

"INTEGRATING ECONOMIC AND ENVIRONMENTAL PLANNING: THE REGIONAL PERSPECTIVE"

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Abstract

Fundamental conflicts between economic development and environmental protection pose a crucial challenge to contemporary planning. This paper addresses the economic-environmental conflict, and the ability of regional planning to integrate these two concerns. I examine how three modern American regional traditions addressed this conflict: the Regional Planning Association of America, New Deal planning, and post-war regional science. Each defined a distinctive relationship between urban and rural land, though only some managed to build a non-exploitative link between cities and nature. Ideally one should combine the regional idealism of the RPAA with the effectiveness of New Deal regional planning and the analytical power of regional science (though freed of its most abstract geo-economic assumptions). I conclude that a return to regional planning (including bioregionalism) would help bridge the economic-environmental gap, but that it is no panacea in an era where the open space-economy of the technoburb-global city has supplanted the closed regional river basin as the defining leitmotif of planning.

"Mankind has cleared the jungle and replaced it by a labyrinth."
(MacKaye 1968, 5)¹

Acid rain, the greenhouse effect, toxic wastes and vanishing ozone have reintroduced the environment into the center of public debate. Recent revelations about environmental degradation in Eastern Europe have joined long-standing ecological fears in both the first and third worlds to create a truly global emergency. Unfortunately, these issues are too rarely integrated with a second public policy concern: the restructuring of the national and international economies. When these two paradigms do collide, the exchange is often brief and dissonant: the environmentalists accuse the economists of being positivistic, myopic smokestack-chasers, while the economists reply with accusations of naïve, utopian thinking without any understanding of how "the economy really works". The resulting lack of cooperation often leads to planning results that please neither group.

This economic-environmental gap manifests itself in practical, conceptual, and pedagogical ways. In planning practice, conflict arises between new housing and open space preservation, timber jobs vs. forest protection, tourism development and coastal zone management. Behind these disputes lie deep conceptual differences in language, models, philosophies and basic assumptions. At the pedagogical level, American planning programs generally treat economics and environmentalism as two separate concentrations, and students in these two areas are not usually in the same academic or social circles. Even within the regional planning concentration, economic development and environmental resource management are treated as two distinctly separate areas.

In this paper I explore ways in which these two planning interests can be reconciled. Specifically, does the "regionalist" approach to planning offer the best path to integrate the disparate interests of economic development and environmental planning? I begin by comparing how economists and environmentalists conceptualize the world. I then review three regional planning traditions from the past — Benton MacKaye's Regional Planning Association of America (1923-33), Harvey Perloff's New Deal regional development (1933-45), and Walter Isard's postwar regional science — to see how

¹The irony here is that the hope in clearing the jungle was not a labyrinth, but instead a garden.

successful they were in achieving this economic-environmental integration. I conclude with an assessment of the promises — and shortcomings — of regional planning to overcome the environmental-economic gap in the future, including the resurgent interest in bioregionalism.

DIFFERING CONCEPTIONS OF THE WORLD: ECONOMICS AND ENVIRONMENTALISM

How do economists and environmentalists use differing concepts of the world? Clearly, both fields contain an enormous diversity of opinion; yet their pure forms seem to lie at opposite ends of the intellectual spectrum. These different world views, in turn, lead to diverging methodologies, assumptions, models, and ultimately to unique — and conflicting — solutions.

The Economic View

The ideal type economists, those within the traditional neoclassical model, use a marginal, mechanistic model. The unit of analysis is the individual or the firm; transactions and values are measured in money. Their view of a system in equilibrium is a balance of supply and demand in the context of a steadily growing economy (like a bicyclist or shark, such an economy must be in forward motion to survive). The future, though periodically interrupted by temporary recessions, is bright and promises steady expansion of economic activity. The needs of individuals are best served through enlightened self-interest as expressed through the marketplace. Natural resources have value only to the extent that they can be converted to present or future monetary payback, generally as factors of production. The aesthetic value of nature is thereby translated as a marketable product for the tourist or real estate industries. The amount of natural resources is also flexible; ever-improving technologies of extraction and processing, as well alternative materials, mean that the supply and value of resources are determined by a changing society, not just their inherent natural quality.

The Environmental View

The ideal type environmentalists, at least those worthy of raising the hackles of economists, have a quite different world view. They use a comprehensive, ecological model. Their unit of analysis is much more varied than that of the economist, including the individual organism, the species, the ecological region, etc. (Daly and Cobb 1989; Hudson 1991). A system in equilibrium is one in steady-state, kept within the carrying capacity of the ecosystem and the rate of resource reproduction. Violations of this balance lead either to painful adjustments, or worse, cataclysmic vicious circles; recognition of the latter often leads to the apocalyptic world view characteristic of some environmentalists.

Natural resources have an intrinsic value that cannot easily be translated to monetary terms. Whereas an economist sees the value of resource *use*, the environmentalist also sees the value of its mere *existence*, undisturbed, in its virgin state. Because the environmentalist sees this value in nature *in itself* — yet nature cannot speak for itself (especially not in the marketplace) — there is no “environmental self-interest” as there is “economic self-interest.” Hence environmentalists feel compelled to “speak” for the trees and the rest of nature.² There is of course, a wide spectrum of opinion here, ranging from the immediate self-interest (resources having only value in their present consumption), to medium-term self-interest (value in their present and discounted future consumption), to a more open-ended social interest (consumption value for present and future generations), to intrinsic value (value in their permanent conservation).

Finding Common Ground

Thus the economist and the environmentalist — at least in their pure manifestations — have conflicting definitions of basic concepts, such as their understanding of equilibrium, growth, social trade-offs, equity, and sustainability.³ This leads not only to conflicting positions on public policy matters, but often even the inability to find a common definition of the problem and its context.

²The skeptic would say that the environmentalist is actually exercising great self-interest, while using the self-appointed role of altruistic “nature’s advocate” as a cynical facade.

³Even Thomas Robert Malthus, in articulating the central dilemma of an exponentially growing population and arithmetically expanding food resources 200 years ago, implicitly recognized the conflict between economic demand and the natural environment.

This is not to say that the two groups are separate and without contact. There have been numerous attempts to integrate these two. Yet quite often these "integrations" are actually the forced compliance of one paradigm to fit the methods and assumptions of the other. For example, traditional environmental economics bends the environmental world to fit into the economic framework by assigning market values to all ecological factors, as is seen in economist Robert Solow's discussion of natural resources:

“A pool of oil or vein of iron or deposit of copper in the ground is a capital asset to society and to its owner (in the kind of society in which such things have private owners) much like a printing press or a building or any other reproducible capital asset. The only difference is that natural resource is not reproducible, so the size of the existing stock can never increase through time. It can only decrease (or, if none is mined for a while, stay the same). ... A resource deposit draws its market value, ultimately, from the prospect of extraction and sale” (Solow 1977, 356).

This approach may be easier than the reverse (having economics fit the world of environmentalists), for the language and coding of environmentalism is not nearly as explicit and mechanized as that of economics. Yet being methodologically operational is not the same as being socially equitable or desirable. By speaking the language of economics, this approach recognizes only the economic value of the environment to the neglect of its nonmarket qualities. True, a sufficiently low discount rate at least allows an economic model to justify slow, long-term consumption of a natural resource; but it still fails to recognize value in the conservation (i.e., the existence rather than consumption) of the resource.

At the other extreme lies much of environmental thinking, which is appealing in its purity and holistic vision, yet frustratingly ineffective in shaping urban and industrial policy. Whether or not justified, too often the environmentalist is placed on the defensive; s/he is labelled obstructive, anti-modern and unwilling to accept the "realities" of industrial society. The effectiveness of environmentalists is undermined through marginalization, decentered from representing the common human interest to being merely a "special interest." The recent accusations against mainstream environmental groups of "environmental racism" in their selection of issues and locations has not helped this marginalized image: they not only fight progress, but now also the interests of the poor and minorities.

Of course, the environmentalists also use the same rhetorical tactic of marginalizing the opposition, shifting the image of economic development from serving universal social interests to filling the greedy pockets of elite investors. Both sides claim universality in their goals and elitist self-interest in their opponents — a certain path to conflict.

PAST REGIONAL PLANNING TRADITIONS

This economist-environmentalist spectrum/debate has been central to the history of regional planning, whose development has been a pushing and pulling between these two ideological poles. Three different phases of regional planning and regional theory illustrate how interactions between the environment and the economy have changed over the course of the twentieth century. The first is the Regional Planning Association of America during the 1920s. The second is New Deal-Era regional planning, including comprehensive river basin development as exemplified by the Tennessee Valley Authority. The third is post-war regional science, especially that of the leading figure of Walter Isard. I will use these three periods as simplified landmarks in the development of regional theory, and see how they point to the future. As such, these brief descriptions are not full histories of each period, but rather extracts to address the following conceptual questions:

- How is the environment defined? Is its identity and value simply to serve society, or does it also have an intrinsic value outside of humanity?
- How is the environment-economy relationship defined (as confrontation, assimilation or harmony)?
- Are the two interests equal, or does one have the upper hand?
- What can be the bridge between the two? Through economic value, political compromise, a urban-rural balance?
- How is the region defined (biophysical, economic or political)? How does the regional definition shape and reflect the nature of the environment?

- What is their historical perspective on urbanization and industrialization?

We will see that the RPAA viewed the link between the economy and the environment as a holistic, organic, balanced, almost spiritual one. The New Deal regional planners took a more pragmatic view, and saw the link as one of multi-use resource conservation, use and management with the ultimate goal of economic recovery and growth. The regional scientists took a cool, functional view, seeing the environment as just another factor in their systems approach to managing the space-economy in a virtual fetish of rational optimization.

Idealists of the 1920s: the Regional Planning Association of America

The Regional Planning Association of America was a small but prominent group of planners, architects and social critics who informally met in New York during the 1920s (Sussman 1976). It included Lewis Mumford, conservationist Benton MacKaye, housing advocate Catherine Bauer, and the labor union specialist Stuart Chase. Clarence Stein and Henry Wright, who built several new towns inspired by Ebenezer Howard's Garden Cities, were also members.

At the heart of the group was the belief that metropolitan sprawl was destructive, and only regional planning could restore a balance between city and countryside and act as a counterweight to the destructive forces of the economy that were breaking down indigenous regional ties. This notion of regional balance reflected an ecological world view: such a balance was not just between city and country, but by extension between the built and the natural, between the urban and rural, between the social and physical. As a result, their critique of metropolitan planning as serving the city over the countryside was not just against the inequality of city vs. country residents, but also the inequality of industrial urbanization vs. nature. Regional planning itself was thus the bridge between the economic and the ecologic, and parity between the two would be achieved through a spatial balance of the two.

The RPAA was not anti-urban and anti-modern. Nor did they start with the concept of economic growth as a central goal; harmony, balance, quality of life were more central. New technology would allow industry to serve humanity and maintain a balance with nature. So, modern technology — plus decentralizing regional planning — could overcome the nature-industry conflict that characterized the early part of the industrial revolution. This hope reflected Ebenezer Howard's belief that the marriage of town and country was the ideal alternative to the filthy industrial city, and a means to transcend both industrial capitalism and socialism.

In the end, however, if the RPAA presented such a wonderfully appealing world view, why was it not accepted by more people? This was in part because the group never attempted to expand their ranks beyond a small circle. In addition, though their ideas were aesthetically and conceptually seductive, they did not carry much clout in the rough world of industry and politics. Finally, many of their members moved on into more pragmatic positions in New Deal planning. This transition is the subject of the next section.

The Great Depression and Wartime: regional planning based in Washington

The shift from the RPAA to New Deal regional planning reflects in part an ideological change; but is also simply the shift from the idealism of a small group of visionaries during an economic boom to the implementation of regional planning in the contested and compromise-ridden political arena of the Great Depression. In this context we can better understand the shift from a vision of harmonious regional balance to a more pragmatic and forceful use of regional resource development for economic expansion and recovery.

Amidst the National Resources Planning Board and its various incarnations (1933-43) and the Tennessee Valley Authority (1933-), one of the central planning ideologies was comprehensive river basin development.⁴ Though the TVA was the only proposed valley authority out of eleven to be realized, the more general notion of regional planning through resource development played a very powerful role (Friedmann and Weaver 1979, 76). In 1942 Alvin Hansen and Harvey Perloff summarized this role of planning in *Regional Resource Development*, a thin but influential pamphlet

⁴Though terminated by an act of an increasingly conservative Congress in 1943, one postwar incarnation of the NRPB can be seen in the private Resources for the Future (RFF). Charles W. Elliot, 2nd, the NRPB's executive officer, from 1933 through 1943, the entire length of the Board's existence, was asked in the early 1950s by Paul Hoffman, the first head of the Ford Foundation, to be the director of Resources Programs, which later led to the formation of Resources for the Future. (see conversation with Charles W. Elliot, 2nd, in Krueckeberg, 1983: 356).

for the National Planning Association. In it they argued that comprehensive regional planning can stimulate private enterprise, not only overcoming economic waste, but also paving the way for postwar economic vitality. Heavily based on the TVA experience, they argued that "the river valley ... should be, with the exception of the Atlantic Coast regions, the developmental area" (Hansen and Perloff 1942, 2).

The utilitarian, economic development orientation of their proposal marked a strong departure from the holistic, conservation-minded regional vision of the RPAA. This may reflect both the practical approach of planners during an economic depression, and the attempt to make comprehensive regional planning more palatable to otherwise skeptical and anti-socialistic politicians.

Hansen and Perloff heavily stressed the role of conservation, not to preserve nature in the tradition of Emerson, John Muir or Benton MacKaye, but rather to protect and maintain resources for the economy. Flood prevention, soil conservation and hydroelectric power were the central tools. "We must aim at *conservation for use* so that resources may always yield to the utmost," they stated. "We must conserve our legacies for this and future generations" (Hansen and Perloff 1942, 12).

This was not the rhetoric of the innate value of nature, of appreciating the environment in its natural state. Yet this resource exploitation was neither for the rich nor for just for immediate consumption; instead, it reflected an ideology of resources for the masses today and tomorrow. Indeed, the nation had so abused its soils and other natural resources that even this type of coordinated resource exploitation was arguably much better than the chaotic abuse that had led to the Dust Bowl.

This was also not the regionalist ideology of the RPAA or Howard Odum's southern regionalists, in which each region had its unique developmental role and identity. The regional organization of society was no longer an end in itself. Instead, regional planning was seen as a way to serve larger national interests. The Second World War subsumed regional inequalities under the larger national war effort. With the war came a rising nationalism, and regional autonomy was no longer a workable political rhetoric. In the face of full production and national mobilization, proponents of balanced rural-urban regional development didn't stand a chance. The nation shifted its attention from rural development to urban defense centers in the name of military expediency (Campbell 1994).

The history of the Tennessee Valley Authority reflects this changing role of river basin development (Creese 1990; Gray and Johnson 1991; Hargrove and Conkin 1983). Initially established as a comprehensive regional planning effort that received enthusiastic support from RPAA members, the TVA's role was eventually narrowed to that of a utility, stripped of its more sweeping social planning roles. For Rexford Tugwell, "from 1936 on, the TVA should have been called the Tennessee Valley Power Production and Flood Control Corporation" (quoted in Friedmann and Weaver 1979, 77). The later establishment of a national atomic weapons center in Oak Ridge, Tennessee to take advantage of TVA power — like the development of the Hanford atomic center to use Columbia River basin power — symbolized this shift in regional development thinking from the early 1930s to the 1940s.

We thus see that the comprehensive nature of river basin development allows, in principle, for both economic and environmental issues to be dealt with in the same plan. Yet this does not insure that the conflict between the two will be resolved equitably, just that the conflict is more likely to be addressed in the same plan and political process. In the TVA case, the early days promised this comprehensive economic-ecologic planning; but by about 1936, the economic side won out, and the ecologic side was neglected. The TVA had thus lost its bioregional orientation towards regional planning (if it ever had one), and had become an agency promoting metropolitan-industrial growth.⁵

From Regionalism to Regional Science: the Postwar Transformation of Regional Thinking (or: Cold War, Cold Science)

If regionalism was transformed from the holistic idealism of the 1920s RPAA to the progressive resource extraction of the 1930s TVA, it seemed to vanish altogether after the end of the Second World War. Private sector expansion serving pent-up consumer demand, new international trade and national homogenization of markets and living standards were the driving forces. Regional planning was seen as anachronistic, or worse, socialistic (see Friedmann and Bloch 1990).

Regional theory was changing as well. The tradition of rich description of regional characteristics and physical geography was giving way to a new science of spatial analysis. The decline of regional planning authority freed the field from its political constraints, giving a false technocratic sense that regions were now outside politics. As a result, the "best" regional development approach was no longer

⁵One cannot, however, criticize the TVA for neglecting anti-metropolitan sprawl ideology in comprehensive river basin development, for the central problem within the region was not unbalanced development, but rather underdevelopment.

what was socio-ecologically balanced (RPAA), or what was feasible in the political economy (TVA). Instead, this political impotence allowed regional scientists to pursue what they perceived as objectively optimal solutions. Borrowing heavily from neoclassical economics, systems analysis and other quantitative analytical fields that were surging in the Cold War (Cold Science) era, regionalism was transformed into regional science. In this abstract imagined world, the topographic and cultural idiosyncrasies of regions were no longer seen as enriching our understanding, but rather as annoying imperfections on the smooth, featureless plane of the ideal space-economy. The region was reduced to a two-dimensional game board with resource factors of production. The goal of this game was to optimize the efficiency of spatial interactions.⁶ To some degree this shift to regional science reflected the growing geographic fluidity of the American economy; but the abstract maps reflected as much wishful futurism as empirical changes.

Walter Isard, the dean of regional science in the United States, addressed the relationship between society and nature in 1972 when he coauthored *Ecologic-Economic Analysis for Regional Development*. Though he saw this book as a great detour from his other, more technical works and one that would raise much controversy, it still was in the same analytical tradition. He is even farther away from the RPAA's vision of the innate value of resources than the TVA, and stresses the socially-defined value of resources:

"Natural resources may be defined as those natural conditions and raw materials which man uses to meet his needs and improve his net welfare. the supply of natural resources is not a fixed quantity, but rather a supply which becomes greater and more varied with every scientific and technological advance by man. Because the type and supply of natural resources are a function of man's ability to develop them, alternative natural resource development policies will inevitably exist, with some alternatives being more desirable than others" (Isard 1972, 50).

He used three techniques to bridge the economic and the ecologic: comparative cost analysis, input-output, and gravity models. He translates several regional science techniques to the natural world, such as an input-output table for flounder ("Winter Flounder Production Linkage Submatrix,"), or a classification system of nature based on the Standard Industrial Classification system ("The Economic-Ecologic Commodity Classification System," (Isard 1972, 57-63).⁷ For input-output, industrial linkages become economic interactions and symbiotic relationships. Industrial forward and backward linkages are translated into prey and predator in nature's food chain.

Isard achieves his integration of the ecologic and the economic by forcing natural resources into the language of economics so they can be valued through the market system as a factor of production. The dollar becomes the unit of comparison: "Theoretically the methodology of [ecologic analysis] can be linked to that of [economic and regional science techniques], and this to the common unit, the dollar. ... Our basic procedure for linking the economic and ecologic systems is an extension of what is generally characterized as linear systems by applied mathematicians." (Isard 1972, 94) This monetary conceptual "bridge" between nature and society is different both in form and content than other such bridges, such as comprehensive regional planning, or a spiritual notion of socio-ecological balance, or the procedural test of what is politically acceptable. For Isard, everything gets funnelled through this filter of linear models.

Natural resources therefore have no intrinsic value. They are also not fixed, but rather can be expanded and changed given technological changes (not individual resources, but rather resources as a group). In this way, they are socially defined and exploitable. Humans define what is a natural resource, what its value is, and when it is valuable and when not. Technology shapes natural resources, not the reverse.

In this regional scientific schema, the planner's traditionally rich sense of land and soil vanishes. If the RPAA's vision of a village-like regional community was romantically antiquated in the face of highly mobile edge and global cities, then the regional scientists' view erred in the opposite direction: an exaggeration of the mobile society to the neglect of communities (and natural resources) still tied to place. There is neither the conservationist ideals of Teddy Roosevelt and Emerson, nor the anthropomorphic sense of public power that hydroelectric dams, water projects and mechanized farm machinery gave to the TVA. The promethian transfer of economic power from the land into industrial society seemed complete, as land became socially-recreated in the image of ideal economic-space.

⁶see Friedmann and Weaver, 1979, for a vivid description of the transformation of regional planning from the 1920s to the postwar period.

⁷The question here is not as much what the mechanisms of the Input-Output table are as they translate from the economy to the environment, but rather what the object of the game, the driving mechanism. In I/O, it is to optimize the system, to remove bottlenecks to increase output and profits. The object of an ecologic I/O is more problematic.

This regional science transformation of nature has deeper roots in urban theory, such as in the famous group of urban ecologists at the University of Chicago in the mid-20th Century. Robert Park, Roderick McKenzie, Ernest Burgess and Louis Wirth were the best known of these urbanists who used concepts from natural ecology to describe the social growth and differentiation of cities. However, such conceptual appropriation didn't necessarily lead to economic-environmental integration. "Ecology" did not refer to a balance in the natural environment; rather, they used the ecological model to examine the balance in the social (i.e., economic or built) environment. They borrowed from the natural sciences an interest in the form of ecologic inquiry, rather than a substantive interest in nature per se. Applying neo-Darwinian concepts of invasion, succession, competition, and division of labor, they explained the "natural" processes in the urban-industrial economy (analogous to such processes in the natural world of flora and fauna).

Just as their social reinterpretation of "ecology," they redefined the term "natural," which no longer referred to the world before and outside of urban-industrialization, but rather as the "unimpeded" functioning of the market economy. Thus the key force in the world — the "natural" force — shifted from that of the physical to the social. This was also a promethian thought (humans freed from the constraints of God and nature), a positivistic sense of the inevitability of development. The role of planning was no longer to achieve an environmental-economic balance, let alone to protect the environment from the dangers of urbanization, but rather to guide this growing urban economy for its own sake.

Though they were not directly involved in regional planning, their ideas did shape future planners and regional scientists.⁸ Louis Wirth, for example, was instrumental in the establishment of the post-war planning program at the University of Chicago, which led the way for the rise of postwar planning education based on social sciences rather than architecture and engineering. (Krueckeberg 1983, 34; Perloff 1957)

ASSESSMENT: ECONOMICS, THE ENVIRONMENT, AND THE REGION

Regional planning has dealt with this ecologic-economic conflict in very different ways over the past 70 years, from the holistic vision of the RPAA to the enlightened resource exploitation of the New Deal to the cool analysis of the regional scientists. None of these three have been wholly successful, suffering the trade-offs of idealistic purity, political-economic effectiveness, and analytical parsimony.

Yet these three past examples offer important lessons. Though the TVA case illustrates that a regional approach does not guarantee this balance, it does seem worth attempting to combine the regional idealism of the RPAA with the effectiveness of New Deal regional planning and the analytical power of regional science (with the latter freed of its more abstract positivistic assumptions and made more sensitive to non-market values of nature).

In the end, does regional planning offer the promise of a more balanced integration? Regional planning has traditionally been advocated in the United States for several reasons: to overcome interregional inequality (e.g., northern vs. southern states); to preserve regional societies and cultures; to achieve efficient scale economies by coordinating inter-municipality investment; and to manage regional resources. Regional planning is sometimes a response to planning that is seen as too localized and fragmented; other times it is a response to planning that is seen as too centralized and coarse. The region is thus alternately contrasted to the city (e.g., for central city-suburban equity), the metropolis (Lewis Mumford's fight against anti-rural metropolitan sprawl), and the nation (Howard Odum's struggle against a northern development path for the American South).

Regional planning in America therefore represents not only a specific geographic scale of planning, but also a broader tradition of comprehensive planning and a regionalist view of society. Like other types of planning, it draws on an interdisciplinary array of ideas and practices. Yet its particular blend of traditions is unique in planning, and its history is one of an alternating — and often ambiguous — alliance to both the built and the natural environments.

On the economic side, the region describes the labor market, the housing market, and often the source of water, energy and other natural resources. On the environmental side, the region describes the watershed, the air quality basin, the land and mineral resources. The city level is too small to contain all the complexities, and the nation-state is often too large and awkward a political entity to represent the

⁸It would be worthwhile to trace the impact of the Chicago School on the intellectual development of regional planning thought, and to compare their impact on the New Deal vs. postwar thought.

subtle complexities of economic and environmental systems. Other planning issues, such as urban design, housing, and historic preservation, are more effective at the local level, so that their relative absence at the regional level allows for the ecologic-economic forces to be expressed more directly.

It is therefore not surprising that the region often captures the planner's imagination. It appealingly offers a balance between parochial local planning and alienating national planning — and between the interests of the city and the countryside. Reminiscent of the fairy tale, *Goldilocks and the Three Bears*, national planning is "too big," local planning is "too small," but regional planning is "just right." That regionalism represents the path not taken in American planning heightens its alluring promise — and the hope that the right geographic scale will lead to the right balance (a kind of spatial determinism).

However, there are numerous limitations: political (boundaries of cities, states, nations); physical (e.g., resources and pollution that cross bioregional boundaries); and economic (the rising global economy). It was much easier to use the river basin as the building block of planning when water navigation, irrigation, hydroelectric power and flood control were key tools in regional development. Modern regional economic development has found new tools, and the simultaneous concentration of global cities and the dispersal of technoburbs/edge cities has drawn a fundamentally new economic map onto the traditional bioregion. This new economic geography has not wholly replaced the physiographic river basin; however, it means that regional planning can no longer be seen as a complete, closed system, but rather as part of a palimpsest of local, national and international development.

The Limits of Sustainable Bioregions

In this light, the current revival of bioregional thinking (Berg 1989; Parsons 1985; Sierra Club 1993), and its call for self-sustaining ecoregions, is both immensely appealing and naively outdated — or at best, in need of great revision. Kirkpatrick Sale (1985), in his important book on bioregionalism, argues that the key for environmental health is to have self-sufficient economic communities at a scale small enough so that its citizens directly see and feel the environmental impacts of their actions. For Sale, this is the bioregional scale — or regions defined by natural boundaries (such as river basins). Bioregions plus self-sufficiency, so the formulation goes, eliminate environmental externalities.

Sale writes with eloquence, but both his belief in the regional scale and in self-sufficiency are troublesome. Though trained as a regional planner, with the sentimental loyalty to the 1920s romantic image of river basin development so eloquently advocated by Lewis Mumford and the Regional Planning Association of America, I have come to believe that there is no inherently best scale — including the regional scale — to do environmental-economic planning (Sussmann 1976, MacKaye 1962, Friedmann and Weaver 1979). Despite its appeal, the regional level no longer can claim to be the best (if it ever did).⁹

Perhaps the two best areas for regional planning are water and transportation: those aspects of planning concerned with river basins (flood control, recreation, water resources, ground water pollution) and commuter sheds (transportation between home and work within a region). Here the regional scale seems to make the most sense, for the local scale is too small and regions have a fair degree of self-sufficiency. No surprise, then, that these are two areas with an already strong presence of regional planning and management (regional transit districts, regional rail districts, regional port authorities, water districts, TVA, etc.). Thus, the regional scale could be the best for certain circumstances, but in others the local, national, or international likely work better.

We should also avoid the simple ecologic determinism of assigning the optimal scale of a specific environmental planning problem based solely on the scale of the natural phenomenon (e.g., the extent of a river basin, or the dispersion range of metropolitan air pollution). No geographic scale will inherently eliminate the conflict (for not all conflict is geographic). One must also overlay the human geographic scale of political and economic coalitions. The current merging of environmental Raster (grid)-based and infrastructural vector-based data in Geographic Information Systems (GIS) reflects the need for multiple layers of planning boundaries. (Wiggins 1993)

What this means is that bioregions and social regions don't always intersect. Alvin Hansen and Harvey Perloff recognized this fifty years ago:

"Experience indicates that the regional boundary should not be rigidified. Many problems of resource management and of social and economic planning cut across watershed boundaries and should

⁹Curiously, the regional planning approach — based on river basins — rather than being some notion of balanced bioregionalism, can be quite environmentally devastating. One need look no further than the western river-basin dam projects under the U.S. Bureau of Reclamation. (Reisner, 1993: 119)

be treated accordingly. ... It is important, therefore that the sphere of authority of the developmental agency be elastic." (Hansen and Perloff 1942, 29)

Regarding self-sufficiency, I see no easy way for the world to return to local or regional self-sufficiency. The challenge will thus be to be sustainable in an interdependent world full of trade, migration, information flows and capital flows. There might be certain resources that should be locally self-sufficient: perhaps air, water and soil. But we might even need to overcome our old environmental bias against interbasinal water transfer. The trick will be to determine the difference between *healthy interdependence* and *parasitic dependence* — that is, when dependence on other regions' resources is equivalent to depletion. Interdependence does not always imply an imbalance of power, nor does self-sufficiency necessitate equality. I envision an extension of the concept of the "trade balance" to include an "environmental balance," which covers not just commodities, but also natural resources and pollution.

Finally, regional planning requires a level of administrative coordination and authority that can challenge the usual limits of government intervention — at least in the United States. To help the environment requires regulation, subsidies, incentives, revenues; to help the economy requires promotion, infrastructure, taxation. But to link the environment and the economy together requires much more: comprehensive planning at a scale which we are not used to, or necessarily ready to grant to the government planners. So, there is something about this integration itself which raises the level of planning needed above what either of the two requires alone. This intersection of public and private creates a complex — and to many people a threatening — sense of what land and resources are, and shakes up traditional visions of the role of planning.¹⁰

Final Thoughts

Though planning certainly does not occupy a neutral position outside the fray of the economic-environmental conflict, it does have a greater tendency towards compromise and synthesis than either the entrenched economic or ecologic camps. One might even hope that planning could overcome its own internal schism between economic development and environmental policy and thereby serve as a bridge between these two camps for other disciplines, meeting the interests of the economy and the environment halfway.¹¹

I must curb this idealism somewhat with the observation that an integrated, holistic planning is more easily imagined than achieved. It is naive to hope that we can soon train all planning students in sustainable development, so that each future planner has integrated the economic and the ecologic from within. In the short-term, we may need to continue to rely on the model of opposing advocates: the economists and the environmentalists each defend their own interests, and integration is achieved through the political process of compromise.¹² We must nonetheless hope that we can achieve a more holistic planning in the long-run.

Importantly, the regional planning tradition acknowledges the issues of inequity that are so central to the ecologic/economic battle; the distribution and control of resources goes to the heart of regional policy. John Wesley Powell recognized this over 100 years ago when he advocated U.S. states based not on arbitrary state boundaries, but rather on river basins, thereby creating a fair territorial division of power and resource wealth. As noted by Marc Reisner (1993, 47), "to divide the West any other way was to sow the future with rivalries, jealousies, and bitter squabbles whose fruits would contribute solely to the nourishment of lawyers."

¹⁰With the exception of New Deal and wartime planning, we have generally shied away from comprehensive regional management in favor of single-resource management districts (e.g., water, power, transportation, ports). Somehow the centralized control of these resources is more threatening than the separate control of each individual resource, perhaps because the former offers a more explicit opportunity for government to comprehensively plan and redistribute resources.

¹¹One needed integration is to better link the geography of the regional-industrial economist (new industrial districts, edge and global cities, new international division of labor, etc.) with the geography of the regional environmentalist (eco- and bioregions, landscape linkages, wildlife corridors, greenways, watersheds, etc.). These two subdisciplines still imagine the landscape in radically different ways.

¹²These two alternatives are analogous to the older debate in planning between comprehensive and advocacy planning; that is, whether one planner can represent all sides fairly, or whether each planner must choose sides, with pluralism achieved through political battles. The pluralist model, however, may not be an option for many countries.

Finally, I see the notion of "resources" as a promising bridge between the economic and environmental worlds. After being almost indispensable in New Deal and wartime planning publications, the term seemed to have disappeared during most of post war regional analysis (with the exception of the 1960 publication of Perloff, et al's *Regions, Resources, and Economic Growth*). This was once understandable in an era of affluence when natural resources were cheap, easily exportable, seemingly abundant and clean, and where labor, capital and consumer demand — not natural resources — were the constraints to industrial growth. These assumptions can no longer be made. Resource planning brings with it an emphasis on setting priorities and promoting efficiency with constrained supplies. The term "resources" also bridges the languages of the economist, the conservationist, and the preservationist by allowing for the exchange, use and innate values to be incorporated into one concept (e.g., the cost, uses, ecological role and beauty of precious California water). The return of "resource planning" to the center of planning language could be a modest but crucial step to get economic development planners and environmentalists to reintegrate their methods and priorities.

Bibliography

- Berg, P. (ed.). (1989) *A Green City Program for San Francisco Bay Area Cities and Towns*. San Francisco, CA: Planet Drum Foundation.
- Campbell, S. (1996) *From Dust Bowl to Defense Buildup: Labor Migration and Regional Development during the Second World War*. *The Annals of Regional Science*. (forthcoming)
- Creese, W. L. (1990) *TVA's Public Planning: The Vision, the Reality*. Knoxville: The University of Tennessee Press.
- Daly, H. E. and J. B. Cobb, Jr. (1989) *For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future*. Boston: Beacon Press.
- Dear, Michael. 1995. Reinventing Regional Science. *International Regional Science Review* 17 (3):355-60.
- Friedmann, J. and C. Weaver. (1979) *Territory and Function: The Evolution of Regional Planning*. Berkeley and Los Angeles: University of California Press.
- Friedmann, J. and R. Bloch. (1990) American exceptionalism in regional planning, 1933-2000, *International Journal of Urban and Regional Research* 14 (4), 576-601.
- Gray, A. J. and D. A. Johnson. (1991) *TVA's Regional Development Planning: The First Twenty Years*, presented at the Joint ACSP and AESOP International Conference, Oxford, UK, July 9.
- Hansen, A. H. and H. S. Perloff. (1942) *Regional Resource Development*. Washington, D.C.: National Planning Association.
- Hardy, Sally, and Greg Lloyd. 1994. An Impossible Dream? Sustainable Regional Economic and Environmental Development. *Regional studies* 28 (8):773.
- Hargrove, E. C. and P. K. Conkin (eds.). (1983) *TVA: Fifty Years of Grass-roots Bureaucracy*. Urbana and Chicago: University of Illinois Press.
- Hotelling, H. (1931) "The Economics of Exhaustible Resources," *Journal of Polit, Econ.*, April. Vol. 39, 137-175.
- Hudson, W. E. (ed.). (1991) *Landscape Linkages and Biodiversity*. Washington, C.C. and Covelo, CA: Island Press.
- Isard, W., with C. L. Choguill, J. Kissin, R. H. Seyfarth and R. Tatlock. (1972) *Ecologic-Economic Analysis for Regional Development*. New York: Free Press.
- Isserman, Andrew M. 1993. Lost in Space? On the History, Status, and Future of Regional Science. *Review of Regional Studies* 23 (1):1-50.
- Isserman, Andrew M. 1995. The History, Status, and Future of Regional Science: An American Perspective. *International Regional Science Review* 17 (3):249-296.
- Johnston, Ronald J. 1987. *Geography and Geographers: Anglo-American Human Geography Since 1945*. 3rd ed. London and Baltimore, Md.: E. Arnold.
- Krueckeberg, D. A. (1983) *The American Planner: Biographies and Recollections*. New York and London: Methuen.
- Leach, Robert. 1994. The Missing Regional Dimension to the Local Government Review. *Regional studies* 28 (8):797.
- MacKaye, B. (1962) *The New Exploration: a Philosophy of Regional Planning*. Urbana: University of Illinois Press. (first published by Harcourt, Brace and Co., 1928)

- MacKaye, B. (1968) *From Geography to Geotechnics*. Urbana: University of Illinois Press. (edited by Paul T. Bryant)
- Markusen, Ann. 1994. American Federalism and Regional Policy. *International Regional Science Review* 16 (1&2):3-15.
- Mills, E. S. (1978) *The Economics of Environmental Quality*. New York: Norton.
- Parsons, J. J. (1985) On 'Bioregionalism' and 'Watershed Consciousness', *The Professional Geographer* 37 (1), 1-6.
- Perloff, H. (1957) *Education for Planning: City, State, and Region*. Baltimore: Johns Hopkins Press.
- Perloff, H., E. Dunn, E. Lampart and R. Muth. (1960) *Regions, Resources, and Economic Growth*. Baltimore: Johns Hopkins University Press.
- Pudup, Mary Beth. 1993. Regional Development: More than Ever, the Business of America. *Urban Geography* 14 (2):177-193.
- Reisner, M. (1993) *Cadillac desert : the American West and its disappearing water*. Penguin Books. revised.
- Roberts, Peter. 1994. Sustainable Regional Planning. *Regional studies* 28 (8):781.
- Sale, K. (1985) *Dwellers in the Land: The Bioregional Vision*. San Francisco: Sierra Club Books.
- Sierra Club. (1993) The Sierra Club Critical Ecoregions Program, San Francisco: Sierra Club (May).
- Smith, S. and E. Reeves (eds.). (1989) *Human Systems Ecology: Studies in the Integration of Political Economy, Adaptation, and Socionatural Regions*. Boulder and San Francisco: Westview Press.
- Solow, R. M. (1977) "The Economics of Resources or the Resources of Economics," in Dorfman, Robert and Nancy S. Dorfman (eds.), *Economics of the Environment. Selected Readings*. New York: W.W. Norton. (second edition), 354 - 370.
- Sussman, C. (ed). (1976) *Planning the Fourth Migration: The Neglected Vision of the Regional Planning Association of America*. Cambridge, Mass.: MIT Press.
- Weaver, Clyde. 1984. *Regional Development and the Local Community: Planning, Politics, and Social Context*. New York: Wiley.

Environmental planning is the process of facilitating decision making to carry out land development with the consideration given to the natural environment, social, political, economic and governance factors and provides a holistic framework to achieve sustainable outcomes. A major goal of environmental planning is to create sustainable communities, which aim to conserve and protect undeveloped land. Regional Economic Integration means the combination separate economies into a larger economic region, aims at expansion of foreign trade and investments. Regional Economic Integration means agreements between groups of countries in a geographic region to reduce and ultimately remove tariff and non-tariff barriers for the free flow of goods, services and factors of production between each other. GATT and WTO are the biggest association of more than 140 member countries, which strive to reduce the barriers. However, more than regional, WTO has a global perspective. By entering into regional agreements, groups of countries aim to reduce trade barriers more rapidly than can be achieved under WTO. The paper presents an analysis of current socio-economic and environmental aspects of the industry imbalances in the regional economy by the example of Ural Federal District and Siberian Federal District. The main aim of it is to identify the actual socio-economic problems in the development of the regional economies. The authors analyze the economic, ecological and social aspects in the development of regional economies by the examples. The analysis has resulted in making proposals for optimization of the regional policy in the field of investments, manufacturing and ecology. The special attention is given to environment-oriented projects. Opyt kompleksnogo podkhoda [Human potential. Experience of an integrated approach]. Moscow, Editorial URSS, 176. Regional economic development, Environmental and Agricultural Economics (Climate Change Economics). Understanding Climate Change in Indore District: An Empirical Investigation of Trends and Shifts. The study tries to analyse the phenomenon of climate-change with respect to Indore district. It attempts to empirically investigate whether the district has actually experienced climate change over the time period of a century (1901-2002) more. This paper identifies and discusses the regional heterogeneity of the Brazilian great economic recession of 2014-16. Specifically, we outline a state-level chronology of the recession by applying the Bry Boschan algorithm, using the more. Regional economic integration has enabled countries to focus on issues that are relevant to their stage of development as well as encourage trade between neighbors. Studies indicate that regional economic integration significantly contributes to the relatively high growth rates in the less-developed countries. Employment opportunities. By removing restrictions on labor movement, economic integration can help expand job opportunities.