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Sustainable Development. A Comment

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Sustainable Development

A Comment

by Tom R. Burns

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Introduction

The papers appearing here represent the engagement of sociology in empirical and conceptual research on, as well as policy analysis of, issues of sustainable developments.

All of the papers exhibit awareness of and interest in normative questions and policy, and two of the papers conduct interesting comparative policy analyses (Bozzini and Cucca). Issues taken up in the papers range from biofuels to urban studies and tourism. Three of the papers (Magnani, Carrosio, Salvatore and Maretti) take issue with some aspects of ecological modernization (EM), and a fourth (Cucca) does so implicitly; at the same time they unfortunately give the false impression that EM is the main theory in sociology dealing with issues of environment and sustainability and that EM constitutes a threat to Sustainable Development (SD). Bozzini avoids discussing EM or any other sociological theory but provides a brilliant comparative policy analysis of biofuel developments in the EU and USA. As I suggest later, there is an implicit theory in Bozzini's paper, which should have been outlined or highlighted.

First a brief background of sociological research on sustainability, which is a relatively new developed and one to be encouraged and expanded.

Background and Theoretical Context of Sustainable Development¹

Long before there was a conception of sustainable development, sociologists (as well as other social scientists) were conducting research on development issues (such as modernization, socio-economic development, distorted development, unequal development, etc.) as well as sustainability issues (pollution, environmental degradation, resource depletion, key resource struggles and politics relating to oil, water, land, etc.).

“Environmental sociology” encompasses a substantial body of research.² Studies include investigations of attitudes toward energy use, pollution, and environmental degradation, the extent people are ready to try to conserve energy or protect the environment (for references, see below). In addition to attitude studies, there has been also considerable research conducted on, among other phenomena, actual patterns of household energy use and energy efficiency, innovations in energy technologies, human factors in and response to pollution and environmental degradation, and the politics of energy as well as other resources such as land, water, and minerals. Sociologists have especially studied environmental movements and in some instances, their interactions with states (a considerable part of this latter research has been institutional as well as historical in character). The section “Energy and Society” (Research Committee 24) was established within the International Sociological Association in 1971, and some years later (1977) the “Environment and Technology” section was formed in the American Sociological Association.

“Development” research emerged as a major sociological undertaking after the Second World War (there were parallel developments in the other social sciences). This research was particularly oriented to “less developed” or “non-industrialized” societies that were undergoing (or could be expected to undergo) a transition to industrialization (the transitions usually occurred under some form of capitalism but communist countries also launched massive industrialization and modernization programs). A major part of the early efforts had a particular theoretical perspective, namely “modernization theory” (MT) and referred to the emergence of modes of social life, organization, and economy which appeared in Europe from the seventeenth century onwards and which came to have worldwide influence [Giddens 1990].³ The approach postulated more or less linear movement from “traditional societies” to

¹ Some of what follows draw upon Burns [2013].

² Environmental sociology can be understood as the study of the interaction between society and the physical environment.

³ In other words, modernization referred to development or change toward “modern” economic, political, and social systems such as those that characterized the USA and Western Europe.

“modern societies” (the latter bearing considerable similarity to the USA): the emergence of “rational” thinking and calculation, professionalization, monetization, market economy, urbanization, representative democracy, advanced educational systems, the spread of mass communication systems and literacy, extensive research systems, modern family structure, and more. “Successful” development (economic, political, and cultural) was expected over time for all nations, and, consequently, a global convergence was predicted: faster or slower as the case may be. In a word, it was a theory not only of societal development but of social transformation.

In the 1960s-70s there emerged widespread critiques of, and counter-approaches, to MT theory: dependency theory, neo-Marxist theory, World Systems Theory (WST), modern systems theory (dialectical systems theory [actor-system dialectics: ASD]), among others. Criticism focused on MT’s simple dichotomization, traditional-modern, the transparent Western ethnocentrism, and strong assumptions of reductionism (individuals and personality structures as key explanatory variables). The critical voices highlighted the importance of international power relationships, unequal exchange (developed countries gaining at the expense of less developed countries), “underdevelopment” as a source of constraint and other perverse developments and distortions appearing in weaker, peripheral parts of “the Third World.” The opposition became a counterpoint to the optimism of MT, emphasizing rather the perverse “development of underdevelopment,” divergence in development patterns, and global inequality and tensions generally.

By the end of 1970s, MT faded, only to return a decade later as *ecological modernization theory* (EM) emphasizing ecological considerations, societal learning, and institutional and cultural analysis (see below). WST, neo-Marxist, and modern systems theory also developed their consideration of materiality and the environment within “development frameworks” (although differing substantially in a number of ways).

“Sustainable development” is a concept that emerged out of political and administrative processes, not scientific ones.⁴ Like the concept of development itself, sustainable development has been a contentious concept, not only with respect to controversies between advocates of capitalism and those of socialism, between industrialized and developing countries, and between modernization advocates and their

⁴ “Sustainability” and “sustainable development” are political and normative ideas such as “democracy,” “social justice,” “equality,” “liberty,” etc. rather than precise and scientific concepts; as such, they are contested and part of struggles over the direction and speed of social, economic, and political initiatives and developments [Baker 1996; 1997; Lafferty 1995]. Baker [1996; 1997] emphasizes that they become particularly meaningful and effective in concrete settings where they are to be operationalized, put into practice – they thus service constructive purposes.

diverse opponents.⁵ Environmental issues have been and continue to be divisive, for instance between those who advocate constraining or blocking much socio-economic development in order to protect or reclaim the environment (green house gases [GHG] emissions, climate change, depletion of key resources, deforestation of rain forests, etc.) and those who stress the need of socio-economic development to alleviate poverty and inequality, if necessary at the expense of environmental conditions.

Historically, the linkage of sustainability and development was primarily the result of global political processes and the diverse interests driving these processes. The term “sustainable development” was coined as a *political-administrative term to bridge differences between developed and developing countries in the context of UN negotiations and resolutions*. The UN World Commission on Environment and Development, under Gro Harlam Brundtland, came out with a report in 1987, *Our Common Future* [WCED 1987]. During the course of negotiations, the developed countries stressed, in general, the need for societal constraints and the strict regulation of hazardous emissions and waste management, the mitigation of depletion of resources and environmental degradation; the developing countries stressed economic growth and development, even if it entailed hazardous emissions and environmental degradation.⁶

Thus, the concept of sustainable development was meant to refer to development that meets the needs of the present without compromising (or jeopardizing) the ability of future generations to meet their needs [WCED 1987].⁷ It is not feasi-

⁵ Lepenies [2008] argues that the development-underdevelopment dichotomy has a long legacy as an asymmetric, dichotomous concept related to dividing the world in two halves: Hellene-Barbarian, Christian-Pagan, civilized-uncivilized, and Human-Subhuman, implying the superiority or advancement of one side and the inferiority and need for advancement of the other side. Of course, underdevelopment is not fixed, development is a process as well as a stage, development assistance is an obligation for the development, and ideally the path of development is laid out for all underdeveloped countries alike [cf. *ibidem*, 203]. Clearly the concept is a normative one. “Developing” has become the term replacing to a large extent “underdeveloped” in the parlance of international agencies, academia, and diplomacy [*ibidem*, 223]. “Developing” presupposes a movement toward a satisfactory level of development whereas the notion of “underdeveloped” is static, frozen.

⁶ The concept’s power and also basis of contentiousness relates to it bringing together the apparently mutually exclusive issues of environmental, economic and social imperatives [Woods 2010]. Harris [2001, 5] emphasizes: “Its contestation arises both from the emphasis place on these three imperatives and from the difficulties encountered in the practical application of the concept.”

⁷ The Brundtland report [WCED 1987] stressed that perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecological possible and to which all can reasonably aspire. Moreover, the Report argued that economic growth is a necessity in developing countries, while economic growth should be curbed in the developed parts of the world. Of particular significance, the report brought the problem of environmental deterioration and ruthless exploitation of natural resources into the global context of the relations between North and South. Thus, issues of equity and distributive justice were raised.

ble to construct a precise *definition of sustainable development*,⁸ based on technical or ecological criteria, since the concept is a normative and political one [Opschoor and van der Straaten 1993], much like “democracy” or “justice” (see footnote 3). Its definition and implementation entails political processes, in which diverse agents and institutions with varying conceptual and value orientations are engaged.⁹

Consequently, sustainable development, as a normative concept, is used, among other things, to refer to a fair distribution of natural resources among different generations as well as among populations of the world today. It may even concern values and “rights” to existence of other species, with notions on how much environmental capital one generation should bequeath to the next.

In sum, in the language of policymaking, some refer to “the three pillars” of sustainability: economic functioning and prosperity, social welfare and justice, and environmental protection. The challenge is to determine how one balances or combines these in a sustainable way, particularly since under some conditions they are contradictory: economic growth versus environmental protection and conservation, or sustained growth versus public welfare and distributive justice.

Ecological Modernization Emerges in the Context of Sociological Theorizing

Several sociological theory traditions, building on earlier development conceptions, have taken up environmental aspects of development, linking development concerns and environmental issues: for instance, EM theory as well as several Marxist inspired theories including world systems theory (WST)¹⁰ and “treadmill of pro-

⁸ But numerous other definitions have been proposed, among others: WWF [2002, 20] puts it as follows: “to be sustainable, humanity’s consumption of renewable natural resources must stay within the limits of the Earth’s biological capacity over the long term...[And] for non-renewable resources (e.g., petroleum), consumption must stay within the limits of the rate and level of replacement with alternatives.” Other variants stress physical and economic aspects. Opschoor and van der Straaten [1993, 1–2]: development is sustainable “if the environmental impacts do not impair the present and future functioning of resource regeneration systems, waste absorption systems, and the systems supporting flows of other environmental services and good, and when use of nonrenewable resources is compensated for by at least equivalent increases in supplies of renewable or reproducible substitutes...”

⁹ Here the concerns are obviously beyond physical conditions or ecological systems. Issues about distributive justice – and the governance systems that would bring this about – are front stage. At the same time, doubts have been raised about whether maintaining a given level of “natural capital” is compatible with non-negative changes in welfare per capita (at least for some measures of welfare).

¹⁰ WST evolved into a major sociological research programme on development, which continues to be active and flourishing and which has in latter ramifications also embraced environmental issues

duction” theory¹¹ and modern systems theory (ASD)¹² as well as a number of other valuable approaches.¹³

In this note, I will touch on one important sociological theory in the area of sustainability – namely, *ecological modernization* (EM) – differing substantially from WST and the various neo-Marxist frameworks as well as actor-system-dialectics (ASD). It’s important to define and frame EM since three of the papers engage in an exchange with EM (and a fourth appears to do so).

EM was developed in the early 1980s; in a certain sense, it continued the earlier modernization ideas but with several significant differences. The theory challenged the environmental movement’s conventional wisdom that a fundamental re-organization of the core institutions of modern society – in particular the industrial production system, the capitalist organization of the economy, and the centralized state – were essential to achieving long-term sustainable development. Adjustments and reforms,

[Bergesen 1983; Chase-Dunn 1997; Chase-Dunn and Hall 1993; Chase-Dunn and Grimes 1995; Frey 2006; Hopkins and Wallerstein 1982; Wallerstein 1974; 2004].

¹¹ A spectrum of neo-Marxists extended their legacy of development and transformation studies to address issues of sustainability. Of particular importance in this regard are Schnaiberg [1980] and Gould, Pellow and Schnaiberg [2008] – with their “treadmill of production” theory. Also, see Benton [1989]; Dickens [1992; 1997; 2002]; Foster [1999; 2000]; O’Connor [1994]; Wehling [2002], among others. They single out the capitalist system as the driver not only of increased production, technological development, and the accumulation of wealth but also systematic environmental degradation. In addition to producing goods and services, its enterprises as well as households and government agencies produce and deposit wastes in the environment. The system excessively extracts and exploits resources from the environment.

¹² Burns and associates [Buckley 1967; Burns and Buckley 1976; Burns *et al.* 1985; Burns and Flam 1987; Carson *et al.* 2007; Burns and Hall 2012] in “Actor System Dialectics” (ASD) take into account human agency, institutional arrangements, material conditions, and innovation and socio-political construction processes in development. Numerous case studies have been conducted [Andersen and Burns 1992; Baumgartner and Burns 1984; Baumgartner and Midttun 1986; Burns and Stohr 2011; Woodward *et al.* 1994]: among others, on sustainable technological innovations (wind, solar, geothermal, heat pumps, wood heating), innovative local government initiatives and programs to conserve energy, to substitute renewable energy sources for oil, etc., global inter-governmental (e.g. the Kyoto agreement, EU on a common Fisheries policies) as well as private governance initiatives (BP establishing trading emissions), WWF and Unilever’s initiatives to regulate palm oil plantations and to protect rain forests, Greenpeace and Springer initiatives to make Nordic paper and pulp production more sustainable and to protect Russian forests and forest workers. Sustainable development initiatives and programs of different degrees of dignity are taking place on all societal levels and often through multi-level mechanisms. A revolution is taking place – not without conflict and struggle, and possibly not rapidly enough to save the planet [Burns 2012].

¹³ Other approaches to sustainable development include such diverse scholars as Susan Baker [1996; 1997], Riley Dunlap [1994], Kasperson *et al.* [2010], Bill Lafferty [1999; 2006], and Meadowcroft [2001] and Gene Rosa *et al.* [2010], as well as a number of researchers working explicitly with new institutional approaches [Burns and Flam 1987; Carson *et al.* 2009; Ostrom and associates 1990; 2005; 2007, among others], which are particularly applicable to agency-structure features of sustainable development.

yes, but, according to EM, there was no need to do away with major institutions of modern society.

The key principle here is that as socio-economic development advances and society becomes maturely developed (“late industrial society”), cultural patterns, institutional arrangements, and organizations becomes increasingly “environmentally rational” and decision-makers take into account environmental criteria and try to minimize human environmental impacts [Jänicke and Weidner 1995; Mol and Sonnenfeld 2000; Spaargaren and Mol 1991]. According to this perspective on advanced modernized society, “externalities” become internalized, and social production *and consumption* become cleaner, and the production of goods and services becomes environmentally compatible. Thus, the theory implies that late capitalism is environmentally competitive, and both at home and abroad there is convergence and compatibility between the aims of capital and the environmental goals of society – as a new societal environmental logic.

In the EM perspective, this type of development trend is the result of broad and effective coalitions (group alignments) emerging in advanced industrial society to concern themselves with, and to try to protect, the environment. This presumably leads to reduced environmental impact but with further growth continuing: that is, the quantity of resources used per unit of output is minimized, and the wastes emitted per unit are also reduced. The underlying principle of environmental rationality becomes incorporated into corporate, government, and organizational policies and strategies. Ultimately, these ideas and policies drive technological innovation, market dynamics, political pressures (direct and indirect) of NGOs, and government regulation.

The theory purports to offer a general explanation of the current transformations of environmental institutions, practices, and discourses in advanced phases of modernization. Major changes are taking place in the organization of production and consumption in ways that bring about environmental improvements. The theory focuses on those institutions, in particular economy and technology, most important to bringing about a transition to more sustainable production and consumption. It stresses that environmental questions do not enjoy undisputed authority but share this with other societal objectives and considerations.

According to EM, as countries reach advanced or late capitalist development, they increasingly adhere to ecological rationality which complements economic rationality. Sustainable development will be the next phase of modernization, following the phase of advanced industrialization.

In this perspective capitalism is neither an essential precondition nor an obstruction to, stringent or radical environmental reform. It becomes redirected so

that it causes less and less environmental harm and increasingly contributes in a fundamental way to sustainability (and society's sustenance). While there continue to be "environmental issues," fundamental conflicts about environmental reform programmes in industrialized countries have in the EM view been decreasing since the late 1980s (although this certainly does not apply to the USA, China, and several of the newer members of the EU nor to China, India, Brazil, and a number of other developing countries opposed to industrialized nations).

Some of the earlier critique of modernization theory has reappeared in criticisms of EM's linearity, its optimism about the course of societal development (in particular, a high level of technological optimism), and its lack of attention to power, conflict and struggle, which arguably are *not* decreasing (as WST, neo-Marxist approaches, and ASD all emphasize).¹⁴

In sum, ecological modernization assumes then a linear development – a further phase of modernization largely without conflict and struggle – assumptions that it shares with the original modernization theory. However, it is much more sophisticated and conceptually rich – for instance, it gives greater attention to concrete innovation processes and developments – than the earlier modernization theory. On the other hand, WST, neo-Marxist, and ASD remains important sociological alternatives because they are attentive to factors of power, contradiction, and conflict (which are readily observable in relation to, for instance, climate change issues and COP meetings).

EM can also be criticized for its heavy emphasis on technological innovation – many of the technological efforts to save the planet may lead to negative, even catastrophic unintended consequences. One should not have blind faith in technological breakthroughs and progress.¹⁵

¹⁴ Some adherents point out that there are substantial differences in perspective within the ecological modernization research programme, namely those who are techno-corporatist in orientation as opposed to those who have a more institutional and democratic political orientation (which allows for conflict and struggle). But this discussion would take us far beyond this note.

¹⁵ Eco-feminists have been particularly critical of such technologically driven "sustainable development," arguing that technology, in its current state, is through-and-through patriarchal, subjugating women and nature together [Mies and Shiva 1993; Salleh 1997; 2009; Shiva 1992, among others]. Vandana Shiva, a physicist engaged in issues of women, nature, and development, claims that the Western model of modern science and technology imposes arbitrary barriers to local inter-generational eco-sufficient knowledge. It is ignorant of the organic, reciprocal and interdependent relations that local people, especially women, in rural areas have with their natural environment. These interrelations engender a particular knowledge of nature as an entire living organism that cannot be divided into small pieces and controlled. In general, eco-feminists argue that sustainable development should learn from the knowledge and subsistent production of eco-sufficient communities rather than try to transform such communities, integrating them into the market in the name of progress.

Brief Reflections and Comments on the Five Contributions to the Special Issue of *Sociologica*

Natalia Magnani uses Sustainable Development (SD) normative ideas to criticize EM. On first reading, this did not seem a particularly useful comparison. EM considers itself a sociological or social science theory while SD serves as a normative idea (or policy-motivating perspective) rather than a social theory. Consequently, and not surprisingly, she finds norms and values formulated in SD terms, awareness of the need for constraints on growth and norms supporting multi-stakeholder participation.

In my judgment, there is some confusion in the paper concerning what is a “theoretical paradigm” and a “policy paradigm.” EM can be considered a scientific theoretical paradigm in Kuhn’s sense; on the other hand, SD is a normative idea or more precisely a complex of normative ideas; it is a policy paradigm [Carson *et al.* 2009]. But the normative principles of SD can be used to critically assess EM *in normative terms*, as the author does.

She exposes in EM a number of tacit assumptions as well as norms and values relating to not only an emphasis on, but belief in, technocracy, a weak participatory concept, assumption of a positive-sum game with little or no attention to distributive aspects and conflict; there is promotion of technologies such as biofuels which have had and have negative unintended consequences (rising food prices, minimum gain in reduction of GHG when one takes into account the inputs and impacts of the biogas production process). The approach reinforces modernization powers (namely, many of the interests responsible for large-scale pollution).

She concludes with a normative principle to support community based developments such as “community renewable energy” (CRE) such as green energy cooperatives and co-ownership of green energy projects, which would be more compatible with SD principles.

Emanuela Bozzini provides a comparative policy analysis concerning how biofuel production is framed in the USA and in the EU. In line with her hypotheses, she finds that biofuel policies and programs are framed and developed differently. In general, the contexts, goals, institutional arrangements, and politics differ. For Europe, biofuels are framed in terms of climate change, and in particular reduction of emissions. In the USA, the concerns are energy security, a national interest matter. Also, important in the USA is the increased supply of biofuels leading to reduced fuel prices, or at least keep prices from rising. In a system highly dependent on the automobile, this is a major political issue.

Her analysis identifies unintended consequences of biofuel development, namely rising food and feed prices. These are major concerns in the USA, especially when it comes to increased feed prices. Farmers are an organized and influential lobby, and are quickly drawn into the policy arena.

The EU perspective expressed concern about rising food prices in developing countries. Also calculations indicated that the gains in reducing emission were limited. Finally, there was a concern about the competitiveness of European automobiles – if they were increasingly designed to run on biofuels. The greater openness of the EU system to NGOs and “developing countries” and their influence as “stakeholders” made for a sustained and broad based critique. An interesting observation, which should be followed up, comparatively, in other policy areas: There was greater critique – and the critique developed earlier – in the EU than the USA.

As indicated initially, Bozzini does not consider in her paper sociological theory, in particular EM. But theory is implicit in Bozzini’s comparative policy analysis to explain differential policy paths: factors such as the context of policy making (which means attending to the institutional arrangements and the interests involved in trying to influence the policy process) and cognitive framing with differential emphases. Her analysis also attends to unintended consequences – and the differential capabilities of the EU and USA relevant policy systems to identify and address systemic unintended consequences. Her research suggests that the EU policy system is more open and more broadly participatory than that of the USA.

Giovanni Carrosio’s paper also addresses issues of biofuels, but does so in a way substantially different from the Bozzini paper. The paper combines a theoretical critique of EM but also a normative analysis. The author suggests that EM tends to lend support a global market of biofuels. By stressing “sustainability” at all costs – what he refers to as “boundless sustainability” (as opposed to “bounded sustainability”), EM is predisposed to overlook or neglect negative unintended consequences. Thus, energy sustainability may be accomplished, in part, through increased biofuel production (and emissions possibly reduced). But this is achieved at the expense of food production (and lower food prices) and the welfare of those dependent on low food prices. As he suggests, globalized biofuel production did not, fortunately, develop uncontested. There were challenges in the EU and the USA, as reported in Bozzini’s paper.

He proposes normatively that “sustainability” initiatives and policies should support local development because such development can better manage side effects and produce a local order, in particular setting bounds on biofuels in relation to side effects such as reduced food production. This leads him to introduce the normative idea of community based models of biofuels. Such “bounded sustainability” takes

into account local autonomy and is more suited to deal with the multiple dimensions of a generalized sustainability.

Rita Salvatore and Mara Maretta have written a highly original article in a number of respects, but it is difficult to follow, to fully grasp its logic. In such a short article, there are too many concepts introduced, and not sufficient focus on a few concrete processes, and, in the final analysis, it is highly fragmented. The authors address the concept of sustainability in relation to tourism, supports a multi-dimensional model of sustainability (see figure). They also stress multiple equity principles, arguably too many to adequately address in such a short paper.

Interestingly, they draw on normative principles of tourism formulated by a global organization: Tour Operators' sustainability handbook. It would have been interesting to know how these principles were decided or achieved, what they entail, and the extent to which they are followed or implemented.

In their view, sustainable tourism development must be a local community-centered process, emphasizing a bottoms-up approach. But certainly, tourism is global. Therefore, a multi-level governance approach might be in order, that is, not just "bottoms-up." A related normative conclusion is that a local process is the "only possible way" in which to apply and test more responsible development procedures.

Roberta Cucca considers sustainable or green cities in a comparative study, guided by a SD concept, the integration of ecological, economic, and social aspects of development. The focus of the paper is sustainable or green cities. The paper, interestingly, utilizes a comparative approach, comparing Copenhagen, Vancouver, Vienna all of which developed ambitious and in many respects "successful" plans to become "green" cities.

Once again, policies that apparently made good sense – in terms of developing a "sustainable city" had negative unintended consequences:

- For instance urban policies of creating a more green city attracted resources and also increased demand to live in such cities on the part of technicians, experts, highly qualified workers – at the expense of lower income groups which were increasingly crowded out by the rising cost of housing.
- The unintended result was "ecogentrification."

The author uses Vienna as a counter-point to the other two cities. Vienna has shown persistent concern about the "social dimension," maintaining or expanding public housing and restraining housing prices and at the same time pursuing the development of a "greener" city.

Cucca's paper suggests not only the importance of a multi-dimensional conception of sustainable development but also the importance of comparative analysis combining considerations of development with policy analysis. One might argue that

she overemphasizes the extent to which *current* attention is focused mainly on economically centered sustainability at the expense of human well-being, equity, democratic government and democratic civil society. In any case, like three of the other papers, excessive attention is given to EM as the dominant paradigm in addressing environmental and sustainability issues.

Several normative ideas associated with SD inform Cucca's normative questions and analyses. Above all, the idea that three normative questions have to be kept in mind: ecological, economic, and social. Cucca arrives at the normative conclusion that local governments can promote environmentally friendly cities while taking better into account the social dimension of SD; in particular, housing policies need to become part of the policy package in supporting housing affordability. Otherwise, the result may be ecogentrification.

As suggested initially, sociological research such as that found in these five papers is to be encouraged and expanded. Particularly important is the application and development of normative and policy analyses of sustainability issues.

References

- Andersen, S. and Burns, T.R.
1992 *Societal Decision-making: Democratic Challenges to State Technocracy*. Aldershot: Dartmouth Publications.
- Baker, S.
1996 "The Evolution of EU Environmental Policy: From Growth to Sustainable Development." In *The Politics of Sustainable Development: Theory, Policy and Practice within the European Union*, edited by S. Baker, M. Kousis, D. Richardson and S.C. Young. London: Routledge.
1997 "Between Commitment and Implementation: tensions in sustainable development policy of the European Union." In *The International Handbook of Environmental Sociology*, edited by M. Redclift and G. Woodgate. Cheltenham, U.K.: Edward Elgar.
- Baumgartner, T. and Burns, T.R.
1984 *Transitions to Alternative Energy Systems: Entrepreneurs, Strategies and Social Change*. Boulder: Westview Press.
- Baumgartner, T. and Midttun, A. (eds.)
1986 *The Politics of Energy Forecasting: A Comparative Study of Energy Forecasting in Western Industrialized Nations*. Oxford: Oxford University Press.
- Benton, T.
1989 Marxism and Natural Limits. *New Left Review* 25: 1-29.
- Bergesen, A.
1983 *Crises in the World-System*. Beverly Hills, CA: Sage.

- Buckley, W.
1967 *Sociology and Modern Systems Theory*. Englewood Cliffs, NJ; Prentice-Hall.
- Burns, T.R.
2006 "System Theories." In: *The Blackwell Encyclopedia of Sociology*. Oxford: Blackwell Publishing.
2012 "The Sustainability Revolution: A Societal Paradigm Shift – Ethos, Innovative Agents, Social Transformation." *Sustainability* 4: 1118-1134.
2013 "Sustainable Development: Sociological Perspectives." To appear in International Sociological Association's *Sociopedia*.
- Burns, T.R. and Buckley, W. (eds.)
1976 *Power and Control: Social Structures and Their Transformation*. Beverly Hills, California: Sage.
- Burns, T.R., Baumgartner, T. and DeVille, P. (eds.)
1985 *Man, Decisions, and Society. The Theory of Actor-System Dynamics for Social Scientists*. Gordon and Breach Science Publishers. New York, London, Paris, Montreux, Tokyo.
- Burns, T.R. and Flam, H.
1987 *The Shaping of Social Organization: Social Rule System Theory with Applications*. London: Sage Publications.
- Burns, T.R. and Hall, P.
2012 *The Meta-Power Paradigm: Impacts and Transformations of Agents, Institutions, and Social Systems – Capitalism, State, and Democracy in a Global Context*. Frankfurt and Berlin, Germany and Oxford: Peter Lang.
- Burns, T.R. and Stöhr, C.
2011 "Power, Knowledge, And Conflict in the Shaping of Commons Governance: The Case of EU Baltic Fisheries." *The International Journal of Commons* (Special Issue: The 20th anniversary of Elinor Ostrom's *Governing the Commons*), 5, 2.
- Carson, M., Burns T.R., and Gomez Calvo, D.
2009 *Public Policy Paradigms: The Theory and Practice of Paradigm Shifts in the EU*. Frankfurt/Berlin/New York: Peter Lang Publishers.
- Chase-Dunn, C.
1997 *Rise and Demise: Comparing World-Systems*. Boulder, Colorado: Westview Press.
- Chase-Dunn, C. and Hall, T.D.
1993 "Comparing World-Systems: Concepts and Working Hypotheses." *Social Forces* 71: 851-86.
- Chase-Dunn, C. and Grimes, P.
1995 "World-Systems Analysis." *Annual Review of Sociology* 21: 387-417.
- Dunlap, R.
1994 "International Attitudes Towards Environment and Development." Pp. 115-126 in H.O. Bergesen and G. Parmann (Eds.), *Green Globe Yearbook of International Co-operation on Environment and Development*. Oxford: Oxford University Press.
- Dickens, P.
1992 *Society and Nature*. Philadelphia: Temple University Press.

- 1997 "Beyond sociology: Marxism and the environment." In: M Redclift and G Woodgate (Eds.) *The International Handbook of Environmental Sociology*. Cheltenham, U.K.: Edward Elgar.
- 2002 "A Green Marxism? Labor Processes, Alienation, and the Division of Labor." In: R.E. Dunlap, F.H. Buttel, P. Dickens, and A. Giswijt (Eds.) *Sociological Theory and the Environment*. Oxford: Rowman & Littlefield.
- Foster, J.B.
- 1999 Marx's Theory of Metabolic Rift: Classical Foundations for Environmental *Sociology*. *American Journal of Sociology* 105: 366-405.
- 2000 *Marx's Ecology*. New York: Monthly Review Press.
- Frey, R.S.
- 2006 "The Flow of Hazardous Experts in the World System." In A. Jorgenson and E. Kick (Eds.) *Globalization and the environment*. Leiden, The Netherlands: Brill Academic Press.
- Giddens, A.
- 1990 *Consequences of Modernity*. Stanford University Press.
- Gould, K.A., Pellow, D.N., and Schnaiberg, A.
- 2008 *The Treadmill of Production: Injustice and Unsustainability in the Global Economy*. Boulder, Co: Paradigm Press.
- Harris, J.M.
- 2001 "Basic Principles of Sustainable Development." In *The Encyclopedia of Life Support Systems*. Paris: UNESCO. Available at: <http://ase.tufts.edu/gdae>.
- Hopkins, T.K. and Wallerstein, I.
- 1982 *World-Systems Analysis: Theory and Methodology*. Beverly Hills, CA: Sage.
- Janicke, M. and Weidner, H. (eds)
- 1995 *Successful Environmental Policy: A Critical Evaluation of 24 Cases*. Berlin: Sigma.
- Kasperson, J.X., Kasperson, R.E., and Turner II, B.L.
- 2010 "Vulnerability of Coupled Human-Ecological Systems to Global Environmental Change." In *Human Footprints on the Global Environment: Threats to Sustainability*, edited by E. Rosa, A. Diekmann, T. Dietz and C. Jaeger. Cambridge, MA: MIT Press.
- Lafferty, W.M.
- 1995 "The Implementation of Sustainable Development in the European Union." In *Contemporary Political Studies. Proceedings of the Political Studies Association*, edited by J. Lovenduski and J. Stanyer. Vol. 1. Belfast: PSA.
- 1999 *Toward Sustainable Development*. London, Palgrave Macmillan.
- 2006 *Governance for Sustainable Development: The Challenge of Adapting Form to Function*. Cheltenham: Edward Elgar.
- Lafferty, W.M. and Meadowcroft, J.
- 2001 *Implementing Sustainable Development. Strategies and Initiatives in High Consumption Societies*. USA: Oxford University Press.
- Lepenies, P.H.
- 2008 "An Inquiry into the Roots of the Modern Concept of Development." *Contribution to the History of Concepts*. 4: 202-225.

- Mies, M. and Shiva, V.
 1993 *Ecofeminism*. London: Zed Books.
- Mol, A. and Sonnenfeld, D. (eds.)
 2000 *Ecological Modernization around the World: Perspectives and Critical Debates*. London: Frank Cass.
- O'Connor, J.
 1994 Is Sustainable Capitalism Possible? In *Is Capitalism Sustainable: Political Economy and the Politics of Ecology*, edited by M O'Connor. New York: The Guilford Press.
- Opschoor, H. & van der Straaten, J.
 1993 *Sustainable Development: An Institutional Approach*. Available at: http://www.geocities.ws/saxifraga_2000/costanza.doc. Accessed 25 September 2012.
- Ostrom, E.
 1990 *Governing the Commons*. Cambridge: Cambridge University Press.
 2005 *Understanding Institutional Diversity*. Woodstock: Princeton University Press.
 2007 "A Diagnostic Approach for Going Beyond Panaceas." *Proceedings of the National Academy of Sciences* 104, 15181-15187.
- Rosa, E., Diekmann, A., Dietz, T., and Jaeger, C. (eds.)
 2010 *Human Footprints on the Global Environment: Threats to Sustainability*. Cambridge, MA: MIT Press.
- Schnaiberg, A.
 1980 *The Environment: From Surplus to Scarcity*. New York: Oxford University Press.
- Spaargaren, G. and Mol, A.
 1991 *Sociology, Environment, and Modernity: Ecological Modernisation as a Theory of Social Change*. Wageningen: LUW.
- Salleh, A. (ed.)
 2009 *Eco-sufficiency and Global Justice: Women Write Political Ecology*. Melbourne, Spinifex Press.
- Salleh, A.
 1997 *Ecofeminism as Politics*. London: Zed Books.
- Shiva, V.
 1992 "Recovering the Real Meaning of sustainability." In *The Environment in Question: Ethics in Global Issues*, edited by D.E. Cooper and J.A. Palmer. London: Routledge.
- Wallerstein, I.
 1974 *The Modern World System*. New York: Academic Press.
 2004 *World-Systems Analysis: An Introduction*. Durham, N.C.: Duke University Press.
- Wehling, P.
 2002 "Dynamic Constellations of the Individual, Society, and Nature: Critical Theory and Environmental Sociology." In *Sociological Theory and the Environment*, edited by R.E. Dunlap, F.H. Buttel, P. Dickens, and A. Giswilt. Oxford: Rowman & Littlefield.
- WCED (World Commission on Environment and Development)
 1987 *Our Common Future*. New York: United Nations.

Burns, *Sustainable Development*

Woods, D.

2010 *Sustainable Development: A Contested Paradigm*. Available at <http://www.fwr.org/sustdev.pdf>. Accessed 18 April 2012.

Woodward, A., Ellig, J., and Burns, T.R.

1994 *Municipal Entrepreneurship and Energy Policy: A Five Nation Study of Politics, Innovation, and Social Change*. New York: Gordon and Breach.

WWF

2002 *Living Planet Report 2002*. Gland, Switzerland: WWF International.

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A comment

Abstract: This article has two purposes: to provide a minimalist background and contextualization of sociology's engagement with sustainable development and to comment briefly on the five articles appearing in this special issue on sustainable development. The article outlines two key research streams in sociology which were relatively distinct: developmental and environmental studies. The article suggests that these streams became linked in part with the emergence of the concept of sustainability development, which, however, was a political-administrative construction, not a scientific one. Among the sociological theories addressing sustainable development, the article focuses critical attention on ecological modernization, which provides a backdrop to four of the articles in this special issue. After commenting on each of the contributions, the article concludes that sociological research such as presented in the five papers is to be encouraged and expanded. Particularly important is the application and development of normative and policy analyses of sustainability issues, which characterize all of the papers.

Keywords: sustainable development, ecological modernization, green cities, biogas, tourism, comparative policy analyses.

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