

Brussels: Perspectives on a European Capital

Edited by Pierre Laconte and Carole Hein

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The role of cities and towns in global human ecology has increased as the proportion of the world's people living in urban areas has grown to above 50%. While segregation of social groups is spatially differentiated at marked scales in rural areas, in cities the juxtapositions between wealth and poverty are stark and often harsh. Where two types of invasion occur simultaneously, perhaps because one stimulates another, they can establish great contrasts in human ecology over scales of a kilometer or less. Such contrasts exist in most cities, but particularly strongly in European cities that have seen mass immigration over the past five decades. They pose major questions for the provision of social services and for the development of infrastructure.

Some cities have special factors that influence their human ecology. In Brussels, Belgium two key elements differentiate it from most other capital cities. On the one hand it is a bilingual city-region in a tripartite federal structure with strong autonomy alongside Flanders (Flemish-speaking) and Wallonia (French-speaking). On the other hand it is the European administrative capital with a large European administrative quarter and many thousands of international diplomats, administrators and representatives of countless organizations and interest groups, which together form a distinctive social group within the city. The European role means that Brussels has to find a way of managing its urban growth and infrastructure to serve the total population and has to consider how European drivers impact upon the city's human ecology and various social groups.

Pierre Laconte and Carola Hein have brought together a group of political, administrative, planning and architectural leaders to discuss the way in which Brussels has emerged from its historic and cultural heritage to become a dynamic forward-looking city. The city's goal is to move from the status of a national capital (the head of a small, bicultural European country with limited visibility) to the status of an international metropolis (the head of a large, multicultural body with global visibility).

As a result of regional autonomy, the Brussels-Capital Region has seen itself deprived of its residential hinterland. In terms of per capita regional production, the Brussels-Cap-

ital Region ranks among the richest regions in Europe. In terms of per capita revenue, however, it is the poorest region in Belgium, with an unemployment rate of 20%, because of the influx of unemployed, non-European immigrants into the region. Although the suburbanisation of jobs and residents has expanded further and further into the countryside beyond the city limits, the Brussels-Capital Region remains more than ever the hub of the Central Belgian mega-city.

One significant human ecological aspect is that whereas non-European communities, mainly Moroccan and Turkish, have taken an important role in political parties and have reaped the fruits of participation, the European expatriates stationed in international institutions in Brussels are largely absent from the voting rolls. Clearly at present, the non-European immigrants feel themselves more involved in the human ecology of Brussels than do the European expatriates. To gain their participation as registered voters would demand strong, organised action—a type of action that has yet to occur. In practice, implementing European citizens' rights in Brussels and gaining European recognition of Brussels's importance will require the participation of all the citizens of Europe, especially the citizens of Brussels, in the ongoing social-urban discussion of how Brussels can best serve a broad European function yet retain its unique character as a livable city of neighbourhoods.

The 19th century Besme Plan called for grand avenues around and across the city, public parks and gardens, and stunning vistas, all this to be realized by foreign planners and architects selected by King Leopold II. Indeed, the King had developed a technique for realizing his urban vision, piece by piece: following the construction of basic neighbourhood infrastructure, notably public space, he called upon the private sector to subdivide and develop the land according to precise architectural specifications. The improvements in the urban environment changed the human ecology and altered the cultural character of Brussels. Some of the mediaeval heritage was lost, but the city acquired broad avenues that coped with motorized traffic until the second half of the 20th century. The International Exhibition 'Expo' of 1958, for example, served as a catalyst for road, oil, and automobile industries to transform several boulevards into urban highways: the urban ecology changed again to cope with a highly motorized city, a decade or more before the introduction of underground rail transport. The European office complex at Berlaymont became the key to the creation of a new street and subway system for Brussels, continuing the government-led building of an urban transportation network that had begun with the highway construction for Expo '58, but giving it a new focus on an east-west axis, connecting the central city to the European Quarter and the well-to-do residential areas to the south-east of the capital. The authors argue that, unlike many Eu-

ropean cities, Brussels has largely avoided the “ghettoisation” associated with large concentrations of suburban public housing towers. At the same time, Brussels’ democracy is characterised by dynamic city councillors who recognise the obligations of propinquity in their deliberations. For the future, the Brussels Region has to sustain its capacity to develop clusters of international activities, while keeping the diversity of its communes and its neighborhoods.

The book looks at human ecology at different scales, from the position of Brussels in Europe to the details of open spaces and access routes within the European Quarter of the city itself. While not a treatise of human ecology, or a direct analysis of the human ecology of an individual city, it shows how the human ecology of a city is driven by a great variety of factors and the roles that different levels of government play in developing both the built and cultural character of cities of international importance. Richly illustrated, with an appropriate historical and political context, this is a penetrating analysis that makes a notable contribution to human ecology.

Conservation: Linking Ecology, Economics, and Culture

By Monique Borgerhoff Mulder and Peter Coppolillo
 Princeton, NJ: Princeton University Press, 2005
 ISBN 0-691-04979-3

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The subtitle of this book signals its most important theme. Biodiversity conservation is about changing human behavior so as to do less harm—perhaps even restore—non-human populations, communities and ecosystems. To do conservation with any hope of success requires doing both the human and the non-human environment side of things correctly. Therein lays the rub, or rather several different sorts of friction that frequently thwart the practice of conservation.

The most obvious rub is between people and nature. People are competitors and predators whose life necessarily impacts other species. At current levels of human populations and levels of affluence these impacts are practically nowhere trivial. Hardly less obviously, different people have quite different interests in the same plots of land. For some, a given plot of forest may be a remnant of a unique ecosystem that should be preserved at all costs. For others, it is a source of a traditional livelihood, the loss of which will have a drastic ef-

fect. For still another, it is the chance to make a quick return from an intensive harvest, generating capital that will contribute to national development. Large scale patterns of conflict emerge. Much of the energy and resources for biodiversity conservation are generated in rich Northern countries. Much of the biodiversity to be conserved is in poor Southern countries. Within the Southern countries, the people closest to the centers of biodiversity are often poor, culturally distinctive societies with a weak influence on national politics. Urban elites in poor countries often favor national development at the expense of indigenous rights and biodiversity priorities. In many Southern countries national institutions are weak and even well-conceived policies may fail to be executed as conceived. The natural and social science disciplines that attempt to influence policy have distressing quirks and weaknesses. Ecologists frequently think people are just the worst weed, to be extirpated as far as practical. Anthropologists take the side of the people they study and class the ecologists with the other threats dire to the communities they study. Economists like to think that they have hard heads but soft hearts, but both ecologists and anthropologists often think that their heads are too big and their hearts too small. Interdisciplinary scholarship is almost impossible because the methodological commitments of ecologists and economists diverge dramatically from those of most social and cultural anthropologists. The “science wars” of the last 40 years have opened an almost unbridgeable gap between these disciplines.

Borgerhoff Mulder and Coppolillo’s book shines a bright and unsparing light on all these frictions. They write from a rare perspective. They are socio-cultural anthropologists, but hark back to the human ecology traditions of pre-“science wars” times. They are respectively a professor and former doctoral student in the Ecology Graduate Group at UC Davis (truth in advertising; so is this reviewer). At the same time, they hew to the long-standing anthropological tradition of sympathy for the people one studies and for the awesome cultural diversity that they represent. Thus, for example, they make very clear the limitations of ecology as an applied science. The complexity of natural communities makes cutting edge ecology very expensive but at best only weakly predictive. The typical conservation biologist’s misanthropy makes them tone deaf participants in the inevitably political process of actually managing biodiversity. Economists’ attempts to value “ecosystem services” and other biodiversity conservation values are still full of holes. Political ecologists from the other side of the “science wars” divide are often the only culturally sensitive people contributing to the debate. But an economist might say that the biggest warm heart is only modestly useful if accompanied by a soft head.

I do not want to give the wrong impression. The forego-

ing might suggest that this book is full of highly abstract polemical arguments. In fact all the general conclusions emerge from a close survey of concrete case studies or sets of case studies. Each chapter contains boxed discussions, most of which develop the lessons from a particular reserve or project. It has around 1,000 references.

Early chapters review essential concepts, the history of conservation, and the basic natural science aspects of conservation. Later chapters treat applied topics and social science in chapters that introduce readers to both issues and tools. For example, one chapter examines whether indigenous peoples are natural conservationists using mainly an anthropological perspective. Another looks at the issues of commons management while introducing some tools from economics and game theory. All of the policy tools that have been used in conservation to lubricate the friction between human and non-human populations and ecosystems are closely examined including parks, community-based conservation, integrated conservation and development, recognition of indigenous property rights and intellectual property rights, participatory action networks, co-management of reserves, direct buy-outs of groups whose practices conflict with conservation, extractive reserves, conservation education, hunters as conservationists and natural top carnivores, and the promotion of non-timber forest products.

Borgerhoff Mulder and Coppolillo reach some strong conclusions by the end of the book. The most important is that we have no magic bullet or bullets to make every conservation problem a “win-win” for all parties concerned. All of the major policy tools have track records that include successes, often partial or temporary successes, and failures. When they succeed, they do partly lubricate the various frictions that affect conservation policy, enough to get real work accomplished. Science, while essential, is too expensive and too weakly predictive to reliably produce optimal outcomes. Science does its best work when disciplinarians combine their tools and design studies that are sensitive to the problems of a particular reserve or policy arena. In particular, natural and social science are both generally relevant to designing sound conservation policy. Overcoming the friction between these two groups of disciplines is perhaps the greatest technical problem in the field of biodiversity conservation. The concluding paragraph of the book begins “Conservation solutions clearly demand a nimble mind.”

This book is a must read for both academics interested in conservation biology and for practitioners creating and managing reserves or dealing with other aspects of conservation biology policy. In particular, it is path breaking in showing how to integrate the social sciences into these endeavors.

The Jevons Paradox and the Myth of Resource Efficiency Improvements

By John M. Polimeni, Koza Mayumi, Mario Giampietro, and Blake Alcott

London, Earthscan, 2008

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The Jevons Paradox may seem unapproachable to the recreational environmentalist at first sight. However, exceedingly simple principles of economics, consumer behavior, and human nature are applied toward unadorned axioms that couldn't be more obvious in the state of the world today. Given the growing awareness of global warming, increasing energy costs, and oil dependence, Polimeni, Giampietro, and Mayumi introduce the five chapter manuscript by explaining that the appeal to technological efficiency innovation may not be the immaculate solution to environmental pollution and depleting natural resources that policymakers have been touting. The Jevons Paradox is rooted in the basic notion that when the cost of consuming a good is reduced, consumers respond by consuming more. The result, predictably, is no net savings, and perhaps even greater overall consumption. The book proceeds with a broad explanation and historical narrative of the Jevons Paradox in chapter two before a theoretical overview illuminating the paradoxical link between efficiency and consumption is presented in chapter three. Chapter four reviews the empirical literature to date and provides a test of Jevonian postulates across diverse contexts before closing chapter five with a plea for discerning consideration of the effect of technological efficiency on consumption patterns in a global economy.

William Stanley Jevons, one of the founding fathers of neoclassical economics, hypothesized in the mid-19th century that increases in efficiency lead to increased use, rather than to a reduction in consumption. Considering recent population growth, the globalizing economy, and the increasing stress on natural resources, Polimeni, Giampietro, and Mayumi open the text with a summary of traditional economic theory. Population growth increases demand for limited resources, in turn, increasing prices. As resources become depleted, development of energy-efficient technology is encouraged. Innovations are defined as successful when economic costs are minimized and market response is maximized. By minimizing the cost to the consumer, end users spend the surplus gained by efficiency on further consumption.

In chapter two, Blake Alcott asks whether efficiency is part of the solution or part of the problem. By exploring the development of the Jevons Paradox from 1675 through its revival in the 1970s, Alcott observes that efficiency lowers production costs and increases productivity for the manufacturer. Price decreases extended to consumers increase demand for cheaper products. Once basic needs are met, human nature in a capitalistic economy is then characterized by gluttonous accumulation. For example, energy-efficient automobiles increase the distance drivers are willing to travel. Additionally, those who might have relied on environmentally friendly means of transportation in the past might, for the first time, consider purchasing a motorized vehicle. Hence, when efficiencies in technology ‘save’ consumers money, they simply find something else to spend their money on, rather than working less. Alcott concludes by exposing proponents of environmentally-friendly consumer products as heirs who profit by maximizing productivity and minimizing input. All savings resulting from increased efficiency are *at least* re-consumed, either directly or indirectly, and Alcott suggests that environment-benefiting initiatives are better served by taxation or rationing.

Whereas direct re-consumption of a particular product is measurable, the primary obstacle for testing the Jevons Paradox in the new millennium is observing how savings resulting from one product are spent on other products, and how consumption by new consumers of the product are captured in a global economy. Alcott calls for a regression analysis modeling energy efficiency, consumption, and prices at the world-economy level but Giampietro and Mayumi, in chapter three, explore the inherent empirical challenges of such a daunting task. These authors address three problems in defining and measuring global efficiency and consumption by delving into epistemological and thermodynamic issues. With practical narratives, they offer a theoretical resolution positioning the phenomena not as paradoxical, but rather as characterized by competing goals that can be managed if priority is given to reducing resource depletion and environmental pollution over economic growth. Chapter three concurs that when efficiencies decrease costs, governments should either introduce taxes proportional to savings and apply these funds toward other initiatives, or limit consumption through rationing. Of course, the material standard of living advocated by human nature will resist situations in which increases in efficiency induce taxation. However, the authors hope that with a better understanding of global systems, environmental issues, and human nature, this might change.

Chapter three concludes with five recommendations for quantitatively testing the sustainability of complex adaptive systems and Polimeni responds to that call for action in

Chapter four by empirically evaluating the degree to which the paradox subsists across a variety of case studies. The author first takes the reader through an empirical review of the literature from 1975 to 2007 and points out that the approach to date has been limited to measuring direct re-consumption of a particular product following innovations in efficiency. However, Polimeni points out that the effects of innovation tend to be economy-wide, making it imperative to explore the macro-economic response to increases in energy-efficiency across products, geographies, and governmental dispositions. By observing the effect of population, GDP, and technology on environmental impact in three economically and geographically diverse regions of the world, the author concludes that energy-efficient technology improvements are counter-productive, thereby promoting energy consumption, rather than reducing it, as hypothesized by Jevons.

In review, increases in efficiency allow for the ability to get more out of less, effectually lowering the price of production. As production price decreases, demand and consumption increases, resulting in the Jevons Paradox. The book’s fifth and final chapter reiterates conclusions from chapters two through four and points out that a chink in the armor of natural selection logic is that adaptive entities are naturally self-destructive. Polimeni, Giampietro, and Mayumi provide the necessary disclaimers ensuring readers understand that the authors are not advocating the discontinuation of energy-efficient innovation, but rather a severe reduction in overall energy consumption necessary for ongoing human sustainability.

This book takes a giant step forward by pointing out shortcomings of the neoclassical economic paradigm by which the development of short-term policies are encouraged. Technological innovations enacting energy-efficient products that simply minimize economic costs and maximize market response are silver-bullets that fail to preserve natural resources in the long run. Policymakers, environmentalists, and consumers need to instead look for alternative courses of action not linked to maximizing GDP. To be sure, *The Jevons Paradox and the Myth of Resource Efficiency Improvements* makes clear that relying on energy efficiency and technology as solutions to pollution and ever-depleting resources is negligent indeed.