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The social pillar of sustainable development: a literature review and framework for policy analysis

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There is a need to develop a clearer understanding of what the social pillar of sustainable development means and how it relates to the environmental pillar. This article contributes to this process by presenting a conceptual framework that identifies four overarching social concepts and links them to environmental imperatives. These concepts are: public awareness, equity, participation, and social cohesion. The framework builds on concepts and policy objectives outlined in research on international sustainable development indicators and the social sustainability literature. The social pillar can be expanded to include environmental, international, and intergenerational dimensions. This framework can then be used to examine how states and organizations understand the social pillar and its environmental links.

KEYWORDS: social policy, environmental education, public awareness, environmental equity, sustainable development, environmental sociology

Introduction

While the concept of sustainable development (SD) generally refers to achieving a balance among the environmental, economic, and social pillars of sustainability, the meaning and associated objectives of the social pillar remain vague (Dempsey et al. 2011; Casula Vifell & Soneryd, 2012). Indeed, it has been described as the most conceptually elusive pillar in SD discourse (Thin, 2002). Moreover, the social dimensions of sustainability have not received the same treatment as the other two pillars (Cuthill, 2009; Vavik & Keitsch, 2010) and there are various interpretations regarding what issues should be addressed (Dixon & Colantonio, 2008). The selection of social measures in sustainable development indicator sets (SDIs) is often a function of power rather than policy coherence, as influential groups are more likely to have their concerns included (Littig & Griessler, 2005). These indicators reflect different sociocultural priorities (Omann & Spangenberg, 2002) and as such are often picked for political rather than scientific reasons (Fahey, 1995). For example, preferences for neoliberalism or the European social model will result in different social objectives (Colantonio, 2007).

These ambiguities suggest that a greater understanding of the social pillar of SD is desirable. The literature also indicates that it is necessary to develop greater linkage between the social and environmental pillars (Dobson, 2003b; Littig & Griessler, 2005; Gough et al. 2008). This article contributes to estab-

lishing such connections by presenting a conceptual framework for understanding the social pillar and outlining its environmental implications. A review of eight bodies of literature related to SD suggests four pre-eminent policy concepts (Figure 1).

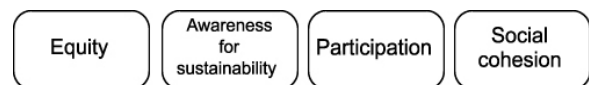


Figure 1 Four Pre-eminent Concepts of the Social Pillar.

While the literature highlights the relatively limited treatment afforded to the social pillar, some work has been done. In particular, SDIs and the social sustainability literature present us with policy concepts and objectives specifically identified as “social” and represent a significant contribution to how the social pillar is conceived. However, I argue that establishing clearer links with the environmental pillar will further enhance this concept, an argument rooted in an understanding of SD as a concept requiring interpillar linkages. In this respect, the links between the social and environmental pillars are particularly underdeveloped. It is therefore useful to expand the parameters of the social pillar by connecting it empirically to environmental imperatives. Furthermore, while existing approaches tend to present the social pillar in terms of national welfare objectives for current generations, it is useful to broaden the understanding of the social to incorporate international and intergenerational dimensions. In so doing, a policy framework

emerges that provides the basis for an alternative set of social indicators to those specified in international SDIs or implied in the social sustainability literature. This approach constitutes a set of policy objectives that have clear social *and* environmental dimensions. The framework may be employed to conduct an empirical analysis of how different states and organizations understand the social pillar and to what extent they develop social/environmental links.

This article is divided into two parts. The first part describes the origins of the proposed framework, explaining the identification of eight key types of SD-related literature that discuss social concepts and policy objectives (Table 1). I then explore how debates to date have presented “the social” in SD. Drawing on key United Nations (UN) and European Union (EU) SD policy documents and environmental policy integration (EPI) literature, the argument then moves to a justification for linking social and environmental imperatives.

The second part of this article presents the four policy concepts at the heart of the framework, which are linked to thirteen policy objectives that address social and environmental concerns simultaneously. These conceptual categories and policy objectives constitute the proposed approach for understanding the social pillar of SD and for providing the basis to develop an alternative set of social indicators. It is important to note that while some of the social policy objectives outlined in the framework may have global application, others are likely only appropriately applied in a global northern context. For example, some objectives refer to a redistribution of resources from North to South, while others refer to reductions in consumption, which is relevant to affluent societies only. Therefore, the framework should be understood primarily in a northern context (with the North/South dichotomy understood in terms of rich and relatively poor countries).

Constructing a Social Pillar

The proposed framework is built from social concepts and policy objectives derived from the literature described in Table 1. This literature was reviewed to explore how the “social” in SD debates is variously understood and, as such, it provides the basis upon which a social pillar of SD is constructed. While this is not an exhaustive record of all documents reviewed, it identifies primary texts in each branch of literature.

Section 1 of Table 1 refers to key UN policy statements regarding the meaning of SD and its associated policy objectives. These documents enjoy a particularly authoritative status within SD discourse.

Section 2 summarizes key European policy statements on SD. These are particularly useful as they give a global northern perspective on the social goals of SD, which may be contrasted with the global view taken by the UN.¹

Section 3 identifies important multilateral SDI sets that specifically allude to social concerns and how progress in these policy areas might be measured.

Section 4 highlights literature that specifically focuses on the social aspects of SD.

Section 5 draws on texts from the social policy literature that specifically seek to establish relationships between welfare issues and environmental concerns.

Section 6 underscores significant work from the environmental justice literature, which highlights the disproportionate burden faced by low income or vulnerable groups regarding the distribution of environmental risks (or “bads”). Both intergenerational and intragenerational equity perspectives are subsumed under this category.

Section 7 refers to central texts in the ecological modernization literature. While some commentators argue that ecological modernization theory (EMT) should not be considered part of SD discourse (e.g., Langhelle, 2000), the more prevalent view is that it is an expression of “weak” sustainability, as Baker et al. (1997) describe.² The EMT work has become an extremely influential conceptual approach in environmental sociology, and while some scholars (e.g., Dean, 2001) argue that it does not address social issues, a careful and systematic review of the relevant literature reveals that authors writing from an EMT perspective have actually considered important social concepts such as equity, awareness for sustainability, and participation.

Section 8 refers to salient research in the EPI literature, which is focused on enhancing the compatibility of sectoral policy objectives with environmental objectives.

These eight bodies of literature provide the foundations of the conception of the “social pillar” outlined in this article. They were selected on the basis

¹ UN policy documents tend to focus on need satisfaction of a more fundamental nature than is evident in EU documents. The latter are inclined to reflect the concerns of more affluent groups. For example, while the EU Sustainable Development Strategy (Council of European Union, 2006) refers to the need to promote animal health welfare and tackle obesity, tobacco use, and harmful drinking, the 1996 UN indicator set highlights indicators of a more fundamental nature, such as “adequate excreta disposal facilities,” “access to safe drinking water,” and “the nutritional status of children” (UNCSD, 1996).

² Some scholars compare ecological modernization and SD strategies as a basis to distinguish policy approaches (see, e.g., Baker, 2007; Wright & Kurian, 2009).

Table 1 Literature that provides the building blocks of a social pillar of sustainable development.

1. Key United Nations Sustainable Development Policy Documents	United Nations Environment Program (UNEP) (1972)	<i>Stockholm Conference on the Human Environment</i>
	International Union for the Conservation of Nature (IUCN) (1980)	<i>World Conservation Strategy</i>
	World Commission on Environment and Development (WCED) (1987)	<i>Our Common Future</i>
	United Nations Conference on Environment and Development (UNCED) (1992)	<i>Documents from the United Nations Conference on Environment and Development</i>
	World Summit on Sustainable Development (WSSD) (2002)	<i>Documents from the World Summit on Sustainable Development</i>
	United Nations Economic, Social, and Cultural Organization (UNESCO) (2004)	<i>United Nations Decade of Education for Sustainable Development (2005–2014) Framework for the International Implementation Scheme</i>
2. Key European Sustainable Development Policy Documents	European Sustainable Cities and Towns Charter (ESCTC) (1994)	<i>Aalborg Charter</i>
	United Nations Economic Commission for Europe (UNECE) (1998)	<i>Aarhus Convention</i>
	Commission of European Communities (CEC) (2001)	<i>A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development</i>
	Office of the [UK] Deputy Prime Minister (ODPM) (2005)	<i>Bristol Accord</i>
	Council of the European Union (CEU) (2006)	<i>Renewed European Union Sustainable Development Strategy</i>
	Commission of European Communities (CEC) (2009)	<i>Mainstreaming Sustainable Development in EU Policies: 2009 Review of the European Union Strategy for Sustainable Development</i>
3. Key Multilateral Sustainable Development Indicators Documents	United Nations Commission for Sustainable Development (UNCSD) (1996)	<i>Indicators of Sustainable Development, Framework and Methodology</i>
	United Nations Department of Social and Economic Affairs (UNDESA) (2001)	<i>Indicators of Sustainable Development: Framework and Methodologies</i>
	Commission of European Communities (CEC) (2004)	<i>EU Member State Experiences with Sustainable Development Indicators</i>
	United Nations Department of Social and Economic Affairs (UNDESA) (2007)	<i>Indicators of Sustainable Development: Guidelines and Methodologies</i>
	Organization for Economic Cooperation and Development (OECD) (2008b)	<i>Measuring Sustainable Development: Report on the Joint UNECE/OECD/Eurostat Working Group on Statistics for Sustainable Development</i>
	Organization for Economic Cooperation and Development (OECD) (2009)	<i>Society at a Glance 2009—OECD Social Indicators</i>
	Eurostat (2005)	<i>Measuring Progress Towards a More Sustainable Europe: Sustainable Development Indicators in the European Union</i>
	Eurostat (2007)	<i>Measuring Progress Toward a More Sustainable Europe: 2007 Monitoring Report of the EU Sustainable Development Strategy</i>
4. Social Sustainability Literature	George & Wilding (1999); Barton (2000); Barron & Guantlet (2002); Goodland (2002); Omman & Spangenberg (2002); Thin (2002); Thin et al. (2002); Littig & Griessler (2005); Bramley et al. (2006); Turkington & Sangster (2006); Colantonio (2007); Munasinghe (2007) Spangenberg (2007); Chan & Lee (2008); Dixon & Colantonio (2008); Bramley & Power (2009); Cuthill (2009); Vavik & Keitsch (2010); Dempsey et al. (2011); Casula Vifell & Soneryd (2012)	
5. Green Social Policy Literature	Irvine & Ponton (1988); Cahill (1991); Ferris (1993); George & Wilding (1994); Barry (1998); Fitzpatrick (1998); Huby (1998); Trainer (1998); Cahill (2001); Fitzpatrick & Cahill (2002); Humphrey (2002); Dean (2001); Dryzek (2005; 2008); Dobson (2003b) Meadowcroft (2005; 2008); Gough et al. (2008); Carnegie UK (2009); Davies (2009)	
6. Environmental Justice Literature	Barry (1993; 1999); Hofrichter (1993); Beckerman (1995; 1999); Bryant (1995); Harvey (1996); Faber (1998); Bullard (1999; 2000); Miller (1999); Norton (1999); Wissenburg (1999); Fitzpatrick (2001); Dobson (2003a; 2007); Faber & McCarthy (2003); Agyeman & Evans (2004); Davies (2006); Gardiner (2006); Karlsson (2009); Singer (2006); Tremmel (2006); Rees (2008)	
7. Ecological Modernization Literature	Hajer (1995); Christoff (1996); Mol (1999; 2000); Frijns et al. (2000); Mol & Spaargaren (2002; 2004); Spaargaren (2000; 2003; 2006); Spaargaren & van Vliet (2000); Spaargaren & Mol (2008)	
8. Environmental Policy Integration (EPI) Literature	Collier (1997); Lenschow (1997; 2002); Liberatore (1997); Lafferty (2002); Lafferty & Hovden (2003); Jordan et al. (2003); Persson (2004); Baker (2007); Jordan (2008); Jordan & Lenschow (2008); Nilsson et al. (2009)	

that they fulfill one or more of the following criteria: they are influential texts in SD discourse; they discuss the social objectives of SD; and they examine the relationships between social and environmental policy.

What is Social?

Identifying a social pillar presents certain challenges. A myriad of different meanings are attached to the term “social.” The *Oxford Concise English Dictionary* presents seven definitions referring to both nouns and adjectives. Littig & Greissler (2005) note that the term has both “analytical” and “normative” meanings. There are also difficulties regarding the identification of “purely” social issues, as considerable overlaps exist across SD’s three pillars. This overlap is particularly pronounced with respect to the economic and social pillars (Thin, 2002), with many issues, most notably employment and unemployment, deemed relevant to both dimensions (OECD, 2009). Despite these circumstances, the literature points to certain policy concerns that have been identified as “social” within the overall SD framework. These have been variously described as social categories (UNCSD, 1996); social themes (UNDESA, 2001); social dimensions (OECD, 2009; Dempsey et al. 2011; Casula Vifell & Soneryd 2012); social indicators (UNCSD, 1996; UNDESA, 2001); and the social realm (Chan & Lee, 2008). Furthermore, the concepts of social sustainability (Goodland, 2002; Turkington & Sangster, 2006; Chan & Lee, 2008) and social SD (Vavik & Keitsch, 2010) have been discussed.

The policy objectives emanating from this literature are broadly similar and form the basis of what might be understood by the notion of “social” in the context of SD. These classifications are primarily derived from SDI sets and the social sustainability literature.³ Various “social pillars” emerging from these literatures are outlined in Tables 2 and 3 and discussed in tandem below.⁴

Table 2 identifies social classifications in SDIs and Table 3 includes both classifications and examples of social policy objectives. Similar policy concerns feature in UN and EU SD literatures. They are also prominent in the other literatures outlined in Table 1, albeit to varying degrees. The purpose of Tables 2 and 3 is to give a general flavor of the kinds of social concepts and policy objectives included in various discussions of the social pillar. These tables

³ After the early 2000s it became less fashionable to use explicit “pillar” distinctions. However, other SDIs and the social sustainability literature refer to the themes highlighted here as “social.”

⁴ The policy objectives discussed in SDIs are broadly similar to those raised in the social sustainability literature.

Table 2 Social classifications and objectives in social indicator sets.

Author	Social Classification
UN Commission for Sustainable Development (UNCSD,1996)	Social “Categories”
	Combating poverty
	Sustainable demographic dynamics
	Protecting human health
	Promoting human settlement
UN Commission for Sustainable Development (UNDESA, 2001)	Promoting education, public awareness, and training
	Social “Themes”
	Equity
	Health
	Education
UN Commission for Sustainable Development (UNDESA, 2007)	Housing
	Security (combating crime)
	Population
	“Themes”²
	Poverty
EU Sustainable Development Indicators (Eurostat, 2007)	Governance
	Health
	Education
	Demographics
	“Themes”²
OECD Social Indicators (OECD, 2009)	Social inclusion
	Public health
	Demography
	Good governance
	Social “Organizing Dimension”
Economic self-sufficiency	
Equity	
Health	
Social cohesion	

do not set up a detailed discussion on classifications or policy objectives. The authors already provide a fully comprehensive and detailed exposition of the conceptual and policy contours of these social dimensions and there is little need to revisit this work. On one hand, this literature, and the level of consensus regarding policy objectives that it suggests, implies that there is less mystery surrounding the social policy objectives of SD than is generally acknowledged. On the other hand, considerable ambiguity remains with respect to the relationship between the social and environmental pillars and it is to this uncertainty that attention turns. The literature outlined in Tables 2 and 3 assists this task by fulfilling two important functions. First, it serves to identify what is generally understood as the “social” in SD discourse. Second, it provides classifications, or umbrella groupings, under which the policy objectives of the social pillar may be usefully subsumed. For example, Chan & Lee

Table 3 Social policy concepts and objectives from the social sustainability literature.

Author	Social Classification	Description of Policy Objective
Littig & Griessler (2005) "Social dimensions of sustainability"	Basic Needs and Quality of Life	Satisfaction of basic material needs and self-fulfillment
	Social Justice	Equality of opportunity
	Social Coherence	Harmony among different social groups
Chan & Lee (2008) "Factors of social sustainability"	Social Infrastructure	Physical infrastructure which delivers locally based services and opportunities for social interaction
	Availability of Job Opportunities	Employment
	Accessibility	Engaging in essential work and leisure activities should not entail too much travel
	Townscape Design	Townscape design that is aesthetically pleasing, functional, and promotes social interaction
	Preservation of Local Characteristics	Conserving physical and social/community characteristics particular to the locality
Cuthill (2009) "Key factors of social sustainability"	Ability to Fulfill Psychological Needs	Fulfilling the need to feel secure and participate in neighborhood design
	Social Capital	Promoting social networks and a sense of social responsibility
	Social Infrastructure	Providing facilities which address need and capacity for participation
	Social Justice + Equity	Providing equitable access to essential welfare services and employment, especially for vulnerable groups
Dempsey et al. (2011) "Dimensions of social sustainability"	Engaged Governance	Promoting bottom-up, participatory democracy
	Social Equity	Reducing inequality in life chances by ensuring local access to key services
	Sustainability of Community	Encouraging social interaction/social networks in the community Encouraging participation in collective groups in the community Engendering a sense of pride in the local place Ensuring safety and security
Vavik & Keitsch (2010) "Three goals of social sustainable development"	Poverty	Promoting "inclusion" by providing basic needs
	Illiteracy	Promoting access to education
	Access	Promoting access to participation in decision making

(2008) employ six classifications while Dempsey et al. (2011) prefer to include all policy concerns under the two master classifications of "equity" and "sustainability of community." Building on such approaches, and based on a review of the literature outlined in Table 1, I argue that four pre-eminent social policy concepts, with attendant policy objectives, emerge from this literature. These are equity, awareness for sustainability, participation, and social cohesion.

This framework employs these four conceptual classifications as "organizing dimensions" (OECD, 2009), generalized policy concepts from which more specific policy objectives may be derived. Such classifications allow a large number of policy objectives to be synthesized into a smaller number, which facilitates easier communication and comparison (OECD, 2009). While the selection of these policy concepts borrows from SDIs and the social sustainability literature, the framework seeks to expand the scope of such "social pillars" by linking these four social concepts to environmental imperatives. The scope of the social pillar may also be expanded to include inter-

national dimensions. While international SDI sets and the social sustainability literatures have addressed a significant gap by fleshing out social policy objectives at a national level, the international dimensions of SD suggest that the "social" be extended to encapsulate global challenges. For example, while the social concepts of equity and social cohesion refer to key national welfare concerns, they also have significant international implications for SD policy. As such, it is appropriate that the international dimensions of these social concepts feed into SDIs.

Developing Links between the Social and Environmental Pillars

The novelty and essential contribution of SD as a concept and policy approach resides in its requirement to develop interpillar links. The Brundtland Report states that the "deepening interconnections" among the pillars is "the central justification for the establishment of the Commission" (WCED, 1987). Jordan & Lenschow (2008) claim that the report's greatest contribution was to highlight the need for

mutual compatibility among the pillars. The Aalborg Charter states that policy must seek to “integrate people’s basic social needs as well as healthcare, employment and housing programmes with environmental protection” (ESCTC, 1994). Similarly, the EU Sustainable Development Strategy calls for the “integration of economic, social and environmental considerations so that they are coherent and mutually reinforce each other” (Council of European Union, 2006). In fact, the European Commission argues that the presentation of SD issues without reference to their interpillar relationships may be described as “bundling,” “artificial,” and “false” (CEC, 2004). Jordan & Lenschow’s (2008) review of EU documents points to a clear requirement that environmental and social imperatives be integrated. Developing these interconnections via policy may be linked to the concept of EPI and in particular horizontal environmental policy integration (HEPI), which refers to incorporating environmental concerns into all sectors of policy, including social policy (Liberatore, 1997; Lafferty, 2002; Lafferty & Hovden, 2003; Jordan & Lenschow, 2008). In an influential EPI text, Liberatore (1997) argues:

The relevance of integration for moving towards sustainable development is straightforward: if environmental factors are not taken into consideration in the formulation and implementation of the policies that regulate economic activities and other forms of social organization, a new model of development that can be environmentally and socially sustainable in the long term cannot be achieved.

While disciplines such as environmental economics do link environmental and economic imperatives, SD is unique in that it adds social aspects into the interdimensional mix (Dryzek, 2005). However, much of the work done on the social pillar discussed above does not place much focus on environmental links. For example, environmental factors are not addressed in George & Wilding’s (1999) conception of social sustainability. More recently, while the work of Littig & Griessler (2005), Chan & Lee (2008), Cuthill (2009), and Dempsey et al. (2011) provide excellent discussions regarding SD’s social aspects, the links between social and environmental goals do not receive much treatment. That said, both Cuthill (2009) and Littig & Griessler (2005) mention that developing such links would enhance our understanding of the social pillar. Key EU SDI documents often cite the importance of developing “interdimensional” relevance among pillars (CEC, 2004; Eurostat, 2007), yet a review of key international

SDIs (e.g., UNCSD, 1996; UNDESA, 2001; 2007; Eurostat, 2005; 2007) reveals that while some linkages are made, these are very weakly developed. In light of these observations, a strong case exists for presenting a social pillar with clear social/environmental links, an approach central to the framework proposed here.

A Social/Environmental Framework

The proposed framework consists of thirteen policy objectives with both social and environmental dimensions, grouped under the four conceptual classifications of equity, awareness for sustainability, participation, and social cohesion. The following discussion explains the meaning of each objective in policy terms, examines the social-environmental policy implications, and outlines the justification for the selection of each objective. What emerges from this treatment is a set of social objectives, linked to environmental imperatives, which may function as a tool of analysis with which to examine how different states and organizations understand social policy concepts within the broader SD framework. States and organizations may be analyzed for their relative commitment to the social pillar with respect to the other pillars and their commitment to develop inter-pillar relationships. While this framework does not include a detailed set of indicators, it provides the foundation upon which such a set may be developed. It should be noted that this discussion does not view this framework as a replacement for the social pillars outlined in Tables 2 and 3, but seeks instead to augment existing approaches.

Table 4 outlines the framework for expanding the social pillar in terms of social/environmental policy objectives.

Equity

Equity is a key social concept in SD discourse. In policy terms, it refers to the distribution of welfare goods and life chances on the basis of fairness and it applies to national, international, and intergenerational contexts. Equitable redistribution means that all citizens, regardless of gender, should have an equal opportunity to both survive and fulfill their development potentials. This very broad conception of equity refers to a wide spectrum of policy areas ranging from the provision of clean water, nutrition, employment, education, shelter, essential medicines, and an unpolluted environment to access to social networks. It also includes the promotion of freedom from discrimination on the grounds of gender, religion, or race. Policy objectives related to equity are articulated in all of the publications identified in Ta-

Table 4 A social pillar of sustainable development.

Organizing Dimension	Policy Area	Policy May Be Analyzed For:
Equity	<p><i>The “export of pollution”</i></p> <p><i>Climate change and the development needs of global southern countries</i></p> <p><i>Vulnerable groups and the effects of climate change</i></p> <p><i>Vulnerable groups and fiscal measures</i></p> <p><i>Welfare provision to current generations and carbon emissions</i></p> <p><i>Protecting future generations by reducing consumption levels</i></p>	<ul style="list-style-type: none"> • Commitment to curb the “export of pollution” • Commitment to economic transfers to global southern countries rather than relying solely on carbon-trading mechanisms • Commitment to assist vulnerable groups in adapting to the effects of climate change • Commitment to protect vulnerable groups from fiscal measures designed to mitigate climate change • Commitment to decarbonize current welfare provision • Commitment to protect future generations by reducing consumption rather than relying solely on market/technological solutions
Awareness for sustainability	<p><i>ESD and environmental awareness programs and campaigns</i></p> <p><i>Content of ESD Programs and campaigns</i></p>	<ul style="list-style-type: none"> • Commitment to designing and implementing educational programs for SD through the formal and informal education sectors • The level to which these programs embrace a challenge to the traditional growth paradigm including nonmaterial conceptions of happiness
Participation	<i>Broadening the participative base of environmental planning processes</i>	<ul style="list-style-type: none"> • The level to which the views and preferences of weaker groups including future generations are reflected in environmental planning processes
Social Cohesion	<i>Promoting social cohesion and environmental objectives simultaneously</i>	<ul style="list-style-type: none"> • Commitment to infrastructural planning which promotes social integration and environmental sustainability simultaneously • Commitment to promoting social activities aimed at environmental goals • Commitment to developing “transition towns” or initiatives of that type • Commitment to combating the kinds of environmental conditions which cause civil strife

ble 1 and in almost all cases equity is understood as a central component of sustainability.⁵

Presenting the concept of equity in such broad terms masks myriad conceptual and ideological debates that a rigorous examination of the concept would expose. However, as previously noted, such arguments are well-rehearsed elsewhere. The purpose here is to examine how the concept of equity has been linked to environmental imperatives and what policy implications emerge from these synergies. The relationship between equity and environmental objectives is steeped in complexity and a simple correlation between increased equity and environmentally benign outcomes cannot be assumed (Ferris, 1993; Humphrey, 2002; Dobson, 2003b).

⁵ It is noted that in the main, ecological modernization theorists see little connection between the equitable distribution of resources and environmental ends (see, e.g., Mol & Spaargaren, 2000; 2002). Furthermore, in terms of debates around intergenerational equity, Beckerman (1995; 1999) represents a deviation from the general consensus in this literature suggesting that current generations have obligations to future generations in terms of ecological sustainability. He argues instead that “[i]ntergenerational egalitarianism has nothing to recommend it.”

To develop this relationship theoretically, Dobson (2003b) calls for empirical examples that highlight how both objectives may be simultaneously promoted. To this end, I outline five ways in which equity has been empirically linked to environmental issues and articulate these in terms of policy objectives. In some cases, these goals refer primarily to the national level while others are relevant to the international sphere. I assess states and organizations with regard to their commitment to these objectives. These policy objectives are considered here in a relatively cursory manner, addressing only the basic contours of the pertinent arguments. Despite such limitations, these objectives provide a broad base for discussion regarding how the environmental dimensions of equity may be understood and developed into indicators.

First, evidence suggests that pollution in general, and the effects of climate change in particular, are and will be disproportionately felt by the poor, whether they reside in the global North or South. For example, Gough et al. (2008) argue that the risks associated with climate change are likely to exacerbate inequalities, as lower income groups are more likely

to live in higher risk areas and marginal lands, have fewer resources to cope with harmful environmental events, and have much less insurance coverage. In this context, the fallout from Hurricane Katrina indicates that those on low incomes are least able to protect themselves from extreme weather (Singer, 2006; Dryzek, 2008). Furthermore, fiscal measures such as carbon taxes, designed to combat climate change, can place a higher burden on lower income households as energy prices increase (Scott, 2007; CPA, 2008). Low-income households spend a higher proportion of their income on domestic energy, live in less energy-efficient houses, and are more likely to consume certain fuels such as peat, coal, and oil that have higher carbon content. Fiscal measures may therefore exacerbate the effects of poverty and increase fuel poverty. Gough et al. (2008) also argue that budgets aimed at welfare provision may be diverted to address the negative consequences of climate change, placing greater strains on low-income groups (Gough et al. 2008). In this context, policy approaches based on a commitment to equity may be understood in terms of 1) commitment to assist vulnerable groups adapting to the effects of climate change, and 2) commitment to protect vulnerable groups from fiscal measures designed to mitigate climate change.

Second, Stern (2006), among others, argues that future generations will face serious environmental risks as a result of climate change that has been linked to economic growth (OECD, 2008b). This issue raises the question of intergenerational equity. While some commentators claim that market mechanisms and technological developments may be harnessed to combat climate change,⁶ others argue that such approaches will be insufficient (Andersen & Massa, 2000; Backstrand & Lovbrand, 2006; Grist, 2008). Continuing increases in global greenhouse gas-emission levels provide empirical support for such skepticism (Hansen, 2006; CEC, 2009; WMO, 2009). Furthermore, evidence suggests that since the 1990s most affluent countries have not decoupled their carbon dioxide (CO₂) and other greenhouse-gas emissions from growth in gross domestic product (GDP) (OECD, 2008b). Alternative approaches to the question of intergenerational equity embrace the idea that it entails reductions in consumption by current generations (Barry, 1993; Dobson, 2003a; Rees, 2008). In this context, pursuing intergenerational equity may be viewed in terms of strength of com-

mitment to reduce consumption rather than relying solely on market/technological solutions.

Third, economically developing countries will disproportionately feel the effects of climate change, partly for geographical reasons and partly because they have limited resources to engage in mitigation or adaptation strategies (Baker, 2006; Stern, 2006). This situation reflects the fact that relatively poor countries have contributed least to the problem, yet will suffer most from it, which raises the question of equity. While some scholars and policy makers advocate for international carbon trading, others have suggested that wealthy countries continue to unfairly dominate negotiations around these mechanisms in ways favorable to their own interests (Backstrand & Lovbrand, 2006; Liverman, 2009). Alternative or stronger approaches tend to focus on the idea of considerable wealth transfers from North to South to assist mitigation and adaptation policies in southern countries. In this context, a commitment to equity may be assessed in terms of resolve for economic and technological transfers to southern countries rather than relying solely on carbon-trading mechanisms.

Fourth, policy should seek to ensure that intergenerational and intragenerational equity are made compatible (Pearce et al. 1989; Redclift, 1993; Fitzpatrick & Cahill, 2002). This means that in protecting future generations via environmental policies, attention and funds must not be diverted away from addressing the needs of today's poor. At the same time, policy must ensure that the provision of welfare for the presently disadvantaged is carried out without diverting attention or funds away from addressing the needs of future generations. The HEPI attempts to overcome this dilemma by requiring all policy goals, including social policy, to be compatible with environmental objectives. Certain policies exist that appear to reflect this ethos, for example, green social economy initiatives (Davies, 2009) or the energy retrofitting of social housing (Gough et al. 2008). On a broader level, the application of HEPI would require agencies responsible for the provision of essential welfare services (e.g., health, housing, education, social security) to develop and implement plans to substantially reduce the carbon emissions associated with the delivery of these services. In this way, policy seeks to simultaneously meet the needs of today's poor and future generations. Gough et al. (2008) provide a good overview of policy debates related to such issues. In this context, policy imbued with the spirit of equity may be viewed in terms of commitment to decouple welfare provision from carbon emissions.

Finally, it has been noted by writers such as Rowley & Holmberg (1995), Moffat (1996), and Purvis & Grainger (2004) that pollution is inequitably

⁶ Market mechanisms include emissions trading, carbon offsetting, and forest sequestration, while technological interventions include carbon storage/sequestration, deflection of heat away from the earth's surface with solar shields or satellites with movable reflectors, and ocean fertilization using iron or similar inputs to increase plankton production (and CO₂ absorption).

distributed on a global level. A combination of demand for certain goods in the North and poverty in the South forces economically developing countries to eschew strict environmental legislation for economic survival. This asymmetry effectively leads to the “export of pollution” to poorer countries, a dynamic that is manifest in different ways around the world. There is an abundance of evidence that industries in rich countries relocate to poorer nations where cheaper and dirtier production processes are tolerated (Faber, 1993; Faber & McCarthy, 2003). Greenpeace (2002) notes that export credit agencies (ECAs) in developed countries have, in recent years, substantially increased their financing of fossil-fuel power in developing countries. The organization goes on to note that, while the UK continues to fund the export of dirty coal technologies to poorer nations, the last coal-powered station built in the UK was in 1972. The increased export of electrical and electronic equipment waste from Western countries to Asia due to “cheaper labor” and “lack of environmental standards” has also been documented (Puckett et al. 2002). Furthermore, Webber et al. (2008) found that while Chinese CO₂ emissions have increased dramatically in recent years, approximately one third of these releases are due to the production of exports, primarily targeted at the developed world.⁷ In this context, policy imbued with the spirit of equity may be viewed in terms of commitment to curb the “export of pollution.”

Awareness for Sustainability

Awareness for sustainability is a key social concept in SD discourse. The associated policy objectives refer to raising public awareness of sustainability issues with a view to encouraging alternative, sustainable consumption patterns. Policies typically include “green” advertising campaigns, ecolabelling, awareness-raising events, environmental education programs, and education for sustainable development (ESD) programs. These initiatives and campaigns encourage consumers to engage in more environmentally benign behavior and to accept the legitimacy of coercive environmental legislation. This objective is clearly articulated in key UN documents (WCED, 1987; UNCED, 1992; WSSD, 2002; UNESCO, 2004), EU communications (CEC, 2001; 2004; Council of European Union, 2006), green social policy materials (Gough et al. 2008; Meadowcroft, 2008), and ecological modernization literature (Spaargaren, 2000; 2003; 2006; Spaargaren & van Vliet, 2000; Spaargaren & Mol, 2008). Awareness for sustainability receives relatively less

treatment in the social sustainability literature, though education as an end in itself is often seen as a key objective. For example, Vavik & Keitsch (2010) cite “access to education” as one of three important policy goals for social sustainability. Similarly, while education for its own sake is presented as a key social indicator in international SDIs, these sets do not include gauges to measure commitment to ESD or environmental awareness. This focus represents a significant weakness, as all contributors to SD debates articulate the need for awareness. Including indicators related to ESD in SDI sets would more effectively embrace the spirit of linking social-environmental objectives.

An important distinction between UN documents and the ecological modernization literature warrants attention. While UN materials embrace a more radical position on awareness, the ecological modernization position does not move too far from traditional Western development norms. For example, the Brundtland Report argues that western consumption levels are ecologically unsustainable and that attitudes must be changed to arrest such trends (WCED, 1987). In addition, Agenda 21 states that awareness programs should stimulate ethical consciousness, address socioeconomic issues, and encourage spiritual development (UNCED, 1992). These programs should be “integrated into all disciplines” and a “thorough review of curricula” is called for. UNESCO (2004) furthermore argues that ESD must be informed by a “sensitivity to the limits and potential of economic growth and their impact on society and the environment” and by a concern for social justice. To promote these objectives, the UN launched the Decade of Education for Sustainable Development, 2005–2014.

In contrast, the ecological modernization approach is more politically modest. Most comprehensively and coherently expressed in Spaargaren’s theory of consumption (Spaargaren, 2000; 2003; 2006; Spaargaren & van Vliet, 2000; Spaargaren & Mol, 2008), this understanding places great faith in a combination of environmental awareness and market mechanisms to deliver sustainability. As a result of greater environmental awareness and a sense of ethical responsibility, consumers will seek opportunities to “green” their lifestyles and domestic routines. In particular, proponents of ecological modernization claim that environmental innovations introduced during the 1990s, such as organic food products, green electricity schemes, or greywater-management systems were a direct result of environmentally aware consumer demand (see, e.g., Spaargaren & van Vliet, 2000). In short, “green” consumption backed up by awareness campaigns, rather than reductions in ab-

⁷ According to Weber et al. (2008), Chinese emission levels doubled from 2002 to 2007.

solute consumption levels, is viewed as central to thwarting environmental threats.⁸

Ecological modernization does not challenge the traditional growth model in the same way as the UN documents. The latter includes calls for significant reductions in consumption, encouragement of spiritual development, critique of socioeconomic norms, concern for social justice, and engagement with the idea of “limits to growth.” Furthermore, while a key UN document, the Aalborg Charter, suggests that quality of life should be decoupled from “maximizing consumption,” the literature on ecological modernization does not generally embrace the promotion of nonmaterial conceptions of happiness. Therefore, the ecomodernist approach is far less radical. In this context, policy approaches may be examined to assess 1) a commitment to designing and implementing programs of ESD through the formal and informal education sectors, and 2) the extent to which ESD programs challenge the traditional growth paradigm, including the promotion of nonmaterial conceptions of happiness.

Participation

Participation is a critical concept in SD discourse. In terms of policy, it refers to the goal of including as many social groups as possible in decision-making processes. This approach is justified on the basis that benefits accrue to both citizen and state. By joining in participatory processes, individuals and groups can enhance their social inclusion. In addition, the participation of more social groups increases the likelihood that civil society will deem government policy legitimate. By including a range of voices, increased public engagement promotes social cohesion and social sustainability (Goodland, 2002; Chan & Lee, 2008; Cuthill, 2009; Dempsey et al. 2011). Numerous observers also view participation as important for promoting environmental goals; furthermore, policy objectives in international documents point to the need for governments to engage with civil society to achieve environmental sustainability (WCED, 1987; UNCED, 1992; ESCTC, 1994; WSSD, 2002; ODP, 2005; CEU, 2006). The ecological modernization literature also widely articulates the need for broadening the participatory base (Mol, 2000; Mol & Spaargaren, 2002), although some proponents of this approach are viewed as “stronger” than others (Hajer, 1995; Christoff, 1996; Dryzek, 2005; Howes et al. 2009).

The underlying premise here is that if people are involved in decision making, they are more likely to

support environmental reform. Therefore, increasing participation is often presented in terms of creating legitimacy. Such forms of engagement are said to allow societies to build consensus about the legitimacy of collective political choices such as reducing consumption and accepting ecotaxes (Baker, 2006) and allow a wide range of groups to resolve potential developmental conflicts (Toke et al. 2008).

However, the link between increased participation and environmentally benign outcomes can be problematic (Jordan, 2008). Certain participating groups have more power than others and may dominate policy-making processes to promote their own ends in ways that undermine environmental goals (Meadowcroft & Lafferty, 1996; Baker, 2006). Countless examples from the literature illustrate how business groups, frequently supported by the state, often use their considerable resources to thwart environmental goals (Keohane, 1998; Benton, 2002). Furthermore, correlations between diffusing power to the local level and achieving environmental goals are also problematic. For example, Toke et al. (2008) point to evidence that regional/local planning systems that allow for citizen participation have in some cases hindered the development of wind power in the UK. On the basis of such outcomes, some observers contend that “equally strong arguments can be made against widespread public involvement” in environmental planning decisions (see, e.g., Connelly, 2007).

In light of such qualifications, contemporary perspectives tend to advocate for a “smart mix” of a strong state and stakeholder participation (Baker, 2009). For stakeholders to operate on a level playing field, funding must be made available to less powerful groups to ensure they have a genuine capacity to participate fully, not merely in a “token” way (Connaughton et al. 2008; Amajirionwu & Barlett, 2009). Environmental decision-making processes need to incorporate mechanisms that require planning to meaningfully reflect the needs of future generations. Accordingly, policy approaches should be examined to assess the extent to which views and preferences of weaker groups, including future generations, are reflected in ultimate decisions.

Social Cohesion

Social cohesion is a salient concept in social policy discourse and debates; that the OECD (2009) lists it as one of four key themes in its social indicator set of 2009 indicates its centrality. Within SD discourse, the promotion of social cohesion as a policy objective appears to occupy a particularly important place in the social sustainability literature and EU SD policy. It receives less treatment in UN documents and is ignored in ecological modernization literature. The meaning of social cohesion is variously defined.

⁸ While Mol & Spaargaren (2004) dispute this point, it is generally held that ecological modernization is hostile to strategies that entail reductions in consumption.

It has been linked to such policy objectives as promoting happiness/well-being; minimizing social strife; reducing crime; promoting interpersonal trust; and combating suicide, bullying, and antisocial behavior (OECD, 2009). The concept of social cohesion has become central to EU policy in general and EU SD policy in particular (Eurostat, 2005; 2007; ODPM, 2005; CEU, 2006). In fact, the term “social cohesion” in EU SD documents appears to be a surrogate for the social pillar. That is, these reports tend to refer to the three pillars of SD in terms of economic growth, environmental protection, and social cohesion (see, e.g., Eurostat, 2007). However, none of the EU SD documents reviewed for this article provide a definition of social cohesion and no EU SD indicators are directly linked to it. In general, EU SD documents establish few clear policy objectives related to social cohesion. An exception is the Bristol Accord which links social cohesion to policy by urging local authorities “to promote a mix of populations, non-segregated areas, accessibility and safety, and the development of opportunity, and facilitate the integration of distressed urban areas” (ODPM, 2005).⁹

According to several commentators, social cohesion is central to the concept of social sustainability (Jörissen et al. 1999; Goodland, 2002; Omann & Spangenberg, 2002; Munasinghe, 2007; Chan & Lee, 2008; Cuthill, 2009; Dempsey et al. 2011). This literature represents a welcome improvement on EU SD documents in that it suggests clearer policy objectives and links social cohesion to the need to foster civic participation in public affairs (Omann & Spangenberg, 2002); to strengthen community networks and reduce conflicts (Munasinghe, 2007); to promote tolerance, solidarity, and integration (Jörissen et al. 1999); to foster a shared sense of social purpose (Baker, 2006); and to combat cultural intolerance (Cuthill, 2009). Dempsey et al. (2011) link social cohesion to the concept of “sustainability of community” and outline five interrelated and measurable dimensions: social interaction/social networks in the community, participation in collective groups and networks in the community, community stability, pride/sense of place, and safety and security. Policy objectives related to social cohesion therefore appear to be focused on creating opportunities that promote harmonious coexistence or, at least, combat the potential for civic strife.

Of the four concepts in this framework, social cohesion is most weakly connected to environmental imperatives. The links that do exist fall into two cate-

gories. First, policies and initiatives exist which simultaneously promote social cohesion and environmental objectives (win-win). For example, infrastructure may be designed to place essential welfare and leisure services in local areas (Dempsey et al. 2011). The reduction of commuting distances to work reduces CO₂ emissions and frees up time for more community participation (Putnam, 2000; Schor, 2010). Initiatives such as “Tidy Towns” competitions and “community cleanups” increase opportunities for social interaction while simultaneously promoting environmental integrity (Department of Environment, Heritage, and Local Government, 2007). In addition, “transition towns” initiatives involve local communities coming together to design programs that seek to protect them from the ill effects of climate change and peak oil, thus promoting social interaction and environmental objectives simultaneously (Brangwyn & Hopkins, 2008). Community groups have a major role to play in locally based climate change adaptation strategies, such as responses to flooding and the formulation and implementation of heat plans (Murphy et al. 2012).

Second, environmental factors pose threats to social cohesion. For example, considerable scope exists for conflict over access to food, water, and fuel as a result of climate change and fossil-fuel depletion (see, e.g., Sanchez, 2000; Brown et al. 2007). UNEP (2007) cites the conflict in Darfur as empirical evidence in support of this link. The predicted influx of climate refugees into Europe from Africa (Brown et al. 2007; Carnegie UK, 2009) or from Central and South America (Schwartz & Randall, 2003) also presents challenges to social cohesion. The diversion of resources away from welfare provision to combat the effects of climate change may also cause considerable social tensions (Gough et al. 2008). Policy objectives therefore refer to initiatives that combat the kinds of environmental conditions that promote social disharmony or upheaval. As such, policy approaches may be assessed on the basis of four commitments: 1) to infrastructure planning that concurrently promotes social integration and environmental sustainability, 2) to the promotion of social activities that have an environmental focus, 3) to the development of “transition towns” or initiatives of a similar nature, and 4) to combating the kinds of environmental conditions that cause civic strife.

Conclusion

While the social pillar of SD is relatively unexplored territory, some of the work highlighted above suggests that a broad understanding is emerging regarding key concepts and policy objectives. This awareness is rooted in social policy discourse and has

⁹ The Bristol Accord is an EU document that outlines what member states deem to be the chief characteristics of sustainable communities.

been transposed onto the social sustainability discourse, work that represents a major contribution to our appreciation of the social pillar.

This article argues that these social pillars may be expanded to incorporate a stronger emphasis on environmental, international, and intergenerational dimensions and that this enlargement would also extend to SDIs. This contention is based on an understanding of SD as a holistic concept requiring simultaneous recognition of these dimensions. Existing social pillars focus on promoting welfare at national levels and the environmental implications of such provision need to be clearly articulated.

While the social sustainability literature appears to have broadly answered the question of “what is the social pillar of SD,” a host of supplementary questions emerge under the remittance of the social pillar. These questions form the basis of the social pillar framework proposed in this article. For example, how can the environmental impact of current welfare provision be minimized? How might the goal of global equity be made compatible with environmental objectives? How might education systems be altered to resocialize citizens for sustainability? How might participative mechanisms incorporate the aspirations of vulnerable groups, current and future? The answers to these questions can form the basis of an alternative set of social indicators that could serve to supplement existing “social pillars” in ways that embrace environmental, international, and intergenerational dimensions. This framework could be used to analyze how different states and organizations conceive of the social pillar and the extent to which social and environmental dynamics have been linked.

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