues concerned with one of the “forms of capital” (Figure 1). In reality, the interconnected issues of loss or decline of the environment and at times associated communities require consideration of not single, but multiple forms of capital and the systemic relationships between them. The forms of capital that are of concern for social policy, economic policy, environmental policy and hence environmental management can be systematically identified.

Figure 1 Different forms of capital are the basis of human existence. Each capital is ultimately dependent on nature and grows, often to the detriment of nature. Growth of physical capital requires use of natural resources and land conversion from natural to farm to urban and industrial. Physical capital growth drives the amount of environmental capital that is utilised and hence can contribute to loss of environmental capital.



Financial capital is the most readily recognised form of capital. It consists of “convertible” items that are surplus to existing perceived needs. It has been amassed in the past and can be borrowed from the future. It can be accumulated through the use of other forms of capital and through its investment in transforming processes. The issue is not how to generate more convertible financial capital, but rather how to channel it in positive ways to address environmental management.

Physical capital is the result of past investments in the conversion of components of natural capital through construction and maintenance, using human, social and knowledge capital. It includes human habitation, towns and cities, bridges, roads, buildings and equipment. As such many heritage items represent a form of physical capital with very high overlays of social significance (social capital). Physical capital characteristically depreciates and requires maintenance. Both financial and physical capital can be held privately or publicly. Both can be combined (land and buildings). Both frequently generate “rent” from their use and contribute to financial capital. The expansion of physical capital stocks largely depends on the investment of financial capital. However, the consequential environmental impacts (externalities) associated with its construction and use lie at the root of many environmental problems.

Environmental capital is often a public or common good associated with a place or part of a complex legally evolved web in which components are owned in the form of bundles of rights. A sense of place reflects awareness by individuals and communities of environmental capital in its many forms and is intimately linked to social capital. Such feelings are significant and the basis of peoples’ identity. Notwithstanding, this self identification with landscape development, because of necessity, often emulates the mistakes of the past through the exploitation of resources beyond their sustainable limits. Ultimately, most residual or recoverable environmental capital are on lands and waters that are owned, but used for other purposes. Some residual environmental capital (eg, protected areas and reserves) remain in public hands, others lie with philanthropic bodies. Others are the great commons of the atmosphere, oceans, lakes and rivers. Nearly all are surrounded by land owned and managed privately. Consequently most cannot realistically survive in a pristine form because of the management problems inherent in their creation as isolates, or because of their storage use as a common resource.

Social capital is a measure of community intangibles such as networks, cultural pursuits, trust, linkages, and commitment to local well-being and shared values. Social capital determines the ability of a community to absorb shocks, exploit opportunities and orient toward the future. Without social capital, a community lacks cohesion, cannot organise to maintain its environment or its economy and consequently is unattractive to outsiders. It often suffers negative migration, usually of the most able. Social capital is not the sum of the individual human capital held by members of a community. Each individual’s contribution compliments and increases that of others. Consequently, social capital increases with use. However, if individual effort is being expended solely on sustenance activity, then the capacities of individuals are unlikely to be

amalgamated into capital for the whole society. Similarly, flows of financial capital as support or subsidy schemes often diminish social capital through lessening the motivation for collective action. In cases where outside capacity and input does not fit with the existing community's culture and social capital, aspects of the recipient culture are displaced (Carter and Beeton 2004). The consequence is that any local surplus available to assimilate or attend to new ideas is depleted. Thus, worthwhile projects fail or cannot be sustained beyond the intervention phase.

Human capital is often seen as a subset of social capital (Figure 1). It can be operationalised usefully as a separate form of capital to emphasize that its components (individual knowledge, average formal education levels in a community and individual skills) need to be considered separately when planning how to use awareness, skills and finance to address the improvement of the environment.

Knowledge capital is another subset of human and social capitals. It is the creative key to the future for private and public investments. Knowledge capital constitutes what is formally known and the context in which this knowledge is acquired and applied. Formal knowledge can be transmitted by various means, often almost instantly around the globe, depending on who controls the original information and data. Experiential knowledge is held by individuals and communities as they manipulate environmental, financial, physical, and social capital in private or public contexts. Frequently, knowledge capital is empirical and stems from the experience of past successes and mistakes. In developed countries, knowledge capital is mainly stored in physical and electronic forms; in other societies, it may be in oral form. In both cases, if access to knowledge is eroded, distorted, inappropriately emphasised or never gained, community dysfunction and environmental decline follows.

Capital stocks, flows and insights in fungibility

All forms of capital represent “stocks” that can be measured, but change occurs because of “flows” amongst them. Capital can be converted from one form to another and, except for environmental capital and some physical infrastructure, transferred from one place to another. Different types of capital can be categorised by their fungibility or the degree to which they can be converted into something else. Fungibility in turn has directional properties. Environmental capital demonstrates the phenomena of variable fungibility in an extreme fashion. If it is to be preserved, it is one of the least fungible even though it may have a very high intrinsic value to some. Its ultimate status depends on the exercise of society's preferences. Often those who coexist with areas of high environmental capital have to exercise fungibility through the destruction of nature as available alternatives cannot generate sufficient enduring individual or community benefit. To reverse such destruction is inordinately expensive and often not possible if species have been lost or other ecosystem components such as soil and nutrients exported.

The combination of forms of capital in different physical environments, with consequential differing limiting factors, not only distinguish the many past and present cultures of the world but

also their associated land and seascapes and community well-being. Different forms of natural capital are transformed by different cultures into many different forms of financial and physical capital, with different productive and consumptive uses in mind, and according to different value systems. An alteration to one of the forms of capital in a societal system is likely to influence others (Fukuyama 1995). This can occur at any one scale, or between scales, such as the influence of economic and social globalisation on local communities. Consequently, the earth's diverse human-environment systems represent the many possible combinations of the forms of capital in the many different environmental settings in which they occur.

A challenge to the analysis of forms of capital is how to characterise flows among them, including the roles of institutional arrangements in influencing and organising capital flows, and of values and perceptions that drive choices of action. However, the "forms of capital" framework directs our attention to their transformational properties and the social choice that inevitably brings either positive or negative outcomes.

Glossary

Isolate An isolate is an area of land containing plant and animal communities that are distinctly different from those that surround it; they typically are residual natural habitat

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