

The Word Shrinks, the World Expands.

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Introduction: devising the route amid the change

Crises and urgencies are not new phenomena, as well as phases of expansion and contraction (or shrinkage). These dynamics are the essential base on which ground the Author of this paper reflected. His focus is specifically on the scientific and technological backgrounds of two quite different fields: petro-chemical geophysics and information technology, and their respective and opposite roles in “shrinking” or “expanding” the perceived and actual size, scale, and grain of the developed landscape. By putting together these two fields, planners can have the sufficient background to anticipate future land patterns that respond to the relocating effects of scarce, expensive, and renewable transportation and shipping fuels on the one hand, and the continued globalization of culture and corporate ownership on the other. This reflection, as highlighted in this special issue of CONTESTI, is pivotal in a context of a changing “new normal” of the 21st-century society. We must accept that the everyday life of people all over the world can be affected by unexpected disruptions, waves of crisis and recovery that may continuously create new equilibriums. Also, the world is, in

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some aspects, shrinking, but in other cases is expanding. How can we face such a situation? What can we expect as a result in terms of (re) configuration of cities and territories? In which world we would live in the (near) future?

The World Expands . . . AND Shrinks

Notwithstanding a continued barrage of optimism from corporate energy sectors like the coal, hydrogen, and nuclear industries, it now seems obvious that the post-oil-peak reality will reverse a formerly one-way trend that has existed since time immemorial: the notion that travel always gets easier, and that the world, in perceptual terms, therefore, continues to “shrink,” or seem increasingly smaller and more accessible. For the first time in human history, we will reach a “Y,” or fork, in the perceived size and physical accessibility of the world: energy and entropy constraints will tend to make it “re-expand” or seem larger, just as electronic communication continues to make it “shrink,” and seem smaller (Table 2). The very wealthy, of course, will continue to travel long distances, but the point bears repeating for emphasis: for most of the middle and lower economic classes, the door to world travel will partially close for the first time in human history. They will travel less frequently, for shorter distances, using modes that take

more, rather than less, time as I discuss below. The peculiar combination of the effects of scarce and expensive transportation fuels on the physical and perceptual world, coupled with continued globalization of culture and economic ownership driven by electronic information, make for some startling potential realities:

- Electronic information will continue to erode sense of place, as individuals adopt increasingly smaller, less expensive, and more powerful communication devices that are able to trump both space and time.
- Continuing globalization of ownership will also erode the sense of place and any sense of responsibility of globalized shareholders to the relocalized effects of physical resources and supply chains.
- Relocalized sources, physical transport means, end uses, and fate of physical goods in the landscape will tend to focus sense of place on smaller, more naturally defined and constrained regions.

What is perhaps even more interesting is the combined effect of accelerating information flow and constrained physical movement of people and goods on the perception of *time*. Because energy efficiencies are maximized at slower speeds, traffic and shipping will

	Time	Place	Ownership	Supply Chains	“World Size”
Information	Speeds Up	Erodes	Consolidates	–	Shrinks
Energy (Post Peak)	Slow Down	Re-Enforces	–	Shortens	Expands

slow down. Speed limits may return, freight will shift from faster, more energy consuming modes to slower, more energy efficient modes. In response to horrendous costs for aviation fuels, airlines may be forced to trade time for fuel efficiency. Furthermore, individual travelers who choose more immediate rather than distant destinations to save energy expenditures will gain additional time at destinations and lose less time en route. Another rather subtle but potent factor affecting time perception after the Hubbert Peak is that renewable resources have inherent speed limits. With a gradual switch to renewable energy sources, the time for renewable energy sources to regenerate will influence the pace of human life. If energy is dependent on wind to blow, sun to shine, hydroelectric dams batteries to recharge, crop residues to be converted biofuels, etc., one may not speed up these processes beyond their natural rates of regeneration. This fact is diametrically opposed to the influence of several centuries of fossil fuel use on human perception of time. In fact, the entire fossil fuel era has been robbing matter (accumulated over many eons) to save time. By the laws of thermodynamics and entropy, this must change, the changes are apt to be dramatically perceived.

On the other hand, as information continues to be processed by more and more efficient

means, and as the size and power requirements of computing and communicating devices drop exponentially (as has been the case), it appears that there will be no comparable slowdown in transmission of information, nor any real drop in the volume of information transferred. As a result, information saturation and the exploding ubiquity of communication devices and means will continue to tend to accelerate our sense of time, and give us the perception of the informational world “speeding up.”

We tend now to think in terms of “either-or” – either the world will seem to speed up, or it will seem to slow down, and it will either “shrink” or “expand,” but not both. Since it has been speeding up for generations now, we can hardly be expected to think otherwise. But we will enter a new stage of landscape perception and sense of reality characterized by “virtual acceleration and world shrinkage” combined with “physical deceleration and world re-expansion.” Let us now attempt to bring this scenario “back to the ground,” and talk about landscape.

Convergent Relocalization

In spite of this somewhat gloomy economic prediction, there are a number of converging influences that, taken together, give us some cause for optimism. During the nineties my focus was on the growing tendency of people to identify with naturally definable regions, or “life-places.” The individual’s increasing

Note: The new relationship between the effects of a post-carbon, post-oil peak physical reality and the continuing globalization of information presents a dup of forces acting on the American landscape that have never before experienced.

identification as a citizen of a particular river watershed, coastal region, mountain range, prairie, or forest land coincided with professional and academic trends towards more comprehensive and applied science disciplines as ecosystem management, ecological restoration, conservation biology, and landscape ecology, all of which served to legitimize the bioregional focus as a means for comprehensive environmental stewardship.

Beyond this brew of new scientific and geographic efforts was added the public's burgeoning identification with naturally-definable life-places, forming "Friends of" (river, mountain range, etc.) groups exponentially. For example, the 2005 Land Trust Alliance's National Rally (one of the most well-attended and uplifting conferences I have ever experienced) demonstrated that land trusts are quintessentially local, bioregional, successful, and highly optimistic, being involved quite literally with saving the nature of local regions. Fortunately, the land trust movement is accelerating each year.

The effects of electronic communication and globalizing ownership notwithstanding, these combined forces of relocalization will assert themselves on our future landscapes, communities, and regions. The scientific legacies of M. King Hubbert and Norbert Wiener will inevitably reach some equilibrium, with a considerable dose of Aldo Leopold

included in the mix. The challenge for planners and designers is to attempt to anticipate and help bring about this proper reconciliation at all possible scales, from the creation of backyards to the planning of entire bioregions.

What will this new, electronically globalized, physically relocalized world with its strange, new landscapes look like and feel like, to those of us who will inherit and live within it? The patterns we might expect to emerge out of the communities and bioregions of the future could include:

- finer-grained, smaller shops and stores
- a more thorough and serious revival of "Main Street"
- dispersed, localized energy sources, such as rooftop PV solar arrays, rural and urban wind farms, cogeneration of biomass, and energy by agriculture and industry
- radically re-configured street corridors with multiple transit modes accommodated in the same right-of-way
- housing finely mixed with commercial, office, and light industrial uses
- vegetation aimed at moderating solar shade and access, ameliorating climate, cleansing or extracting carbon from the air, or providing local food or critical habitat (instead of just "looking good")
- transparent expression of local utilities such as water, waste, and electricity (which will, for better rather than worse, be "in our back

yard”)

- re-densification of remote, sprawled suburbs, starting with reclamation of formerly antiquated, one-story shopping centers now in seas of asphalt being reconfigured as dense, mixed-use village centers
- reinforcement of the center city as the most sustainable and high-class residential location
- evolution of much more fine-grained, flexible, and multi-use zoning allowing more land use complexity and variety in any given size parcel or zone
- more emphasis on local parks and regional wildlands
- “escape routes,” which allow non-motorized circulation from dense residential neighborhoods to “nearby nature”
- smaller vehicles of all kinds (probably rechargeable hybrid-electric flex-fuel vehicles running on ethanol or biodiesel) including scooters, two, three and four wheeled vehicles that are much smaller than cars of today¹
- shrinking the grain, scale, and current ubiquity of residential streets, parking lots, and garages
- fewer, less dispersed, but larger airports
- air travel that increasingly caters only to the very wealthy, with luxury emphasized rather than mass transportation
- more ferries and ferry terminals
- railroads returned from the brink of nostalgia to operational status
- reversal of the abandonment of rail rights of way (“Rails to Rails?”), with train tracks being considered as irreplaceable assets
- high speed electric trains
- micro light-rail systems for short distance travel
- regional tourist getaways
- zoning for protection of existing prime agricultural soils
- reclamation of good agricultural soils long-buried by excessive asphalt or concrete
- diverse reclamation and revitalization of older, industrial era manufacturing zones for local renewable resource-based industry

A simple glance at the above list obviates the need for well-trained, professional land planners and designers at all scales and stages, from policy generation, regional planning, through site design and detail construction.

Bibliografia

Boschert S. 2006, Plug-in Hybrids: The Cars That Will Recharge America, New Society Publishers, Gabriola Island

Frank A. 2007, Plug-in hybrid vehicles for a sustainable future, «American Scientist», vol. 95, n. 2, pp. 158-165

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Note

¹ There is strong evidence that the plug-in electric flex-fuel ethanol or biodiesel hybrids coupled with rooftop-mounted solar photovoltaic electricity-producing systems are key to a more sustainable future for many Americans. Hybrids that could use battery power only for up to 60 miles in range would cut the need for any petroleum or liquid fuel at all for 90 percent of personal vehicle trips. See Andrew Frank (2007) and Sherry Boschert (2006). (I currently ride a 14 kW/ 19 hp, all-electric motorcycle that charges from my 4 kW rooftop photovoltaic array.) If a transition to plug-in electric/biofuel hybrid vehicles were coupled with land use and transportation policies that emphasized mass transit and dispersed essential land uses to village/city centers no greater than thirty miles apart from each other, most of the polluting carbon footprints of contemporary land use could be avoided.

