



# The environmental–social interface of sustainable development: capabilities, social capital, institutions

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## Abstract

The social dimension has commonly been recognised as the weakest ‘pillar’ of sustainable development, notably when it comes to its analytical and theoretical underpinnings. While increasing attention has lately been paid to social sustainability, the interaction between the ‘environmental’ and the ‘social’ still remains a largely uncharted terrain. Nevertheless, one can argue that the key challenges of sustainable development reside at the interfaces—synergies and trade-offs—between its various dimensions. This paper looks for preliminary ideas on frameworks for analysing the environmental–social interface. It first discusses the concept of sustainable development and the relations of the three dimensions of sustainability on the basis of the fundamental premises of neoinstitutional and ecological economics, and briefly presents the ‘bioeconomy model’. Based on this conceptualisation of sustainable development, it then goes on to analyse two popular ways of addressing the social dimension of sustainability, namely, the ‘capability approach’ of Amartya Sen, and the concept of social capital, and discusses the potential of these as bases for the analysis of the environment–social interaction. The Organisation for Economic Cooperation and Development (OECD) Environmental Performance Review (EPR) programme is presented as an example of attempts to analyse the environmental–social interface in practice. The paper concludes by noting that a single framework for studying environmental–social interface is neither feasible nor desirable. It questions the usefulness of analysing only two dimensions of sustainability at a time; and emphasises the need to situate the analysis in its context. In particular, it stresses the need to involve the potential users, as well as to take into account the planned use of the analysis and the interactions between different levels of analysis and decision-making. Capabilities and social capital can both be useful in structuring thoughts, but are not as such directly applicable as suitable analytical frameworks. In particular, they do not provide adequate tools for examining the social preconditions for institutional change needed for environmentally sustainable development.

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## 1. Introduction

The social dimension has commonly been recognised as the weakest ‘pillar’ of sustainable development, notably when it comes to its analytical and

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theoretical underpinnings. Until recently, sustainable development was perceived as an essentially environmental issue, concerning the integration of environmental concerns into economic decision-making. In the past decade, there has been a resurgence of interest towards the social dimensions of development, which can be attributed to the fall of communism, the ostensible difficulties of creating market institutions in transitional economies, the financial crises in Latin America, East Asia, and Russia, and the persistent problems of unemployment and social marginalisation in even the most prosperous economies (Woolcock, 2001, p. 66). The academic literature has paid increasing attention to the role of institutions, governance, and social capital in the development process. Finally, the political acceptability of sustainable development depends on its capacity to respond to the persistent social problems that seem to have to some extent surpassed the environmental issues as matters of public concern. Such a shift was clearly seen also in the negotiations at the Johannesburg summit on sustainable development in 2002, which raised the development concerns again to the forefront (see, e.g., Jollivet, 2003).

Even less attention has so far been paid to the linkages between the social and the environmental dimensions. Nevertheless, it can be argued that the essence of sustainable development lies precisely at the interfaces and trade-offs between the often conflicting objectives of economic and social development, and environmental protection. The demand for such an analytical framework is clearly present, as manifested i.a. by the Organisation for Economic Cooperation and Development (OECD) Council of Ministers' call for integrating the environmental–social interface into the

OECD Environmental Performance Reviews (EPRs) (OECD, 2001a).

Given their holistic view of economy and interdisciplinary character, the neoinstitutional<sup>1</sup> and the ecological economics can be argued to present a 'comparative advantage' over the more conventional neoclassical approaches in integrating the social dimension of sustainability into their analytical toolbox. Among the recent approaches that at least to some extent share the critique that neoinstitutional and ecological economics direct towards the conventional economic theories are Sen's (1987, 1999) approach based on individual capabilities and the concept of 'social capital', used for addressing the social dimension of sustainable development. This paper looks at these approaches with a view to analysing their potential as foundation for analysing the environmental–social interface. After a brief description of the way in which neoinstitutional and ecological economics conceptualises sustainable development, the paper goes on to review the 'capability approach' and the theories of social capital, providing then some preliminary thoughts on their suitability in addressing the environmental–social interface. To present an example of an attempt at evaluating the environmental–social interface, the paper briefly describes the way in which the OECD Environmental Performance Reviews have dealt with the issue.

## 2. Sustainable development—the bioeconomy model

Although the original definition by the Brundtland Commission from 1987 does not make such a distinction, sustainable development has later become perceived as a combination of three dimensions or 'pillars', namely, the environmental (ecological), economic, and social dimensions. Since the Rio conference in 1992, this tripartite description has constituted the basis for most of the generally accepted definitions of sustainable development in international organisations (e.g., OECD, 2001b; Commission of the European Communities, 2001), called 'triple bottom line' in the business circles. The 'capitals approach'—considering sustainability as the maintenance or increase of the total stock of different

<sup>1</sup> The term 'neoinstitutional economics' is used here to make a distinction between scholars representing the New Institutional Economics (e.g., Coase, North, Olson, Williamson) and the authors following the American 'Old Institutionalism' of Veblen, Commons, Mitchell and Ayres. Among the contemporary neoinstitutionalists, one can mention names such as Hodgson (1988, 1999), Bromley (1991), Schmid (1978), Samuels (1971), Tool (1979) (see also Samuels and Schmid, 1981). In the field of environmental economics, one can also mention the 'Nordic school' of institutionalism, exemplified by the works of Söderbaum (2000, 2001) and Hahtola (1990), as well as Opschoor and van der Straaten (1993). For a brief review of institutionalism's roots and the present situation, see Rutherford (2001).

types of capital (manufactured, natural, and social)<sup>2</sup>—has its origins in economics (see, e.g., Zaccai, 2002, pp. 241–248), but has been much more widely accepted as a ‘common sense approach’ by the academic community more generally (e.g., Farrell and Hart, 1998; Harris, 2000, pp. 5–6; Spangenberg, 2001; Ballet et al., 2003). However, much less consensus reigns over the relations among the dimensions. The ‘institutional’ version endorsed by the international organisations is that of three hierarchically equal, mutually interacting dimensions. While the importance of each pillar may vary from one situation to another, the model as such does not attribute priority to any of the dimensions. Moreover, the model gives the impression of pillars as independent elements that can be treated, at least analytically, separately from each other.

Four main types of criticism can be voiced against the three-pillar conception. The political critique evokes the risk that such an approach would likely reinforce the status quo, by legitimising the existing goals of the society, each government agency finding its own objectives corroborated in the concept of sustainable development. Another, more conceptual critique claims that the three-pillar model perpetuates the ‘economism’ and ‘productivism’ characteristic of modern societies. By continuing to distinguish the ‘social’ from the ‘economic’, the three-pillar model contributes to strengthening the idea that the economy can be treated as a separate sphere, detached from the social context within which all human activities are embedded. This radical critique considers the three-pillar representation as a false consensus, which reflects fundamental flaws in the relations between human societies and their environment. (Passet, 1996; Le Bot, 2002). A third criticism focuses on the trade-offs and synergies between the dimensions. Each of the three ‘pillars’ has its own characteristics and logic, which are likely to conflict with each other. The model does not give any guidance on how to arbitrate between the unavoidably conflicting objectives of economic rationality (profitability), social justice and ecological equilibrium. For instance, the objectives of improving of material well-being and the conserving natural ecosystems often conflict with each other

(Harribey, 1998, pp. 102–103; Upton, 2002). Finally, there are good reasons to believe that the three ‘dimensions’ of sustainable development are not qualitatively equal, but occupy different positions in a hierarchy. Disagreements over the proper hierarchy have probably prevented such models from becoming widely adopted in international policy circles. Good arguments can, indeed, be given to support the prevalence of any of the three dimensions for sustainability. In particular, it can be argued that the social dimension cannot be analysed through the same analytical framework and same tools as the ecological and economic ones, notably because of the reflexivity, multidimensionality and relational character of ‘the social’, and the difficulty if not impossibility to quantify most social phenomena (e.g., Empacher, 2002; Dubois and Mahieu, 2002).

Given the basic principles of the neoinstitutional and ecological economics—the explicit commitments to deliberative democracy and enhancing ecologically sustainable development; ‘pragmatic realism’ (Bazzoli, 1999); the coevolutionary framework, methodological pluralism, postnormal science, discursive institutions and multicriteria decision-making aids designed to deal with complexity, uncertainty, and irreversibility (e.g., Özkaynak et al., 2001; Norgaard, 1989, 1994)<sup>3</sup>—sustainable development is often conceptualised through a bioeconomy model (Passet, 1996; Maréchal, 2000). In this model, the three pillars have been replaced by three concentric circles, the environment circumscribing the social dimension, and the economic sphere constituting the innermost circle. This reflects the idea that economic activities should be in the service of all human beings while at the same time safeguarding the biophysical systems necessary for human existence. The social would thus be in the command of the economic, but at the same time submitted to the ultimate environmental constraints (Passet, 1996; Maréchal, 2000). This model is here taken as the point of departure, yet with two caveats.

<sup>2</sup> The human capital is sometimes considered as a type of capital in its own right, and sometimes included in social capital.

<sup>3</sup> While neoinstitutional and ecological economics largely share the same basic principles, one can however attribute to the former the epistemological principles based on pragmatic realism, the emphasis on power and institutions, and the extensive critique against the assumption of the ‘economic man’, rationally calculating costs and benefits of his actions in order to maximise individual utility.

First, the biophysical limits are not stable, but in constant change in function of the development of human knowledge and technology (e.g., Hukkinen, 2003). Second, the clear hierarchy between the circles does not mean that the environment would necessarily always be the most important and relevant dimension. In any particular situation, at any particular point of time in history, social or economic aspects may be the most relevant and meaningful points of departure as long as the operation of socioeconomic systems does not enter into conflict with the environmental framework conditions (Hahtola, 1990; Norgaard, 1994).

### 3. The social dimension of sustainable development

A Commonly accepted definition for the social dimension is not available, largely because there is no consensus on what is to be understood by the ‘social’, in the first place. Indeed, what defines the ‘social’ is determined by the underlying theoretical framework. As noted above, the social dimension is clearly different from the environmental one, since it is bipolar—it refers both to individual and collective levels; it is reflexive—our perceptions and interpretations of the objective social conditions change the behaviour of individuals and social collectives, hence influencing the objective conditions themselves; and it is immaterial—while concrete material circumstances lie at the basis of the ‘social’, the social phenomena themselves are essentially immaterial and therefore difficult to grasp and analyse, in particular quantitatively (Empacher, 2002).

Given the distinctive character of the social, and its place embedded in the environment and encompassing the economy, the social dimension of sustainable development cannot be addressed with the same analytical toolbox as the environmental and economic ones. An injunction from the perspective of NE is that the whole attempt to define the ‘social’ separate from the economic and the environmental is arbitrary, since economy constitutes an open system, encompassing the social and in constant interaction with the environmental sphere. Likewise, Sachs (1999) argues that the concept of development itself is by essence pluridimensional, and therefore talking about ‘social’ development is referring to only one element of development among all the other possible dimensions.

By contrast, Daly (1996) criticises any attempt to extend the concept of sustainable development to areas not related to the environment, and argues that a distinct concept should be developed in order to take into account the ‘ethicosocial’ limits to growth. The view taken here is that notwithstanding the unavoidable interconnectedness of the social and the economic, analytically distinguishing the two spheres is indeed helpful in grasping the dimensions of sustainability. Holism and methodological pluralism do not imply that all dimensions of sustainability should be mixed up and analysed in each individual case, but that none of the dimensions or elements should be excluded from the analysis *a priori*. Moreover, in the name of political realism, leaving out social considerations from sustainable development would necessarily lead to the marginalisation of the whole issue, notably in view of the recent increasing concerns about the social consequences of globalisation.

One can imagine a number of different approaches to analysing socially sustainable development. The traditional welfare economic approaches would lead one to identify a social welfare function, use a theory of optimal development, or look at social issues as externalities. These approaches share the problems of neoclassical models in general, and are therefore not further developed here.<sup>4</sup> Two approaches that seem to be more in line with NE—the individual capabilities and the social capital approaches—will be studied more in detail below.

#### 3.1. Capabilities

A step away from the traditional welfare economics is an approach relying on the notion of individual capabilities popularised by Sen (1987, 1999). By

<sup>4</sup> Above all, they share the idea that optimising social welfare over time is possible. There is compelling evidence indicating the existence of multiple optima for any particular distribution of property rights and endowments (see, e.g., Bromley, 1991). Defining a social welfare function is not only difficult in political terms—in achieving an agreement over the correct weighting among the elements of welfare—but also theoretically impossible. Of course, one might call optimum the result of negotiations leading to a definition of such a set of welfare criteria, but one may ask whether the purpose of defining and measuring social sustainability might not be better served through alternative approaches.

capabilities, Sen means the alternative combinations of functionings an individual can achieve. Functionings, in turn, denote the various things a person may value doing or being—varying from elementary functionings like nourishment and shelter to complex ones such as self-esteem and community participation (Sen, 1999). Policies should not focus on collective outcomes such as the distribution of income, but rather on building individual capabilities, and ensuring that people have the freedom to convert economic wealth into outcomes they desire.

Ballet et al. (2003) have extended the notion of capabilities from individuals to cover also societies. The structure of capabilities expresses the adaptation of an individual or a society to a number of external constraints. Such a structure tends to be relatively stable in the short term. Any abrupt change in one element of the structure of capabilities—for instance, a sudden shift from a pension system based on redistribution to one based on capitalisation—risks to provoke serious social disorder and might increase the vulnerability of individuals or societies to external shocks, in other words, reduce their resilience. A distinction is made between the vulnerability of individuals or societies and the fragility of their capabilities. The former is determined by the entire set of their capabilities, combined so as to improve the resistance of an individual or a society to risks. The fragility of the capabilities, in turn, refers to the characteristics of specific capabilities. For example, highly specialised qualifications tend to be more fragile than more general skills in the face of changes in the job market. Finally, it is important to not only know the levels of capabilities of individuals, but also to consider to what extent different capabilities are substitutable for each other without causing irreversible breakdown of resilience. Hence, Ballet et al. (2003, p. 6) define socially sustainable development as one that “guarantees for both present and future generations an improvement of the capabilities of well-being (social, economic or environmental) for all, through the aspiration of equity on the one hand—as intragenerational distribution of these capabilities—and their transmission across generations on the other hand”.

The capability approach hence puts emphasis on the improvement of social conditions from one generation to another, and on the interactions between the

three spheres of development—social, environmental and economic. In designing policies, one needs to look at not only the effects of economic and environmental policies on the social dimension, but also at decisions within the social sphere itself. This approach has both an individualistic and a social point of view—on one hand, it looks at the capabilities of rationally and responsibly acting individuals, and on the other hand, at the social capabilities of a society and the roles of social actors. These two levels are not necessarily in harmony with each other, since the improvement of some components of well-being (education, health, employment, etc.) may have harmful effects on some social groups and thus even threaten social cohesion itself. Likewise, social policies such as poverty reduction programmes may in fact adversely affect certain capabilities, with an increasing vulnerability of individuals and social inequalities as a result. In some cases, the destruction of capabilities may be irreversible, such as in the case of accidents, chronic illnesses, or the loss of the ability to work. Such social irreversibilities may also be associated with phenomena such as extreme poverty, social exclusion, forced migration, civil wars, etc. While developing countries are likely to be the most vulnerable, it is reasonable to assume that irreversible social developments may also arise in developed economies. Social precautionary principle should therefore be applied when designing policies (Ballet et al., 2003, pp. 4–5, 9). Policy design and studies on the potential effects of policies should be carried out in a dialogue and public deliberation between all affected parties and involve a consideration of various scenarios. Actors are thus themselves to decide which capabilities are to be considered. Finally, freedom is a key element in Sen’s approach—all evidence seems to show that even very poor people attach significant value to freedom, even if it would not seem ‘rational’ from the traditional economic perspective of maximising individual utility.

The framework proposed by Ballet et al. (2003, pp. 10–11) for analysing policies with significant effects on various groups starts from the evaluation of the likely consequences of the policies on individual or social capabilities, in the context of uncertainty. These consequences and the alternative criteria for applying the social precautionary principle allow the construction of various scenarios, which in turn serve as a



basis when establishing the responsibilities of the respective actors.

In summary then, the capability approach would focus on evaluating the impacts of public policies on the distribution of capabilities across the society both at the level of the individual and of the society as a whole, taking into account the structures within which they are embedded. Tracking these consequences would then allow one to construct several scenarios, elaborated through an open, discursive process to identify the relevant capabilities and the possible thresholds of adaptation (Ballet et al., 2003, p. 12).

It is interesting to note the resemblance of Sen's approach with the function-based approach used by some ecological economists to define what is often called critical natural capital (e.g., de Groot, 1994). Human societies depend on the proper functioning of natural systems. Such critical functions include regulation of essential life-supporting systems, production, provision of habitat, and information (Chiesura and de Groot, 2003). Moreover, many of the environmental assets fulfil not only ecological, but also economic and social functions, through their critical contribution to human mental well-being and pleasure, as well as being a source of ethical and cultural meaning. A marriage between the capability approach and the one based on environmental functions might hence provide ideas for analysing the environmental–social interface.

### 3.2. *Social capital*

Perhaps the most commonly proposed framework for addressing social sustainability is that of valuing stocks of capital, notably of social capital. It also points to the notions of weak and strong sustainability, the latter referring to the idea that a part of the social capital is critical, irreplaceable, in the same manner as some of the natural capital is considered 'critical'.

The roots of the concept of social capital have been traced back to the works of Durkheim and Marx—even Aristotle (Carroll and Stanfield, 2003, p. 397).<sup>5</sup> North's (1990) writings on informal and formal institutions, Fukuyama's (1995) work on the role of trust in economy, and Evans' (1995) writings on the nature of state–society relations are other intellectual predeces-

sors of the concept. The contemporary use of the term is, however, most often attributed to Bourdieu (1986), Coleman (1988) and Putnam (1993, 2000). The World Bank has been one of the most prominent advocates of the social capital approach over the past few years.

Social capital has been defined in a number of different ways, but in general, it refers to the networks of social relations characterised by norms of trust and reciprocity that can improve the efficiency of society by facilitating coordinated actions (see, e.g., Stone and Hughes, 2002; Adger, 2001). The narrowest concept of social capital is associated with Putnam (1993), who views it as a set of horizontal associations between people—social networks and associated norms that have an effect on the productivity of the community. A broader definition is given by Coleman (1988, p. 598), who describes 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”. This definition broadens the concept to include vertical as well as horizontal associations, and also the behaviour among other entities such as firms. The most encompassing view—the one that has attracted plenty of interest among economists—includes “the social and political environment that enables norms to develop and shapes social structure” (Grootaert, 1998; Woolcock, 2001). This broadest definition includes not only the largely informal and often local relationships, but also the more formalised institutions such as the government, the political regime, the rule of law, the court system, and civil and political liberties.

Woolcock (2001, p. 70) argues that a relative consensus has been struck among scholars on the definition of social capital as referring to “the norms and networks that facilitate collective action”. He further maintains that any definition of social capital should focus on its sources rather than consequences. Thus, for instance, trust is not social capital but an outcome of it—outcome of repeated interactions, of credible legal institutions, of reputations. It can nevertheless be used as a measure of social capital. Determinants of social capital might include personal characteristics such as age, sex or health; family characteristics; resources (education, employment); attitudes and values; or characteristics of the living area. Social capital itself consists of networks at different levels, while outcomes

<sup>5</sup> Woolcock (2001, p. 66) mentions Hirschman (1958) and Adelman and Morris (1967) as pioneers in the field of economics.

may include the well-being of the individual or family or the public at large; vibrancy of civic life; neighbourhood well-being; and political or economic well-being (participatory democracy, prosperity; reduced inequality) (Stone and Hughes, 2002). Social capital has sources of multiple dimensions; hence, the distinction between ‘bonding’ and ‘bridging’ social capital. The former refers to relations between family members, close friends and neighbours, the latter to more distant friends, associates and colleagues. In addition to these horizontal dimensions, social capital also has a vertical dimension, which can be called ‘linking’ social capital. The capacity to leverage resources, ideas and information from formal institutions beyond the community is a key function of linking social capital (Woolcock, 2001, pp. 71–72).

Social capital has mostly been used to explain differentials in economic development between societies with different levels of social integration. The economic benefits of social capital are well established. How exactly social networks produce the beneficial outcomes is a subject of debate, and the causal relationships are far from clear, but information sharing, coordination of activities, and collective decision-making are mentioned among the beneficial functions of social capital. An often-mentioned example of environmental benefits of social capital is the management of common property resources by local level associations (Grootaert, 1998, pp. 3–6, 11).

A lot of critique has been levelled against the idea of social capital and its application in practical policies, notably by the proponents of neoinstitutional economics (e.g., Sobel, 2002; Carroll and Stanfield, 2003; Dolfisma and Dannreuther, 2003; van Staveren, 2003). Many of the criticisms do not seem to stand closer scrutiny, however. As noted above, social capital theorists are aware of the need to distinguish sources of social capital from its outcomes—an error that has been pointed out in Putnam’s analysis (Sobel, 2002, pp. 140–141; Dolfisma and Dannreuther, 2003, p. 407). Unlike some critics have claimed, the social capital theory does take into account issues of unequal distribution of power and in fact claims to provide a tool not just for identifying power differentials, but also providing recipes for correcting inequalities, for instance by showing how marginalized groups themselves possess unique social resources that these groups can harness to overcome exclusion (Woolcock,

2001, p. 76). Although scholars using the social capital framework often see it as a resource for economic growth and development, they do recognise the intrinsic value of social networking—the fact that social capital is simultaneously an input to and an output of the development process (e.g., Grootaert, 1998, pp. 7–8). Finally, the criticism that social capital legitimises orthodox development policies and reinforces the idea of seeing social relations as ‘capital’ is a question of ideology and faith. That is, the proponents of the social capital concept see it as an opportunity to open up the dialogue between different social science disciplines and facilitating sociology’s entry into high-level policy discussions (Woolcock, 2001, pp. 74–75), while the critics take a more pessimistic view concerning the possibilities of changing the prevailing structures of power.

The relationship between social capital and the state has been a subject of much controversy, some scholars accusing the social capital approach of neglecting the crucial role of formal state institutions in influencing development at the local level. Social capital has been accused of being a concept that simply legitimises the liberalistic downsizing of the state. That is, it is the less privileged, who have been left with an impoverished web of social institutions—a reduced stock of social capital—who should repair the social institutions and associations originally established and later on deserted by the middle class (e.g., Harriss, 2001; van Staveren, 2003). However, as Woolcock (2001) and Adger (2001) emphasise, the institutional context within which the social networks are embedded, notably the state, plays a central role in the facilitation of social capital. The absence or weakness of formal institutions is often compensated by the creation of informal organisations (Woolcock, 2001, p. 72) and vice versa; high levels of social capital may render market exchange less important (Carroll and Stanfield, 2003, p. 400).

In conclusion, the concept of social capital seems a potentially useful tool in analysing economy–society relationships. For instance, with its integrated view of social and economic aspects, social capital could be used for analysing the impacts of macro phenomena such as globalisation on societies at the local level. However, two main sets of problems still remain. First, the concept, as it has been defined so far, is too broad and vague, covering too many different aspects, which

makes it ambiguous and confusing.<sup>6</sup> An example is the well-known dysfunctional effects of social capital—more of it is not necessarily better as exemplified by inner-city youth gangs, near monopoly position of certain ethnic groups in the US local business that practically bar others' access, etc. (Carroll and Stanfield, 2003, p. 402). The second problem follows directly from the first one: the vagueness of the concept renders the measurement and the design of suitable indicators difficult, which forces one to rely on various proxies (Dubois and Mahieu, 2002, p. 87). Social capital framework seems likewise to have difficulties in integrating the more qualitative, non-measurable aspects into its framework. Furthermore, social capital literature seems to be excessively based on the assumptions of 'rational economic man', ignoring the multiple motivations affecting human action (e.g., Piazza-Georgi, 2002, p. 477). This, again, seems to be an example of an issue that is recognised at the level of discourse, but which has not entered in the toolbox of the practitioners. The debate of whether social capital can actually be considered a capital, in the economic sense of the term (see, e.g., Arrow, 1999; Solow, 1999; Robinson et al., 2002), has little relevance for the present purpose. What matters is the usefulness of the concept as a basis for analysing environmental–social interface—not whether it can be used as a rigorous concept in traditional welfare economic calculations.

### 3.3. *Capabilities and social capital: metaphors or operational tools?*

Both capabilities and social capital seem to provide promising insights into analysing the social dimension of sustainable development, but neither one is at a stage of practical application yet. Instead of constituting rigorous theoretical frameworks for measuring socially sustainable development, they can rather be seen as useful metaphors that help structuring thoughts, allowing the exploration of a system approach with three fundamentally different, but nevertheless interrelated clusters of variables—ecological, economic and social

(Robeyns, 2000; Chiesura and de Groot, 2003).<sup>7</sup> As such, both concepts can be useful tools in enhancing dialogue across disciplinary boundaries and in particular strengthening economists' interest towards institutions and power as crucial variables explaining economic phenomena.

When applied to practice, capabilities and social capital can be seen to operate at different levels. Olate (2003) has proposed to integrate three frameworks of analysis—capabilities, social capital and institutions—in order to study social development programmes for poor people in Latin America. Contrary to Ballet et al. (2003), he limits the capability approach to the individual level, but stresses strongly the participatory and discursive element embodied in the concept. Social capital would suit to studying the intermediate group and community level, while the New Institutional Economics' view on institutions would be used to analyse phenomena at the level of macroeconomic policy. The framework incorporates the idea of synergy to analyse the nature of state–society interactions, a synergy recognising the complementarity between public and private actors and the ties between citizens and public officials. Such a combination of approaches might provide a fruitful basis for treating social sustainability. However, instead of the New Institutional Economics with its assumptions of rational, utility-maximising individual, methodological individualism, and a rather narrow view of institutions only as constraints, the neoinstitutionalists' stress on institutions such as routine, habits, norms and knowledge, might provide a more useful starting point.

While none of the approaches described above is at a stage where it could be directly applied to practical social policy problems, both do suggest what sorts of issues policymakers would be well advised to pay attention to when considering social sustainability. First, equity lies at the heart of the social dimension; in the sustainability perspective, special attention should be given to intergenerational equity. Second, it is not enough to look at social outcomes (or outcomes of social capital), but one needs also to consider the individual capabilities to exercise choices which would help the marginalized take themselves out of socially disadvantaged situations. The inherent

<sup>6</sup> This is probably also the reason why social capital seems to fit into many different theoretical frameworks and is endorsed by several academic disciplines.

<sup>7</sup> This is the sense in which Chiesura and de Groot (2003) propose the concept of natural capital to be used.



uncertainty, complexity, and risk of irreversible effects imply that a principle of social precaution should apply, and policies should aim at reducing individuals' and groups' vulnerabilities to adverse circumstances, i.e., improve their adaptive capacity in the face of external and internal changes. Learning, in turn, is one of the main instruments of coming to grips with changes. The concept of socially sustainable development is multidimensional and calls for an analytical framework capable of addressing the links of the social with the economic and environmental spheres as well as between the different spatial scales. At the political level, it calls for enhanced policy coordination. Finally, participation and genuine dialogue among stakeholders are among the key prerequisites of sustainable development, but they need to recognise the pervasively unequal distribution of power and thus help to empower the disadvantaged groups.

#### 4. Environmental–social interface

It is often recognised that one of the elements that make sustainable development unique and different from the previous conceptions of development or environmental policy is its stress on the interactions between the environmental, social and economic dimensions of development. However, much of the intellectual work around the concept of sustainable development—both when it comes to basic conceptual frameworks and indicators of sustainability—has so far focused on the individual dimensions as such. Although the multidimensional character is usually mentioned, in actual practice, the interactions between the dimensions, notably the trade-offs between alternative, conflicting goals, have been absent from the analysis. The interaction between the social and environmental dimensions is probably the least developed notably when it comes to measurement of sustainable development (OECD, 2001b, p. 63). The development of environmental economics—including its different variants—has contributed to developing tools for analysing the interface between economy and the environment, while frameworks for analysing the links between the social and the other dimensions are in short supply.

The above-presented frameworks for analysing the social dimension of sustainable development do pro-

vide helpful guides for structuring thoughts on the environmental–social interface, but are not yet developed enough to provide a basis for practical analysis. The 'pragmatic realism' (Bazzoli, 1999, p. 192) of neoinstitutional economics, and the policy-oriented view of ecological economics guides one to look at the demand-side of the issue: who would use the information provided by an analysis of environmental–social interface and for which purpose? Moreover, the nature of sustainable development as a contested, open, and multidimensional process implies that any analytical framework is bound to represent only a temporary agreement, which evolves along with our understanding of sustainability (Simon, 2003, p. 6). The search for a universally applicable framework is inconsistent with our understanding of human–environment systems, and therefore theoretically unfounded and practically problematic (Norgaard, 1994; Hukkinen, 2003). Any evaluation framework should be embedded in the prevailing context and institutions. Last but not least, the quality of an evaluation framework is determined by its capacity of enhancing dialogue in the spirit of discursive democracy. This in turn presupposes a good understanding of the positions of various participants along the dimensions of power.

One of the few existing attempts to systematise the environmental–social interface has been a study commissioned by the Dutch Ministry of the Environment in the end of the 1990s, with the aim of operationalising the environment–social linkages to concrete indicators. The applied theoretical model was relatively simple, consisting of four key concepts: environmental quality, social quality, environmental policy and social policy. Social quality was in this study defined as "the objectifiable and subjective aspects of society which direct people's well-being" (Coenen et al., 2000, p. 5). In a national or Western perspective, social quality could be conceived as "the objective quality and subjective valuation of health, housing, education and the income situation" (ibid.). The Dutch study brought attention to some rather self-evident, but often neglected issues such as the fact that social policies have in a number of areas adversely affected the environment. For instance, social policies may have reinforced the so-called 'rebound effect' by stimulating consumption, and therefore the volume of production, thus cancelling out the gains in eco-

efficiency (see also Hukkinen, 2003). Of course, social policies can also have positive effects for the environment, the provision of public transport being a case in point (Coenen et al., 2000, p. 10).

The overall conclusions from the Dutch study showed that the simple model was too rudimentary to represent the complex interactions and causal relations between social and environmental indicators, and that the absence of the economic dimension reduced the usefulness of the model, since many environmental effects of social trends operate through the economic system. Implicitly, the study calls into question the relevance of looking for the causal relations, given their complexity and often indirect character. Likewise, the sharp dividing line between the social and the environmental systems was seen as a drawback, thus calling for a model capable of integrating all three dimensions, and confirming the view that all dimensions of sustainable development should be treated in a holistic framework (e.g., Sachs, 1999; Hukkinen, 2003). Finally, the authors take note of a change taking place in particular at the local level towards an increasing interest in policy integrating the different policy areas that affect the living environment (Coenen et al., 2000, pp. 49–52).

#### *4.1. Territories as a platform for integrating social and environmental concerns?*

The Dutch study seems to confirm several of the assumptions behind the neoinstitutional and ecological economics. First, the traditional linear models of cause and effect relationships are poorly adapted to analysing the complex social phenomena, let alone the interactions between the environmental and social phenomena. The coevolutionary framework might be a good candidate for a more adequate analytical model. Second, while intuitively appealing, the idea of treating the environmental–social interface in abstraction of the economic one is problematic. This speaks in favour of the ‘whole development’ approach adopted by Sachs (1999), and tends to corroborate the perception implied in the bioeconomy model, which sees the three spheres of sustainability as embedded one in another. Third, the observation that the integration of the various dimensions of sustainable development works best at the local level—tied to the concrete living conditions of indi-

viduals in their daily environments—has been underlined, e.g., by Theys (2002) who considers that local territories are the level at which the questions of socially sustainable development become concrete, where the interactions between the different dimensions are most explicit, and where participation and dialogue are the most feasible. Finally, in view of the discussions on the social capital and capabilities above, it is clear that the concept of social quality alone is insufficient to cover the whole spectrum of social phenomena relevant to the environmental–social interface. Most notably, it does not encompass the impact of social norms and values on environmental sustainability—a subject that is largely ignored by the social capital approach as well.

Theys (2002) points at a gap between two levels of present discourse on sustainable development. On one side are the geographers, planners, landowners, etc., mainly interested in integrating environmental concerns into local development, in infrastructures, and spatial planning. On the opposite side, one finds the economists, large enterprises, consumer organisations, international NGOs and diplomats, more occupied with ethical consumption, precautionary principle, eco-taxes, emission trading, WTO, etc. What should be at the heart of sustainability debate is an attempt to build bridges between the local and the global, the sectoral and the spatial. The economic and macrolevel analyses should incorporate issues of growing ‘environmental inequalities’, instead of treating equity issues solely in terms of revenue or access to development. (ibid.)

Therefore, while the environmental–social interface may be easiest to track at the local level, the challenge is to find ways of situating local level phenomena into a broader context, and to identify the roles of actors and institutions at different levels. Theys (2002) recommends a three-tiered approach for public action in favour of sustainable development. The local level should function as a motor, given its unique capability of integrating the various sustainability concerns. This would leave two functions for the national level: first, developing a flexible framework of common principles to guide local level action (such as the precautionary principle), and second, the identification of manifestly unsustainable situations—be they environmentally, socially or economically unsustainable. Several of the unsustainable situations

mentioned by They have, indeed, both environmental and socioeconomic components: the emergence of ‘ghettos’ in urban areas with economically, socially, and environmentally disadvantaged inhabitants; the uncontrolled growth—physical as well as economic—of urban agglomerations; the expansion of private motor traffic in urban areas; and the ‘triple-dead-end’ (economic, social, environmental) resulting from the overexploitation by certain professional groups (fisheries, road transport, pork production, etc.).

### 5. Operationalising the environmental–social interface: the OECD Environmental Performance Reviews

In order to illustrate the practical difficulties in addressing the interaction between environmental and social questions in a national–international context, I shall briefly describe the experiences gained so far in analysing the environmental–social interface in the OECD Environmental Performance Reviews.<sup>8</sup>

The Organisation for Economic Cooperation and Development (OECD) has carried out systematic reviews of its member countries’ environmental policies since 1992. The principal aim of the Environmental Performance Reviews (EPRs) is “to help Member countries improve their individual and collective performances in environmental management” (OECD, 1997, p. 5). The primary goals of the EPR programme are to:

- (1) help individual governments judge and make progress by establishing baseline conditions, trends, policy commitments, institutional arrangements and routine capabilities for carrying out national evaluations;
- (2) promote a continuous policy dialogue among Member countries, through a peer review pro-

cess and by the transfer of information of policies, approaches and experiences of reviewed countries;

- (3) stimulate greater accountability from Member countries’ governments towards public opinion within developed countries and beyond. (ibid.)

Together with other country reviews of the OECD,<sup>9</sup> the EPRs constitute an element in the Organisation’s efforts to analyse sustainable development in its member countries. As a result of the changing policy context over the 1990s, and in line with the OECD’s 3-year effort to place sustainable development as one of the Organisation’s overarching strategic principles, the ‘second cycle’ of reviews that started in 2000 was to integrate into its framework all three dimensions of sustainable development—economic, environmental and social (see, e.g., OECD, 2001b,c). The inclusion of the environmental–social interface was a major innovation to the reviews, which had thus far focused on the traditional environmental issues (air, water, nature, waste), the integration of environmental concerns into economic and sectoral policies, and international environmental cooperation. In other words, the environment–economy interface was to be complemented by the environmental–social one. The analysis of the environmental–social interface was to include (OECD, 1998):

- demographic aspects;
- health and the environment;
- employment and environment;
- distributional aspects (‘environmental justice’); poverty, access to environmental goods (clean air, water), distribution of environmental damages and actual costs;
- availability of and access to environmental information, public participation, access to courts; and
- environmental education and training.

The analytical framework for analysing the interaction between the environment and the social dimension is not overly sophisticated, but corresponds to the rather pragmatic approach adopted in the EPRs in general. The OECD statistics and indicators provide a

<sup>8</sup> The information for the part dealing with the OECD approach stems from the author’s experience as a Finnish delegate in the OECD Working Party on Environmental Performance since 1996, the participation in the reviews of Finland (as coordinator at the Ministry of the Environment), Mexico and Russia (as country expert), and Sweden (as consultant for the OECD), as well as numerous interviews and discussions with persons involved in the review programme.

<sup>9</sup> Such as Economic Surveys, territorial development reviews, development cooperation reviews, and energy policy reviews, the latter being carried out by the International Energy Agency (IEA).

number of basic data concerning population and ageing, population density, income and employment, as well as health and education. Beyond these basic facts, the main source of information is the reviewed country's government, and the task of the evaluating team is to chart the situation in the four principal areas of interest: (1) What is the level of environmental democracy in the country (how well is environmental information made available to the citizens; which mechanisms are in place to provide for participatory planning and decision-making in the field of the environment)? (2) What has been done to promote environmental awareness and provide environmental education? (3) What has been the impact of environmental policies on employment (including employment in 'eco-industries' and services)? (4) Which negative and positive health impacts have environmental conditions had in the country and how are these impacts distributed across different population groups? As for all themes studied in the environmental performance reviews, the review team looks at the degree of goal achievement in relation to the country's own national objectives and international commitments; the level of ambition of the objectives; and cost-effectiveness of the policies. Obviously, a problem is that for the environmental–social interface the countries usually have very few explicit objectives or international commitments.

Naturally, there are several gaps in the OECD analysis. For instance, concepts such as pollution load displacement, ecological footprint, or environmental space have so far not been applied to studying the impacts of consumption patterns of the industrialised countries on the developing countries. Lack of political consensus and the methodological difficulties have prevented the use of such measures, but there are signs of gradual change. The OECD decoupling indicators and the new OECD council resolution on material flows accounting are signs of such a change, although the decoupling indicators seem to aim mainly at proving that the OECD countries are, indeed, on a good track, instead of attempting to give an objective view of development. Moreover, the approach suffers from the need to demonstrate the causal relations between environmental and social issues. This automatically excludes a number of questions that are highly relevant, but where causal relationships are intractable, difficult to demonstrate, or complex,

involving often economic dimensions, for instance. As a rule, speculation is to be avoided as much as possible in the EPRs. Since the review team has very limited resources for doing any in-depth research, the result is that only those issues are included on which 'hard data' is available.

The experiences from the analysis of the environmental–social interface have been mixed so far, when about a half of the 30 OECD member countries have been examined. On the positive side, one can mention the simple fact that the reviewed countries have been forced to pay attention to the issue. A frequent problem for the reviewing team is the small amount of information on the issues at the environmental–social interface; in most countries there are no formal institutions responsible for the environmental–social integration. The positive role the EPRs could play in this matter is providing an incentive to the countries to improve cross-sectoral integration. The downside is, of course, that the quality of the analysis suffers if basic data is not available. Furthermore, since no authority is formally responsible for the issues at the environmental–social interface, the findings and recommendations of the review on this matter tend to be soon forgotten. In order for the review to have a role, responsibilities for the implementation of the recommendations should be clearly defined.

Seen in the light of the above discussion on possible frameworks for analysing the social dimension of sustainable development, one can note that neither one of the approaches has been applied, but the analysis is rather based on very pragmatic 'ad hoc' type of approach, relying on a checklist of key issues to be analysed. The final documents produced in the OECD Sustainable Development Initiative after a 3-year work in 2001 laid out a tentative framework for measuring sustainable development, including its social dimension. The proposed framework was rough and incomplete, but contained, however, some possible pathways towards the analysis of the environmental–social interface as well. The Organisation has since then produced documents on the role of social and human capital in economic development (e.g., [OECD, 2001d,e](#)), but findings from these studies have hardly been incorporated into the EPR framework.

While the EPR framework for examining the environmental–social interface is far from being a sophisticated analytical apparatus relying on a clear

theoretical understanding of the subject, this doesn't mean that the analysis would be useless or not in line with the basic principles of NE. A very incomplete analysis may serve well the purpose of enhancing discursive democracy, if it provokes debate on sustainability issues. However, the environmental–social chapter is usually the one that generates the least interest within the reviewed country—for the reasons mentioned above. This leaves us with one final hope, namely, the possibility of the analysis gradually improving as a result of an interactive learning process, in which all relevant stakeholders would participate. Unfortunately, there seems to be rather little learning of this kind, and interaction between the secretariat and the potential users of the reviews is very limited. Before the launching of the second cycle of EPRs in the end of the 1990s, a number of seminars were organised in order to provide new ideas for the reviews—among these events was a seminar held in Paris on the environmental–social interface. However, the interest towards the matter seems to have faded away since then, for several reasons. First, the seminars and brainstorming sessions did not seem to have a great impact on the second cycle of reviews, which has frustrated some participants. Second, the person responsible for developing the analysis on the environmental–social interface in the OECD environment directorate moved to another post within the OECD, and the issue was hence left without a 'guardian'. Third, while there seems to be a continuous demand for an analysis of the environmental–social interface within politicians, the same does not hold for the administrations, which seem rather reluctant to engage in intersectoral cooperation.<sup>10</sup>

## 6. Conclusions

It is neither feasible nor desirable to search for a single measure or a single framework for analysing the environmental–social interface. Different geographical and temporal scales as well as situational contexts require their own frameworks, which do not necessarily provide a coherent picture, but a mosaic of partly contradicting views of reality. Eventual thresh-

olds of sustainability, beyond which irreversible damage would be caused, cannot be defined in absolute terms, but need to be looked at in their context—as a part of a coevolutionary framework, in which changing one 'parameter' affects several others, and may thus affect the system resilience. Hence, any evaluation or measurement of sustainability needs to be embedded in a coevolutionary framework that takes into account the dynamic interactions between different elements.

Analysing the environmental–social interface without including the economic dimension may not be desirable, because in most cases, the three dimensions of sustainability are all entangled together. The need to demonstrate the existence of causal relationships between the social and environmental aspects may in such a situation be rather counterproductive, and exclude a number of relevant factors from the analysis.

Integration of the three dimensions of sustainability seems easiest and most 'natural' at the local level, in concrete situations, and at a scale in which specialisation and sectorisation are far less developed than at higher levels of hierarchy. However, the challenge is to come up with assessment frameworks that enhance meaningful communication and attribution of responsibilities between the local and the national–global levels. The institutions at the nation level play a crucial role in setting the framework for local action. Addressing the local–global interaction implies addressing the questions of power that neither the capabilities nor the social capital approach seem be able to handle in a satisfactory manner, but where neoinstitutional economics might be helpful with its emphasis on institutions and power. Neoinstitutionalism might also help to escape the view of rational, utility-maximising individual, which still underpins a lot of the work on social capital. Any analysis of the 'social' should recognise that human beings have multiple motives for action, and that the social 'outcomes' of two seemingly similar actions may differ depending on the underlying motives. This is particularly relevant when studying an area that has received little attention in capability and social capital approaches, namely, the social conditions of an institutional change towards an environmentally sustainable development. Likewise, the capability approach should clearly distance itself from methodological individualism, which ultimately explains all social phenomena by reference to the

<sup>10</sup> Perhaps with the exception of environmental health, which has in recent and ongoing reviews generated relatively high interest.



individual. Applying the capability concept to societies, along with individuals, is a welcome opening to this direction.

Neither the capabilities, nor the social capital approach provide ready-made toolkits for measuring the environmental–social interface, but both can be useful as frameworks of thought helping to conceptualise the social phenomena—in the simple framework presented in the Dutch experience the ‘social quality’—which could then be used in developing tools for analysing the environmental–social interface. The social capital metaphor can be useful in ‘marketing’ social issues to economists, but its vague definition and the underlying conception of rational, utility-maximising individual lessen its usefulness.

While a simple, pragmatic framework of analysis is preferable in studying the environmental–social interactions in practical policy situations, the basic framework suggested in the Dutch study was too reductionist in its assumptions of simple causal relationships among the four variables of environmental policy, environmental quality, social policy and social quality. A coevolutionary framework would be better adapted to grasping the dynamic and holistic character of human–social interactions, and would avoid the dead-end resulting from the need to always demonstrate causal relationships. The OECD experience testifies to the need of involving stakeholders and potential users of evaluations in the design of the analytical framework—otherwise there is a significant risk that the results will not be of greater interest to any constituency. A particular problem when developing methods for analysing the environmental–social interface is the lack of an organisation clearly responsible for the issues at the interface—a gap between the political demand for greater attention to the interaction between social and environmental issues, and the capacity of the formal institutions to respond to the demand. The relative neglect of global equity issues related to consumption patterns in the OECD reviews demonstrates the political sensitivity and methodological complexity of the issues involved. Probably the only way to overcome such problems is learning by doing—an approach that the OECD is applying—but broadening the range of stakeholders involved would probably increase the legitimacy and credibility of the reviews in the eyes of the stakeholders. Finally, any evaluator addressing the issues of environmental–social interaction faces

the question of how best to influence decision-makers and other actors; through a diplomatic, ‘soft’ persuasion, or through a more direct confrontation. There is no universal answer: an intergovernmental organisation like the OECD must probably be rather cautious, whereas an NGO is instead morally obliged to take a tougher stand. One can only hope that the mere fact of the environmental–social interface being now addressed in reviews carried out by an intergovernmental organisation of a certain standing will gradually bring about the needed institutional change towards better integration of social and environmental issues in OECD countries’ public policy making.

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