

Introduction

The resurgence of regional design

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Introduction

The Resurgence of Regional Design

Michael Neuman and Wil Zonneveld

Why Now

We all know that the world is changing, profoundly, in front of our eyes. Alvin Toffler's 1970 landmark *Future Shock* has become the norm in a world without norms. Institutions crumble, ecosystems collapse, countries burn, pandemics rage, climate and weather patterns are unrecognizable, inequalities surge, and business as usual has led to politics that are unusual. The scale, pace, and scope of change of all types is so dramatic that a statement made a mere 30 years ago by one of the most astute observers of city regions and their "design" seems improbable today as we realize that the very technologies (largely infrastructures) that he referred to have abetted economic and social structures and actions that have been shown to be unsustainable in the deepest sense.

Not that a steep rise of population density did not cause difficulties and problems in the past. But these have always been solved, and the succession of these solutions is nothing else than the progress of civilization as usually described in history.

(Gottmann and Harper 1990, 221)

In large part the statement is implausible today because of the very scale, pace, and scope of urban change that these technologies abetted. For Gottmann, the solutions were "technology and progress," an intertwined synergy. While sustainable infrastructures offer part of the way out of unsustainable practices, and are an important part of the story of regional design, they are not the only answer. For that we must recognize the new reality of city regions and other types of regions, particularly complex hybrids of regions, and how they affect life, and thus our politics, economics, and more precisely for the readers of this book, planning and design.

What this means is that communities and cities, while essential places for the human experience, are not sufficient objects of intervention (policy, planning, design, investment) for us to go forward sustainably. When individual cities reach 30–40 million and urban agglomerations approach 100 million, and globalization continues almost unchecked, regions, and not just city regions, become increasingly vital domains of action.

Regional design, long a backbone for spatial planning, even if under other names, has become topical again for two reasons—as a key tool for spatial strategy making and as a key

tool in spatial management. This is due to several reasons. New conditions of urbanization that result from the convergence of several factors highlight the need for spatial strategy formation and application at supra-metropolitan scales. These new conditions include globalization and climate change along with all their impacts, as well as the urban population boom enabled by increased mobility and interconnectivity, along with new infrastructure technologies. These forces driving urbanization today and into the future play out at a new urban scale, which is increasingly encompassed in the city-region. The solutions to the impacts and problems that these forces cause must be dealt with by urbanism at a scale that matches. Strategic solutions to this scale of urbanism can be denoted as regional design. The case studies analyzed in Part II of this book are of city regions.

Regional design is not limited to urban regions, and can be applied to rural, ecological, and hybrid regions. By rural is meant non-urban areas where agriculture and other natural resource-based economic activities such as forestry and tourism occur in a palimpsest of small settlements such as hamlets, villages, and towns. Ecological in this context means that more “natural” and fewer economic activities predominate in the landscape. “An ecoregion is a large unit of land and water typically characterized and delimited by climate, geology, topography, and associations of plants and animals” (Forman 2008, 14). In these regions, environmental protection and conservation are the focus of policy, planning, and design; or should be. Hybrid regions are those that exhibit a mix of characteristics from any of the region types mentioned. All can benefit from practices of regional design as described in Part III of this book, where water management can either be the basis of regional design, or an integrated part of it. That is, regional design is not only terrestrial.

Returning to city regions, older factors still provide impetus for regional design. These include those stemming from the problematic impacts of city-region growth and development that have remained unsolved for generations despite best efforts, such as housing affordability, socio-spatial inequity, traffic congestion, and air and water pollution, among others. They have city-region sources and need holistic city-region wide solutions. These persistent factors also can be, and have been, effectively dealt with by regional design.

This is because traditional urban planning, conceived at the neighborhood, district, city, or even metropolitan scale, are inadequate to deal with many pressing urban problems and opportunities today, and into the future. Often the causes of these problems arise at regional and even larger scales (Burger et al. 2017). Moreover, traditional statutory planning in general regulates the use of space, hardly offering a strategic orientation, as it is strictly local in nearly all countries (Ryser and Franchini 2015). Further, in its emphasis on place and zoning, traditional urban planning omits flows and processes (Neuman 2005).

Thus, by being strategic, by focusing on the scale that provides critical context for urban planning at local and metropolitan scales, by addressing supra-urban issues, and by addressing the flows that infrastructures convey, regional design has been re-emerging in the forefront of spatial planning. Its focus is a bit sharper than spatial planning, as discussed herein. As we will argue, regional design can also be seen as a partial response to the procedural and communicative turn in planning which took place in many countries in the 1980s and 1990s. This “turn” moved planning away from space and territory into the direction of process, collaboration, and negotiation.

Regional design takes into account spatial parameters to undertake both analysis (understanding the problematic) and synthesis (formulating spatial solutions) at the regional scale through the use of a wide range of spatial imageries. Its rationale, as evidenced and synthesized from the practice and literature reviewed here, stems from:

1. The increase in scale and connectivity among neighboring metropolises to form large city regions;
2. The influence of transport, water, energy, telecommunications, and knowledge infrastructures as drivers of regional agglomerations;
3. The multi-scalar realities of glocal processes and spatial formation;
4. The twin and inter-related imperatives of competitiveness and sustainability necessitate larger-scale, holistic thinking;
5. The multiple levels of governance in concert with other sectors of society that are needed to address intertwined regional and local issues in new ways that traditional government and its planning have not been able to perform.

These factors combine and permute to reassert the importance of the regional design of territorial forms and processes, including and especially governance: targeting public and private actors (Salet and Faludi 2000). Case studies herein will refer to ongoing regional design activities across the globe, with a focus on Asia (especially Japan and China), Europe (much of the continent), and North America (particularly the Texas Urban Triangle, Los Angeles, New York, the Northeastern Megalopolis, and the bioregions discussed in Chapter 20). They illustrate the resurgence of regional design, an element of the contemporary take on the broader resurgence of the design dimension in planning (Albrechts, Balducci, and Hillier 2016).

Regional design takes place in a setting where an entire range of boundaries has become blurred (Neuman 2014). Being fuzzy at the edges not only relates to space but also to actors as well as to knowledge about spatial dynamics (De Roo and Porter 2016). “The” region is difficult to demarcate—the fractured functional spaces of daily activity surpass contiguous administrative territories (Friedmann and Weaver 1980). Spaces and places are connected in many different ways, leading to complex, multi-scalar inter-relations. The administrative borders of local and regional government no longer match these relations (Neuman 2007). Critically, they no longer *can* match them. Existing formal (statutory) supra-local planning does not deliver orientation about the potentialities of space that is strong enough to contend with its domain. One main cause: in many countries, supra-local intervention is contested. Another: the legal-administrative arrangements and tools are no longer sufficient, as they were designed decades, even generations ago, to deal with simpler, smaller-scale circumstances.

Regional design has the virtue of clarifying, at least in part, necessary changes in the governance of city-region development by focusing on *strategic* spatial characteristics. Strategic ones are selected because they induce growth and shape a region’s form and structure. These strategic matters that in many regional designs are spatially expressed by infrastructure, are thus subject to investments that can spur economic activity and ecological restoration. By contrast, regulation and other development *controls* are more apt for smaller urban scales such as the municipality and specific projects. It is the larger-scale and the associated level of complexity—in terms of governance as well as spatial structure—which distinguishes regional design from urban design.

These are strong claims. Not all agree with them, whether in politics, in academia, or across professional domains. At the outset of the preparation for the third regional plan for New York, Princeton architecture dean and noted urban designer Professor Robert Geddes commented “you can’t design a region.” Yet, after an extensive process of plan development, the New York Regional Plan Association (RPA) did just that. The RPA explicitly employed regional design as the strategic backbone of its 1996 regional plan (Yaro and Hiss 1996). It continues to do so in its most recent plan (RPA 2017, see Chapter 10). To justify these claims and to understand the origins of regional design and its relevance today and into the future, the master strokes in its

history are presented next. After that we discuss current concepts and practices in regional design and try to answer the question: why a resurgence of regional design? We round off with a brief conclusion. We then continue with a presentation of the structure of the book.

History and Evolution of Regional Design

Predecessors to regional design have a long and storied history that goes back to none other than da Vinci. Polymath Leonardo, in one page with several sketches, posited how to arrange spatial elements, both infrastructural and natural, in a settled region (Millon 1994). This was perhaps the first document to outline a proto-regional design method. In the mid-nineteenth century, the concepts proposed by Ángel Fernández de los Ríos in his book *El Futuro Madrid* (1868) offered a detailed vision of the future of both the city of Madrid and its greater region, in terms of a detailed analysis and a synthetic proposal for a regional vision, truly progressive for its time, recognizable to urbanists and regionalists today. His analysis befits a contemporary regional plan based on analytical methods first proposed by Patrick Geddes as “survey before plan” (1915) a half century later. They were given more contemporary ecological expression in Ian McHarg’s landmark book *Design with Nature* (1969), one century after Fernández de los Ríos.

The Spaniard’s comprehensiveness included geologic, demographic, climatic, landscape, architectural, educational, economic, and historic elements, among others, to determine the *suitability* of urbanization. It is also notable for the central and strategic role accorded to infrastructure, especially transport and water. While virtually unknown outside of Spain, this remarkable book merits translation, as he reached beyond the urban scale of his Spanish contemporary Ildefons Cerdà (Neuman 2000, 2011). It is a striking precedent for McHarg’s “layer” method of suitability analysis, itself a landmark as the basis for GIS (Spirn 2000).

In the early twentieth century, regional design thinking was further elaborated in Anglo-Saxon thought by Ebenezer Howard, Patrick Geddes, Thomas Adams, Lewis Mumford, Benton MacKaye, and others on both sides of the Atlantic. Their contributions, including the Garden City, as networked in a rural region, by Howard (1898), the Valley Section by Geddes (1915), the Townless Highway by Mumford and MacKaye (1931), the Appalachian Trail by MacKaye (1921), and New York’s regional plan (RPA 1929), along with the “counterplan” by the Regional Planning Association of America (Regional Planning Association of America 1925) were put in to practice in Europe, North America, and beyond since the 1920s. See also Chapters 1 and 3 of this volume.

As regional planning practices evolved, other leading proponents included the Randstad surrounding the Green Heart in the Netherlands in its basic form unveiled as early as 1924 (Faludi and van der Valk 1994), the 1945 Greater London Plan of Patrick Abercrombie, the Tennessee Valley Authority regional planning of the 1930s and 1940s, and the 1939 Gran Madrid Plan of Pedro Bidagor. In the pre-World War II era, leading practitioners of planning in most European and North American nations were often designers—architects and landscape architects. They oriented planning, especially when at the regional scale, mostly toward the physical urban environment. That is, regional planning was design oriented, using maps, spatial models, diagrams, and other imageries as main devices to simultaneously express analytical understanding and normative thinking. Pre-war regional planning was a precursor to regional design.

The current resurgence in regional design in Europe can be seen in many countries beyond the Netherlands (Lingua and Balz 2020), which is generally seen as one leader (see for instance Salewski 2012). The example of the 1997 *Structure Plan Flanders* is one instance that has drawn a lot of attention (Albrechts 1999, Olesen and Albrechts 2017), not only because it is the first plan ever made for the entire Flanders region. Its content is highly characterized by a heavy use

of design tools such as spatial concepts, maps, and images. Looking at its making, in our view it could only acquire such a character through the involvement of regional designers, in particular Van den Broeck, also a leading figure behind the 1996 *Benelux Structural Outline*, whose content mirrors strongly the Flemish plan (Van den Broeck 1997). Yet for both point and counterpoint to concepts and images as well as design in planning, see Faludi (1996).

Across the Atlantic in North America, without the level of trans-Atlantic dialogue evident in the 1920s due to Robert Adams's and Werner Hegemann's efforts (Hegemann and Peets 1922), the resurgence of regional design began with the New Jersey State Plan, that had as its strategic backbone the Regional Design System, articulated in 1989 (New Jersey Office of State Planning 1990). Regional design provided a spatial framework for the policies and strategies of the New Jersey State Plan, *Communities of Place*. Key principles underlying regional design in the State Plan were a hierarchy of settlements arrayed in a region, connected by infrastructure networks, and buffered by rural and ecological environs (New Jersey State Planning Commission 1992, Center for Urban Policy Research 1992).

The regional design strategy of the New Jersey State Plan synthesized, in part, some of the principles in Lynch and Appleyard (1972), McHarg (1969), and Alexander et al. (1977), as applied to the highly urbanized territory of New Jersey. Since then it has been used as a touchstone for the RPA's third Plan for New York and Environs (Yaro and Hiss 1996), and the subject of several books (Lewis 1996, Kelbaugh 1997, Simmonds and Hack 2000).

The above shows that regional design comes under a variety of different names like outline, sketch, scheme, vision, strategy, or even exhibitions like *Internationale Bauausstellung* (IBA) which in English reads as International Architecture Exhibition, although this does not capture the full German meaning, as an IBA could have an entire region as its subject. The prime example here is the 1989–1999 IBA Emscher Park, which—like its name suggests—lasted for more than ten years. It was meant to experiment with new concepts targeting transformation—and ecological cleansing—of a former industrial region. It has inspired regional design exercises across the globe as far away as Australia, in *Melbourne 2030*, addressing not just the city but the entire region (Kozłowski 2006).

The thinking and action behind labels such as the IBA and others mentioned above does not necessarily restrict regional design to a design, plan, or strategy to be created or implemented in the traditional statutory sense. In most cases we know, it is rather a signpost to possible futures, including scenarios, to be created and tested in processes where designers—although playing a key role—collaborate with others (Neuman 2016). The “other” could be a government administrator, a representative of industry or an NGO, a resident, and so forth. Regional design also can take place via a design competition, especially in cases where there is great uncertainty about how to manage pressing issues (Bisker, Chester, and Eisenberg 2015, National Infrastructure Commission 2017a, 2017b).

Another significant example is “Rebuild by Design,” a design exercise initiated after Hurricane Sandy hit the northeast of the USA in 2012. As its namesake website indicates, it “convenes a mix of sectors—including government, business, non-profit, and community organizations—to gain a better understanding of how overlapping environmental and human-made vulnerabilities leave cities and regions at risk.” While regional designers are not explicitly mentioned, a Dutch water envoy—himself an urban designer—has been highly influential framing the search for strategies to deal with flood management as a design competition (Ovink and Boeijenga 2018, Bisker, Chester, and Eisenberg 2015).

Other examples of trans-Atlantic dialogue include mega-region planning in the United States in the ten mega-regions under the joint auspices of the New York RPA, *America 2050*, and several universities (Lang and Knox 2009, Ross 2009). It is also occurring as a response to

climate change-induced severe storms such as those in the New Orleans/Mississippi River delta, New York (White 2015), and Houston.

What all these examples have in common is that regional design is not just *physical* design.¹ Design as an activity is an active verb meaning a process of “creating.” The process of regional design, when conducted well, creates governance capacity. Designers and other professionals with the capacity to design can play a vital role in these processes for an important reason: at the regional scale, novel governance institutions, structures, processes, and means must be created. Regional governance processes are *designed*, as are regional governance institutions in which they are embedded. This is an emergent and critical role for regional design *as a process*. Regional designers, when organized and acting in such a way, enable their expertise to manifest itself, for instance through the creation of design studios (Balz and Zonneveld 2015), charrettes, or competitions.

Regional design—at least in the examples mentioned—is also connected to politics. This aspect of regional design is explored in each of the case study chapters and in the final section’s chapters. Political and therefore governance success is not guaranteed, though, in large part due to the complexity and conflicts attending politics and governance. The design of regions, by its very nature, crosses administrative boundaries. Scores and, often, hundreds of organizations can be engaged. Inevitably, it results in conflict and disagreement, entrenched as they are in existing institutions and their values, interests, and actions. This entrenchment is known as path dependence.

The role of design thus straddles the contested terrain of cultures and personal politics that are embedded in governance institutions. To be effective, it must strike a balance between the needs of new policies and practices specifically designed for the task of regional governance, and existing ones enshrined in old and often inflexible levels and sectors of government that are not regional and were not established to deal with regional issues.

Current Concepts and Practices in Regional Design

Settlements and their planning get played out in the landscape in built form. In a region of any type, its spatial components are organized into networks. In this sense, regional design can be seen as network urbanism (Dupuy 1991) at the regional scale. In the human built environment, key components at the regional scale include settlements, infrastructure linkages/networks, and the hybrid spaces in-between the settlements that the infrastructure networks traverse. Therefore, any responsible approach to regional planning is realized by design of the physical network aspects of the built environment, along with socio-economic and governance aspects. While this is well settled in cities at the urban scale through long-established practices of urban design and physical urban planning, at the regional scale the physical components have tended to be less integrated through strategic and holistic design. This has been due to the infrequent existence of well-established governance conditions that support a strategic and holistic approach on regional levels. In this void, there has emerged an emphasis on planning processes, procedures, and consensus-building which frequently leads to less than desirable outcomes, and ultimately may even lead to what some call “negotiated nonsense” (De Bruijn and Ten Heuvelhof 1999, van de Riet 2003). This is the downside of communicative and collaborative approaches in planning practice and literature: a lack of attention toward the content of plans and planning, conveyed through images (Neuman 1996, Zonneveld 2005a) and “storytelling” (Throgmorton 1996, 2003).

Regional design is the practice of guiding human settlement in a region by shaping the size, function, location, and inter-relations of settlements; as well as the connective tissue among these

settlements (infrastructure networks) and the relation of those settlements to their environs. Regional design thus guides the flow of human activities related to settlements via the infrastructure linkages among them. (We emphasize that we employ throughout a broad understanding of what constitutes “infrastructure.”) In so doing, regional design addresses the integration of settlements and infrastructure networks with ecological patterns to attain the greatest degree of sustainability available. Finally, regionally design recently also touches upon flood management in large-scale water systems—river basins and delta and coastal areas—in relation to land use and patterns of metropolitan development (see Part III of this book). The imperative for regional-scale flood management has been bolstered by catastrophic damage caused by severe storms, and corresponding efforts at recovery and at building future resilience and mitigation. In sum, regional design concerns the physical design of a region which includes all sorts of non-physical connectivities made possible through physical infrastructure. As such it provides a context for urban and community design. To a certain extent regional design is to a region as urban design is to a city and architectural design is to a building.

Regional design focuses on the spatial—that is, physical design, which is visualized by maps, physical plans, and designs. As such, regional design is related to and at the same time distinguished from 1) spatial planning (as practiced in Europe), 2) strategic planning, 3) spatial strategies, and 4) strategic spatial planning. For example, spatial strategies can be merely a collection of regional spatial objectives, or regional-scale mega-projects like, for instance, the 2050 regional development plan for the Stockholm region. This class of planning documents do not necessarily have the fully *integrative* ambition intrinsically connected to regional spatial structure and the *imaginative, forward looking* ambition which regional design has. Our focus on regional design combines strategic (therefore selective) and integrative (therefore systemic) components (see also Alaily-Mattar, Thierstein, and Förster 2014). The tension among these components accounts for the complexity of urban regions today, where transformative ambitions are situated in a dynamic setting of governance with its real-life actors and their contestations in attempting to solve persistent and wicked problems.

The practices of regional design have become increasingly sophisticated with the advances in geographic, modeling, computational, and visualization technologies and methods. The importance of regional design in these times can be found in the imperatives stemming from the impacts of new infrastructures and technologies, emergent socio-spatial-economic processes, dramatic evolution in spatial governance and the proliferation of stakeholders, and the increasing urgency of addressing climate change, natural disasters, and refugee and migrant movements, among others.

Regional design consciously considers the spatial nature of settlement patterns in a region. Four aspects of settlement patterns are most pertinent (strategic) at the regional scale:²

1. Settlement location, size, function, and their inter-relations within a determined region;
2. Infrastructure networks in all their varied forms that link the flows among settlements within a region and to other settlements and regions;
3. The environs, understood as the lands and water bodies outside the settlements, which the infrastructure networks traverse;
4. The institutions, which govern regional analysis, planning, design, and development.

These four components combine to demarcate the intellectual territory of regional design in the spatial sense. In addition to this spatial aspect, the governance of regional design starts with *institutional design* at the regional level that brings actors together and assigns rights and responsibilities through legal and institutional apparatus. This is the constitutional aspect of governance.

The ongoing management of the development of the region is another function of regional governance which, due to the networked nature of contemporary city regions, ought to take shape as “network governance” (Hajer and Versteeg 2005). In this case, regional design, besides being a key element of regional spatial planning, can be a stimulus for the establishment of regional governance capacity. Regional design, as conceived by civil society actors in addition to professionals, is thus a disruptive force vis-à-vis established governing institutions of traditional land use and spatial planning.

This formulation will be familiar to planners and designers of spaces and places—the spatial and territorial realms. Yet what about processes and flows, and their relation to places? Any coherent and integrated approach to regional design needs to consider the complexities of global process of placemaking that address simultaneously these aspects of contemporary city regions and their design and governance:

- Multi-scale—referring to spatial dimensions of territory;
- Multi-level—referring to the layers of government;
- Multi-function—referring to the substantive domains;
- Multi-flow—referring to processes, their fluxes, and the conduits that convey them;
- Multi-sector—referring to the sectors of society;
- Multi-disciplinary—referring to the professions engaged;
- Multi-actor—referring to the multitude of actors which have or demand a stake.

One source of the disruptiveness of regional design stems from its stance as a design discipline. Design disciplines for the built environment typically take into account the physical form of a given region, yet to be comprehensive and thus disruptive, they must take into account the fluxes generated by natural, social, and economic processes in and through the region. These fluxes are always carried through infrastructures, an integral and strategic part of regional design. Another source of the disruptive nature of regional design is its intellectual history, spanning the professions of architecture, landscape architecture, urban design, engineering, planning, geography, and sociology. This intellectual diversity impinges on its practice.

For example, nowadays in the Netherlands, it has been common, though not universal, that landscape architects are those who lead in the design of the region, which results in the emphasis on land, landscape, and water; that is, ecological factors (De Jonge 2009). In the United States, it tends to be urban designers and urban planners, and in Spain and Italy it is architect-planners. Yet, regardless of the histories of the intellectual development of regional design as practiced in different countries, its multiple demands nowadays lead to disruptive practices that are at the same time cross-, inter-, trans-, and multi-disciplinary; leading to new conceptions of territory, new visions of the future, and new practices to attain them.

The Dutch practice mentioned above can also be seen as “hydraulic” regional design—managing water at a regional scale. The long history in the Netherlands in the management of polders such as the Zuiderzee (its historic name) is now being exported around the world, to Southern Louisiana, the Pearl River Delta, and New York, to name a few. In the Netherlands, hydraulic engineers drew up the water plans, except for the urban aspects. Villages and towns were drawn up by urban and landscape designers. Yet the dominance of engineers in the past leads to contemporary questions for further analysis, including how did that combination of professions work together? How were they brought together? To what extent were engineers effective in designing the synthetic frame in which other specialist disciplines/professions contributed? How has their role changed in the face of the contemporary contributions by landscape architects? Were any professions missing or subordinate to the extent of not being consequential? How did

the emergent practice of “working with water” break out of the civil-engineering straight jacket of “fighting against water” (see for instance Meyer, Bobbink, and Nijhuis 2010).

The Dutch experience provides one lens through which to consider the renaissance of regional design in many regions of the world. These regional efforts have often been spurred by responses to large-scale disasters, many of them water-related (flooding due to severe storms, for example). Their responses focused on adaptation, resilience, and preparedness for future calamities. What better “substrate”—water—to weave together regional territories, and what better “substance”—water again—to understand and deal with the temporal flows that these devastating natural events occasion? More recently these questions have stimulated a new wave of design thinking about spatial structure on supra-local levels (Sijmons et al. 2014, Kidd and Shaw 2013).

The Design of Regional Governance

The inter-related issues confronting contemporary city regions, as disparate as transport, pollution, climate change, land conversion, housing affordability, infrastructure finance, economic and social disparities/inequities, knowledge creation, digitalization, and disaster response, along with others, have strong regional and global causes and implications. A critical characteristic of these types of problems is that they are no longer merely local in origin and effect. They have supra-local, and in fact, multi-scalar causes, interactions, and impacts. Inter-local planning and design are no longer sufficient, not even at the metropolitan level. Yet on the other end of the spectrum, national and international policies and programs are typically a-spatial. Thus they are not specific to/adapted for local and regional conditions. This shortcoming has led to many problems in the in-between realm of regional governance.

Regional design is one framework for practices at a range of scales, not only regional, that can remedy the shortcomings stated above. For example, in Europe, regional design could inform the practices that implement policy and strategy in “macro-regions” and cross-border regions (see below). Regional design is able to respond to these conditions and issues by focusing analysis *and* synthetic solutions—the main components of design—on intermediate scales often overlooked by both national and local/metropolitan planning and governance entities. It provides a responsive method to the trends that shape the contemporary urban formations known as the city-region (Neuman and Hull 2011).

Regional issues, between local and national, imply revisioning and reforming institutions of governance for three key components of regional design: urban development for the settlements, environmental and rural management for the environs, and infrastructure management for the physical networks that link the settlements. In order to attain effective governance for regional design across these three components entails collaborative, consensus seeking, and inter- and multi-jurisdictional practices among and within levels of governance. Yet the size of contemporary regions, larger than the past due to increases in population as well as in economic, social, and political interactions, means that many regions cross political borders, including national ones. This makes governance more difficult due to the complexity of the inter-jurisdictional matters that arise from cross-border issues. Cross-border policy is a common topic in the European Union, yet is not unique to Europe.

Cross-border planning, design, and governance are becoming more prominent because the size of regions increases as activities become more interconnected. This is due in part to information and communications technologies, more rapid travel speeds, growing volumes of trade, tourism, and migration, and so on. A new term—“macro-regions”—has been put in use in the European Union (EU) that reflects this increase in scale. Macro-regions are transnational

regions that encompass several countries that are connected by a common geophysical feature such as a sea, river, or mountain range. They are intended for the development of “macro-region strategies” that supplement national policy and legislation (European Commission 2016). These functional regions tend to be larger than past regional planning and design approaches, and have received their conceptual start from the establishment of the North Sea Commission in 1989. The first strategy to be finalized targeted the Baltic Sea Region (Stead 2014).³

Cross-border, transnational planning has been initiated in Europe. They can be traced back to the origins of spatial planning in the Netherlands, Germany, and France, and its transference to the EU in 1980s and 1990s. Regional and supra-regional concepts like urban networks, polycentricity and metropolitan regions have been “uploaded” (scaled up) from these countries in European-wide discourses and documents like the 1999 *European Spatial Development Perspective* (Faludi and Waterhout 2002) and transnational visions from the late 1990s (Zonneveld 2005a, b). Subsequently they have been “downloaded” back in national and sub-national planning (Faludi 2003a, b; Cotella and Janin Rivolin 2011).

In the past two decades, European planning addressed entirely new scales—cross-border, transnational, and even continental. This started stimulating regional design approaches that parlayed their inherent creativity and innovation in intervening in these very large territories, which heretofore was virtually unknown. Spatial structures needed to be unveiled at these levels, and related policy agendas had to be identified. An entire new visual language emerged, often highly metaphorical, in images and vocabulary like Finger Plan, Corridor, Red Octopus, Archipelago, Pentagon, Blue Banana and Bunch of Grapes, and so on (Dühr 2007, Dühr and Zonneveld 2012, see also Chapter 23).

Where regional design is accompanied by complementary institutional design of regional governance, together they can fill the gaps in contemporary spatial planning by developing more effective regional laws, policies, and integrative processes; if not full-blown regional institutions. These can enable the establishment and implementation of development and financial mechanisms for infrastructure investment, which in turn can lessen regional inequalities, and for protection of regional land resources. While it may be useful in select places to establish regional government, as in Spain and Italy, it is not necessary and can be difficult.

Legal and policy instruments at the regional scale include tax reform for land and other real property, transfer of development rights schemes including development rights banks, impact fees, and related mechanisms for infrastructure finance, land banking, and regional value capture schemes to spread the costs and the benefits of new development and redevelopment. This illustrative sample (not a definitive list) can be put into place by a range of inter-institutional contractual agreements that entail creative institutional designs. Regional design prompts a reallocation of the capacities of governance institutions, and the rights and responsibilities of constituent institutions (levels of government) incident on the region. Regional design in this sense—as a form of informal *interstitial* planning—becomes a matter of creating and enhancing institutional capacity. (For an early example of U.S. cases and theory, see Innes et al. 1994.)

Yet what is more important to note for the design of regional governance is the spatial dimensions of regions, that is, their place-based nature that is defined by specific regional characteristics such as identity, language, culture, geography, and so on. Being place-based differs from the typically a-spatial nature of national and international policy. When considering regional design and institutional design together in this way, we witness a sort of yin-yang. One cannot prosper without the other. They are different sides of the same coin.

Institutional design ⇔ regional design

This implies a sort of spatial-institutional isomorphism in which the current structure and future design of the spatial region corresponds with the architecture of its governance institutions (Neuman 2007). Just as regional design is a form of large-scale network urbanism (Dupuy 1991), regional governance is a form of networked governance (Hajer and Versteeg 2005, Hajer 2010). However, we must be careful in using this isomorphism analogy, in that isomorphism focuses only on the spatial, and not the processes and flows that shape the form(s) of a region and its governance.

Conclusion

As we can appreciate, the challenges that face contemporary city regions can seem daunting. The problems are complex, multi-layered, and intertwined; all with spatial and processual ramifications at the regional scale. Furthermore, they exert important impacts on actions and conditions at other scales of territory and levels of government. Yet this level of complexity does more than merely illustrate the limitations and inadequacies of levels of government up to a millennium old—municipalities, shires, counties; and even the more recent provinces and nation-states (see also Faludi 2013).

Regional design is a field which is ripe for bold action at scales that match those of the phenomena which we seek to manage. A conservative approach would counsel known agents like municipalities, and known actions like zoning. Yet new fields of play are veritable institutional blank slates that can spawn new solutions less fettered by past blinders. As Clifford Geertz once wrote, “the more orderly and straightforward a particular course of action looks, the more it seems ill-advised” (Geertz 1983, 6). While his phrase applied to the complexity of local cultures, we can apply it to the complexity of governance cultures. Regional networks of governing institutions can seem not to be orderly, yet we can see that they are indispensable.

Communities in metropolises and city regions are where most people spend the vast majority of their lives residing, working, commuting, and recreating. They go a long way in satisfying many human needs. The regional context and its design are necessary conditions for analyzing and solving these local and metropolitan problems, made more apparent as the metropolis is expanding and evolving to the qualitatively different polycentric city-region. Regional design provides a means to enhance the practices of planning and designing. While there are numerous critics of current approaches to solving urban problems, planners and designers using the proper tools can improve the human urban condition. If we succumb to our critics who suggest that planning is a marginal enterprise in the neoliberal era of global society, not only do we overlook the evidence of significant urban achievement in the last decades. We may fall into the trap Samuel Johnson noted when he stated: “Nothing will even be attempted if all possible objections must first be overcome.”

Regional design provides an evolving toolbox that helps planners, designers, and policy makers overcome a number of objections to the limits of both local and national planning. This toolkit contains intellectual tools including theoretical frameworks and principles, as well as broadening of design thinking to address institutional matters in addition to spatial issues. It also contains practical tools including design methods of how to think about the design of spaces and flows at the regional scale, and how to design/redesign governance institutions and processes at the regional scale and their interactions with other institutions at other scales.

Outline of the Book

The book is organized in four Parts. Part I, introduced by Gary Hack’s forward, covers the intellectual and practice foundations of regional design, including historical precedents. Part II

presents case studies of contemporary city regions and megalopolises from around the world. Yet regional design not only related to city regions. Part III consists of case studies on deltaic, ecological, and bioregional design, including integrated water and land (marine and territorial) design. Taken together, the case study chapters touch each inhabited continent. Part IV offers an overview of current and future challenges and opportunities through chapters on the role of images (in particular maps), education, management, and governance. This Part is crowned by an epilogue by Catherine L. Ross.

At the regional scale, data, especially spatial data and maps, overtake direct experience in observing and understanding regions and their characteristics. We can contrast the regional scale with local scale. At the local scale, we get to know a place on foot, talking to people, community members, “research by walking.” The regional scale is different, more akin to “research by driving and flying.” We use planes, helicopters, drones, and remote sensing, including satellites. This has critical implications for the planning, designing, policy making, and politics of regions. New vocabularies are being created based on new data and new technologies of observation and recording.

Part I The editors open the volume by examining the resurgence of regional design in recent years in a global overview of thinking and practices. Neuman follows by tracing historical roots and precedents going back to the nineteenth century in Europe and the United States. In Chapter 2, eminent scholar Andreas Faludi portrays the recent European experience, stressing the EU’s roles. Frederick Steiner traces the ecological foundations of regional design in Chapter 3. This part concludes with Verena Balz’s exposition of the theory underlying regional design, including the relationships of spatial form and governance.

Part II This part contains the city-region and mega-region case studies, spanning the globe. Wang-Guen Lee starts off with a case study of Korea, focusing on the Seoul metropolitan region yet expanding to include national regional policy. Hitomi Nakanishi and Fumitaka Kurauchi analyze in Chapter 6 the Japanese Linear Megalopolis whose spine is the Shinkansen high-speed rail network that has fundamentally shifted spatial and economic realities in Japan over the last 60 years. Stefanie Dühr’s Chapter 7 on Germany’s European Metropolitan regions gives particular attention to top-down and bottom-up influences in region design using the examples of Berlin/Brandenburg (monocentric) and Rhine-Ruhr (polycentric). Robert Yaro, former President of New York’s RPA and a leader in megapolitan planning, presents the Northeastern U.S. corridor megalopolis in all its complexity. In another American mega-region, Michael Neuman highlights an analysis of the Texas Urban Triangle, of 25 million inhabitants across 58,000 square miles (150,000 km²), employing a multi-factor GIS-based analysis based on Ian McHarg’s suitability method. In Chapter 10, current RPA President Tom Wright gives a first-hand account of the post-1995 designing of the New York region, including a sketch of its century-old history. Roberto Moris and William Siembieda follow with a chapter on metropolitan planning and design in Santiago de Chile, whose story represents a command and control approach used since its Spanish colonial origins. Chapter 12 is the illuminating case of Nairobi, the capital of Kenya, by American scholar and African specialist Garth Myers, in a British colonial setting. Back in Europe, architect-planner-scholar Antonio Font delves deeply into the metro region of his hometown Barcelona, tracing its illustrious planning and design history while focusing on contemporary times. Anna Geppert and Xavier Desjardins show in Chapter 14 the distinctive approach that Paris has taken to regional design, where ambitious, design-led regional approaches have competed with a long history of more traditional regional planning. Historian Robert Freestone and planning scholar Simon Pinnegar tackle the case of Sydney, Australia by giving a historical overview of a century of metropolitan planning while focusing on the present, with its current model of a “metropolis of three cities.” Urban design scholar Tridib Banerjee

closes this part of the book by presenting the intriguing Los Angeles, California situation. He answers his question of “Who designed the Los Angeles region?” with a contentious palimpsest of actions driven by profit and politics, exploiting nature and people.

Part III This part contains the eco-region and hybrid ecological-urban case studies from three continents. In Chapter 17 on the Dutch Delta Metropolis, Dutch scholar Lianne van Duinen points to regional design as a framework comprised of inter-connectivities among multiple transport networks, such as roads, rails, canals, rivers, airports, and seaports, reinforced by telecommunications networks. In the evolution in regional design and policy that was signaled by the change from Randstad through Delta Metropolis to the current South and North Wing, and back again to the Randstad. This case study focuses on the role of images and names in the evolution of institutional design. Mapping and visualization played important roles in this debate. The next chapter by Lei Qu and Dongjin Qi about the complex megalopolis of the Pearl River Delta in southern China, encompassing megacities such as Hong Kong, Shenzhen, Dongguan, Guangzhou, Foshan, and Macau, clocks in at about 100 million inhabitants in a large and sensitive estuary, complicating trade-offs between massive, explosive urban growth and the environment. In Chapter 19 on the integration of water (marine) and land (terrestrial) design, Sue Kidd and David Shaw show that land and water ecosystems must be woven together to form both a coherent and inspiring policy narrative, as well as a sound evidentiary basis for policy. Ecological planning and design pioneer Pliny Fisk’s chapter about bioregional design draws on several examples that illustrate that bio-regional approaches that integrate ecology and urbanity are essential for the successful prosecution of regional design, echoing Fritz Steiner’s theoretical contribution at the outset.

Part IV In Chapter 21 on teaching regional design, Lukas Gilliard and his European colleagues provide a road map and a reflection on the type of pedagogy needed, radically different from the typical curriculum on offer. In a provocative chapter titled *Imagining the Region*, Alfonso Vegara and Juan Luis de las Rivas suggest through their global experiences in creating “intelligent territories,” that their visualization—a sort of spatial marketing—has inspired city regions to creatively consider connections outside the territories normally associated with a metropolis in order to open new horizons. In Chapter 23, *Mapping for Regions*, Wil Zonneveld takes this a step further in the theoretical realm by analyzing the visualization of places (spatial) and flows (time) via the use of technologies such as GIS, apps, big data and analytics, and infographics. His work reveals that the map of the region is an essential component in policy dialogues about regional design, and conversely, that regional design is a tool to delineate and express a region’s image/vision. Indeed, in more than several chapters we could observe the role of images in the conception of regional futures and the practice of regional design.

Yet without institutions to implement these visions and designs, much of these efforts would go to naught. Thus, Willem Salet’s contribution in Chapter 24 is essential, while uncovering the paradox of governing flows through governing places by examining the institutions of multi-scalar and multi-level regional governance. He finds that regions evince a “complex institutional ecology” not dissimilar from complex spatial ecologies, that must be grappled with to attain beneficial outcomes through institutional design at not only the regional scale, but other levels of government that act upon the region. To put these issues into perspective, Vaclav Havel (in the words of his biographer) noted the role of images.

Symbols in politics can be very powerful simplifiers, amplifiers and energizers, offering shortcuts through otherwise complex and intractable problems, provided that they are universally understood. Without this understanding, the amplifying capacity of symbols works in exactly the opposite way.

(Zantovsky 2014, 350–351)

To conclude, Wil Zonneveld and Michael Neuman paint possible futures of regional design, and implications for going forward. Practitioner-academic Catherine L. Ross closes with her epilogue that compiles an action program of how to practice regional design today.

Notes

1. Many more examples can be cited. In Europe alone, see the European regional policy, the “Region Urbaine” policies in France, the Ghent Canal Area, the Öresund Region in Denmark and Sweden, the Milanese Città di Città, and the Limmat Valley in Switzerland.
2. A more complete exegesis can be found in Neuman (2000).
3. As of this writing, there are four designated macro-region strategies in the EU: Baltic Sea Region (2009), Danube River Region (2010), Adriatic and Ionian Sea Region (2014), and the Alpine Region (2015). http://ec.europa.eu/regional_policy/en/policy/cooperation/macro-regional-strategies/ (accessed June 10, 2020).

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