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Megaregions

Megaregions

Globalization's New Urban Form?

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5. Five reasons why mega-regional planning works against sustainability

Stephen M. Wheeler

5.1 INTRODUCTION

For the past decade ‘megaregions’ – very large-scale constellations of urban regions – have been a popular focus of attention at academic conferences. They have also attracted the attention of non-governmental organizations (NGOs) specializing in urban and regional planning as well as governmental agencies at multiple levels. It is easy to see why. Thinking at a (relatively) new scale generates intellectual excitement as well as new research and funding opportunities. Researchers have been able to create intriguing maps showing the new urban geographies. This larger scale of planning brings into play attractive technologies such as high-speed rail. Equally importantly, it provides a respite from the challenge of dealing with the gridlocked politics and often ineffective institutions at other levels. As a result of such factors, efforts at megaregional planning and infrastructure development are gaining speed, with few voices raised in opposition.

However, rather than helping bring about more sustainable societies this new scale of planning is likely to accelerate what some climate change scientists have labeled BAU (‘business-as-usual’) forms of development. If conducted primarily to coordinate new infrastructure or to promote globalized forms of economic development, the consequences of megaregional planning are likely to be disastrous. The result may well be to facilitate the physical sprawl of urban development between cities, to increase the amount that people travel and associated greenhouse gas emissions, to worsen disparities between different populations and communities, and to strengthen economic globalization trends that undermine local place and global sustainability. In this chapter I will develop the case that megaregional planning and research should thus be undertaken with a very cautious eye, within the larger umbrella of a move towards more local and sustainable communities.

Let me dispense with one likely objection to start with. I know that many planners and scholars will argue that trends are moving inexorably toward development of megaregions already, and that therefore the best approach is to work with existing forces to ensure that the best possible forms come about. This objection is similar to those that have been raised about other dimensions of progressive planning and activism historically. For example, many have thought it necessary to work with suburban sprawl developers so as to improve project design rather than opposing development on unbuilt land in the first place and supporting infill development instead. Thus in the US we see many sprawling subdivisions featuring cosmetic improvements such as landscaped medians on access roads and sidewalks in front of houses, without changing the underlying single-use, low-density, motor-vehicle-dependent nature of the development. Other local officials have supported the development of big box retail in their communities on the grounds that such stores will be built nearby anyway and if located in their jurisdiction will provide tax revenues that can be used for beneficial purposes. Thus countless US towns feature large stand-alone chain stores, malls and commercial strips on the outskirts of town which have helped in turn kill Main Street businesses, ironically necessitating further public expenditures to attempt to redevelop the historic core. There are always rationalizations for collaborating with the status quo. But on a planet whose climate is now radically changing due in part to past urban planning decisions, stronger backbones are needed.

The development of megaregions is not a *fait accompli*. Planners can do a great deal to work together at the megaregional scale on those issues that merit it – for example to protect large-scale ecosystems – while resisting the temptation to plan large-scale infrastructure that will only facilitate exurban development, promote extreme commuting, raise greenhouse gas emissions and deepen inequities. Megaregional projects should only be undertaken if they clearly contribute to sustainability goals and if other more sustainable alternatives do not exist. To give just one example, my home state of California is currently considering spending at least \$68 billion to build a high-speed rail system of dubious value when local transit systems, renewable energy initiatives and public education are languishing. If such money is to be spent on transportation, a case can be made that far greater sustainability benefits would arise from strengthening local bus and rail systems serving far larger numbers of less affluent people while promoting revitalization of existing urban areas.

With that prologue, let me now move on to some specific arguments for more cautious exploration of the megaregional concept. The following points are by no means the only ones possible, but are particularly important at this time given the current need to move rapidly toward

sustainability planning. I will briefly illustrate each point with discussion of dynamics within my home megaregion of Northern California.

5.2 WHY MEGAREGIONAL PLANNING WORKS AGAINST SUSTAINABILITY

5.2.1 We Can Hardly Plan at the Regional Scale, Let Alone for Megaregions

The region – whether defined as a metropolitan area or a watershed, airshed, bioregion or cultural region – is generally seen as the weakest scale of planning. Institutions are less strong at this level than at local, state, provincial or national scales and face many well-known challenges. Local governments are notoriously fragmented within regions, creating many opposing interests that work against regional coordination (Danielson and Doig, 1982; Self, 1982; Dear, 2000). Consolidating local governments can help (Rusk, 1999), but is difficult politically. The voluntary nature of many regional agencies works against their success. Councils of Governments (COGs) in the US are for the most part voluntary associations of local officials with little statutory authority; each COG representative has primary responsibility to the local voters who elected him or her, not to the overall region. Cities, towns and counties are free to ignore regional agreements or withdraw from regional consensus-building exercises. In the UK, metropolitan agencies have at times been stronger, but suffer from inconsistent political support, having been abolished by Conservative governments in 1979 and 2010. Regional planning is little covered in the media and the public is not used to thinking regionally. Although some scholars (for example Innes et al., 2010) argue that regional and megaregional governance strategies based on collaborative dialogue, networks and self-organization hold great promise, in practice these processes are difficult, time-consuming and vulnerable to sabotage by powerful special interests. They are likely to produce lowest-common-denominator solutions or to work only with the additional incentive of higher-level governmental action to motivate change.

Although there have been some regional successes in terms of environmental planning (for example air quality in many US metro regions), growth management (for example spatial planning within regions such as Stockholm, Copenhagen, London, the Dutch Randstad and Portland, OR) and transportation planning (for example the Parisian web of public transit systems) the track record of regional planning for sustainability is not great (Wheeler, 2009). Metropolitan regions worldwide have had

difficulty managing their growth, ensuring social equity, protecting local environments and significantly reducing their energy consumption and greenhouse gas emissions. Rural regions have often had similar difficulties in protecting environmental quality and ensuring adequate employment and quality of life for residents.

Yet if regional planning is challenging, the megaregional level would be even harder. In the US this scale typically crosses state boundaries, and so not just multiple municipalities but multiple states (and at times governments within Canada and Mexico) would be required to work with one another. The number of jurisdictions involved becomes exponentially greater (see Glass, 2015). There is some precedent for action at this scale – for example with regard to environmental protection in the Great Lakes area (Mazmanian and Kraft, 2009) and the Regional Greenhouse Gas Initiative (RGGI) consortium establishing a market in greenhouse gas emissions in the northeastern US and adjoining Canadian provinces. But these processes have focused on single-issue planning rather than broad-based visions for the future and have suffered from inconsistent political commitment from their many stakeholders. Broad-based megaregional planning to coordinate urbanization in North America is still nonexistent, with the exception of some initial studies carried out by universities and the nonprofit America 2050 organization. In the European Union many mechanisms for large-scale cooperation have been set up, but Faludi (2009, p. 32) argues that few people are interested in planning for spatial development at a megaregional scale, and that ‘there is no clearly defined policy other than encouraging seed money for research, networking, and initiatives from below’.

Developing institutions at the megaregional scale will be difficult simply because it is often hard to define these areas. In the US researchers disagree on many megaregional boundaries. For example, Ross (2011) proposes one combined California megaregion, while America 2050, affiliated with the venerable New York-based Regional Plan Association, identifies two separate Northern and Southern California megaregions (America 2050, 2013a). Ross also proposes a Central Plains megaregion that does not exist in the America 2050 typology, while the latter shows Front Range and Gulf Coast megaregions not found by Ross. The two teams have sharply different boundaries for Piedmont and Midwestern megaregions. Nelson and Lang (2011) present a version of the America 2050 map with most of the megaregions divided into sub-regions, for example ‘Twin Cities’, ‘Chicago’, ‘Michigan Corridor’, ‘Steel Corridor’ and ‘Ohio Valley’ portions of the Great Lakes Megaregion. Their map shows clear areas of daylight between these sub-regions, raising the question of how integrated these megaregions really are. This team also uses the term ‘megapolitan’

rather than ‘megaregion’ (see Fleming, 2015). Another group led by economic theorist Richard Florida proposes yet another set of borders and names for North American megaregions (Creative Class Group, 2008). Instead of ‘megaregions’, some European scholars talk about ‘megacity regions’ that are larger than metropolitan areas and yet smaller than megaregions (for example Hall, 2011). With such disagreement about the territories involved, how can authorities be expected to develop effective institutions and governance strategies for these areas?

Spatial planning for the megaregion will also be difficult because its on-the-ground development forms undermine widely held physical planning objectives for compact cities, infill development, transit-oriented development, neighbourhood centres and balanced land use mix. Like metropolitan regions, megaregions tend to be characterized by what Lang (2003) has called ‘edgeless city’ development – a sprawling and decentralized form of growth that contains a larger proportion of the region’s employment and population than the ‘edge cities’ identified by Garreau (1991). These ‘edgeless city’ areas are characterized by a profusion of poorly connected, inwardly focused forms such as suburban tracts, office parks, shopping malls and upscale enclaves, in addition to some relatively new physical types such as ‘rural sprawl’ (Wheeler, 2008; Wheeler and Beebe, 2011). It is much more difficult to provide public transit and services to such spatial forms than it is for denser, more centralized, more mixed-use communities. These newer built landscapes are also strongly motor vehicle-dependent and partly as a result tend to have high levels of greenhouse gas emissions. Political cohesion is difficult, and their politics tend to be more conservative (for example Beebe and Wheeler, 2012). Asia, interestingly, may be less susceptible to some of these problems than North America, due to its higher population densities and tendencies toward top-down planning (Yang, 2009). However, Xu and Yeh (2011) caution that in China there are still many obstacles to coordination of large city-regions including administrative fragmentation, changing institutional frameworks, dispersed governance and laissez-faire culture.

Benner and Pastor (2008) point out that the megaregion is a particularly difficult scale for public interest organizing. Advocacy groups have made progress at the regional scale in recent decades, developing coalitions in many North American metro regions around smart growth, social equity, regional greenspaces planning and public transportation. But the megaregional scale is vastly harder for nonprofit organizations to work at. Distances are greater, relationships do not exist between constituencies to the same extent, and institutional targets for organizing are lacking. Work at this scale could also take away energy from local and regional organizing efforts.

All of these challenges to megaregional planning can be seen within Northern California. The definition of the Northern California Megaregion, first of all, is open to question, with maps by America 2050 and the San Francisco Planning and Urban Research Association (SPUR) showing many possible ways that this area could be defined (America 2050, 2013b; SPUR, 2007). No statistical information is currently available for this megaregion; rather, the US Bureau of the Census recognizes four different metropolitan statistical areas that cover only a limited part of the territory. Depending on definition, this megaregion includes at least three existing regional councils of governments, approximately 24 counties and several hundred incorporated cities and towns within two states. There are dozens of other units of government as well, including air districts, water districts, park districts, public transit agencies and school districts. The Bay Area alone already has five regional agencies; getting these and other institutions to coordinate on a regional smart growth plan ('Plan Bay Area') was an organizing task that occupied many individuals and organizations for at least 20 years. Efforts at regionalism in the Bay Area date back nearly a century (Orman, 1976), with major failures in the early 1960s – when efforts collapsed in the state legislature to produce a strong regional government – and the early 1990s – when a 'Bay Vision 2020' process sponsored by the non-profit Greenbelt Alliance and the business-oriented Bay Area Council failed to produce agreement on anything but generalities. Arguably the only reason that a (voluntary) regional growth plan finally emerged in 2013 was passage of state legislation in 2008, S.B. 375, that requires the state's regions to adopt a Sustainable Communities Strategy reducing greenhouse gas emissions (it remains to be seen whether the targets and mechanisms for such reductions are sufficient).

Needless to say there are no existing megaregional agencies for Northern California. Several large-scale consensus-building efforts have been attempted, primarily around water and air quality issues, but with limited success. Enormous political obstacles exist to megaregional coordination. Cities such as San Francisco, Berkeley, Oakland and Santa Cruz are among the most liberal in the US, while many suburban Bay Area jurisdictions are moderately conservative and communities within the Central Valley and Sierra Nevada Foothills are far on the right of the American political spectrum. The eight counties of the San Joaquin Valley have been unable to cooperate even among themselves on regional planning, let alone San Francisco, and so consequently each of these counties is recognized as a stand-alone Metropolitan Planning Organization by the federal government. Throughout the megaregion literally hundreds of different cultural groups exist, speaking different languages, with tens of

Source: San Francisco Planning and Urban Research Association (SPUR). Reproduced by permission.

Figure 5.1 The geography of the Northern California megaregion

thousands of residents in the country illegally and unable to speak English. Perhaps someday all of these fragmented communities and jurisdictions will come together into a megaregional whole. But at least for the foreseeable future the physical, political, cultural and jurisdictional challenges of megaregional planning in Northern California are staggering (see Schafran, 2015).

5.2.2 Infrastructure Alone Does Not Make Good Planning

At many times throughout history infrastructure has been built at a mega-regional scale. Ancient Greek colonial towns, Roman roads and aqueducts, Indian ceremonial centres, Chinese city regions and Mesoamerican religious and cultural facilities were all built across very large distances (Sutcliffe, 1993). But beginning in the 1800s new forms of infrastructure and technology have played a crucial role in bringing about larger and more permanent forms of megaregional development. Railroad networks combined with steam power and the rise of factory production to create new urban constellations such as the British Midlands and the German Ruhr Valley, and to facilitate early forms of suburban sprawl around many cities. Large-scale water systems enabled regional and more recently megaregional development on the East and West Coasts of the US. The New Deal's Tennessee Valley Authority constructed dams, power plants and industrial facilities across portions of seven US states in a vast economic development initiative. Most powerfully, 20th-century freeway networks enabled the vast expansion of metropolitan areas in North America and elsewhere, and continue to tie metro regions ever more closely together. In fact, the Interstate Highway System can be viewed as the dominant form of megaregional planning in the US to date (Yaro, 2011).

Continuing this infrastructure-oriented tradition, recent megaregional enthusiasts have focused primarily on high-speed rail (HSR) as their initiative of choice, perhaps because such infrastructure is virtually the only planning 'handle' that exists for most megaregions. Ross (2011, p. 341) argues for investment in high-speed rail as a means for 'providing greater connectivity between and within megaregions'. Yaro (2011, p. 246) argues that HSR is essential to 'create the foundation for new economic synergies between metropolitan areas and among metropolitan centers and second-tier cities, in the process enabling them all to reach their full economic, social, and environmental potential'. But how exactly HSR would do these things is usually left unsaid. In the low-density US context it is not at all clear that such systems would achieve significant ridership or yield economic synergies not already provided by air and motor vehicle travel. It is likely that equal investment within existing metropolitan areas would yield better results. As a result Seltzer (2011, p. 355) comments that 'we have work to do before we can even explain why we are pursuing mega-region-scale strategies, particularly infrastructure-based strategies, first and ahead of all others'.

Emphasizing infrastructure favours some goals such as increased mobility and rapid economic development over other objectives such as environmental protection and social equity. Transportation infrastructure of

course undercuts environmental goals if it leads to suburban sprawl and increased greenhouse gas emissions or local air pollution. It also undercuts equity goals if it facilitates spatial segregation of different socioeconomic populations. Conversely, improving equity requires very little infrastructure, but rather policy revisions to share resources more equally between jurisdictions, to improve public education and services for disadvantaged communities, and to introduce more progressive taxation, higher minimum wages and other policy changes.

Advocates of technologies such as high-speed rail try to argue that their approach has environmental and equity advantages, but these are debatable. In locations such as Europe and the northeastern US, high-speed rail may make environmental sense if it accommodates passengers who would otherwise have flown or driven. However, even for the Northeastern Corridor in the US, Amtrak's own estimates are that 20 to 30 per cent of the 2040 ridership would be new 'induced demand' (Amtrak 2012, p. 29) – that is, building high speed rail would lead to substantially more trips and greenhouse gas emissions than otherwise. In China likewise, which has recently built a very extensive high-speed rail system, there is evidence that many of the trips being taken are new ones that would not have been taken otherwise (Bradsher, 2013). In low-density areas such as California where driving is an easy option, the proportion of induced demand is likely to be even higher. Suburban and exurban sprawl around high-speed rail nodes – leading to secondary motor vehicle trips to and from stations and within low-density communities – is an additional concern.

In the Northern California Megaregion, those few megaregional planning exercises taken to date have focused primarily on infrastructure for HSR or on modest changes to existing land use. The only public sector planning effort to date at this scale, the *Planning for the Northern California Megaregion* vision document developed in 2009 by the Bay Area's Metropolitan Transportation Commission in conjunction with other regional agencies, focused primarily on land use and transportation options in the Interstate 80 corridor (MTC, 2009). The agencies developed three scenarios, but either because these alternatives were quite similar or because the models were unable to incorporate other policy variables related to road pricing, housing affordability, or economic development, their sustainability impacts were not significantly different. Carbon dioxide emissions, for example, differed by only 4 per cent from the baseline for all scenarios, with all three alternative scenarios producing higher emissions than the baseline. Thus by focusing on a narrow range of policy alternatives for a single corridor, this exercise clearly failed to address megaregional sustainability needs. Several reports by SPUR – the main Northern California non-governmental organization interested in

megaregional planning – have focused almost exclusively on high-speed rail (SPUR, 2007, 2011). SPUR admits that few tools exist to limit sprawl in conjunction with a high-speed rail system, and that one of the lessons of the earlier Bay Area Regional Transit (BART) system was the importance of having land use controls in place before new transportation infrastructure is built (SPUR, 2011). However, perhaps entranced by the lure of megaregional infrastructure, this group, along with the TransForm regional smart growth coalition and other environmental organizations, have supported HSR anyway.

5.2.3 Promoting Megaregions will Further Fuel Growthmania

A basic theme of the sustainability discourse from the beginning has been that the growth of human societies has limits – in terms of population, resource consumption, pollution, physical expansion and mobility (Wheeler, 2013). Not for nothing were two of the most influential early texts entitled *Limits to Growth* and *Small is Beautiful* (Meadows et al., 1972; Schumacher, 1975). Working within limits does not of course mean accepting a static or declining society; many types of qualitative improvement in human and ecological welfare would be possible even while reducing quantitative consumption, pollution and spatial expansion. Rather, it means looking for ‘appropriate’ levels of growth, technology and population.

From the start this ‘limits’ theme has been vigorously fought by opponents who argue that human ingenuity and the supposedly self-correcting nature of markets will be able to address environmental problems (for example Simon, 1981). In some areas these arguments have merit. Industries, for example, are often good at substituting certain materials for others that may be in short supply, and in recent years the fossil fuel industry has also proven remarkably adept at maintaining production through increasingly creative extraction processes. But in other areas such as global climate change, the ‘limits’ perspective must be taken very seriously.

Campbell (2009) argues that urban planning has been characterized by similarly contradictory impulses for rapid growth and ‘small is beautiful’ thinking. However, megaregional planning in particular seems guided by a logic of rapid growth of physical, economic and social systems, likely fueling economic globalization and the sort of consumption-oriented society that Daly (1973) labeled ‘growthmania’. The point of most megaregional advocacy to date seems to be to knit urban areas together into larger and more cohesive units, and to have these units compete successfully within an increasingly global economy. Ross, for example, entitles

her 2009 book *Megaregions: Planning for Global Competitiveness*, and argues elsewhere that megaregions provide a framework 'to direct infrastructure investment and enhance competitiveness' aimed at 'economic growth' (Ross, 2011, p. 343). Although she mentions 'sustainability' as a goal as well, there is little indication of how this is to be achieved, in contrast to the strong expectation that megaregional infrastructure will enable some parts of the world to position themselves better within a globalizing economy.

Advocates tend to assume that megaregions are the world's main engines of economic activity, and presumably would generate more economic development if better planned. But economic development of what sort? It is likely that these large urban constellations will be most suited to multinational businesses that will benefit from the global linkages, concentrations of capital and well-developed supply chains present in these areas. Thus enhancing the primacy of megaregions is likely to promote economic globalization at the expense of smaller-scale, more locally oriented communities and economies. Such economic globalization has been strongly critiqued by many sustainability advocates who see it as promoting highly consumptive lifestyles, potentially damaging forms of financial speculation, and excessive pollution, resource consumption and exploitation (for example Korten, 1995; Shuman, 1998).

Spatial growth is almost certain within a megaregional planning framework as jobs and housing spread outward from core urban areas and new edge cities emerge within the megaregion. Gottmann (1961) and others first identified megaregions precisely because of suburban sprawl's role in tying together clusters of cities. Glaeser (2007) sees megaregions as characterized by increasing decentralization, and finds that less dense regions grow faster in economic, population and spatial terms than denser ones. Unless strong steps are taken to manage spatial expansion (which is unlikely given political realities in many countries), this physical growth seems set to continue. Construction of megaregional infrastructure such as high-speed rail is likely to speed spatial expansion, since the experience of past transportation infrastructure has been that in the absence of strong growth management policies land development follows the new facilities outward. The result will be the opposite of the compact urban growth model usually preferred by sustainability advocates.

Growing mobility is yet another concern. Researchers have often assumed that this is desirable and should characterize megaregions. In fact the Regional Plan Association has used growing business travel between cities as an indicator of emerging megaregions (Goldfeld, 2007, p. 8). However, increased mobility works strongly against sustainability in a number of ways. No mode of transportation is carbon-neutral except for

biking and walking (very local-scale modes), or is likely to be so anytime soon. So growing mobility means increased greenhouse gas emissions. Indeed, for decades increases in per-capita vehicle miles travel have been offsetting improvements in vehicle fuel efficiency. Moreover, even completely carbon-neutral vehicles would still damage natural and human environments in many ways, for example through the detrimental effects of traffic on communities, embodied energy in the production of the vehicles, and runoff from roads and parking lots. The more sustainable alternative is for planners to prioritize 'access' instead of 'mobility' – seeking to reduce people's travel needs through design of more compact, well-balanced communities and transportation demand management programs, rather than encouraging more travel by constructing new long-distance systems. But instead of doing this, even environmental organizations tend to assume that growth in motor vehicle and air travel is inevitable, and then rationalize high-speed rail as a less-damaging alternative mode (for example SPUR, 2011; Cohen, 2012).

Within California, an extreme example of the pro-growth approach to megaregional analysis is Landis and Reilly's study *How We Will Grow* (2003), whose title gives away the assumption that growth is inevitable. These authors map an expanding urban footprint in California from 33 million residents in 1997 to 92 million in 2100, and provide detailed maps showing much of the state eventually covered with new urban development. Predictably, urban areas merge along existing highway corridors to form one massive megaregion. The study never asks whether such growth is desirable or sustainable, or considers the possibility that state jurisdictions might seek to aggressively limit their urban footprint (for example by establishing greenbelts or urban growth boundaries) or that the state might stabilize its population at lower levels through better family planning, reductions in poverty and improvements in the status of women (three leading mechanisms for population stabilization globally). Rather, the authors take into account only relatively minor variations in land use regulation. Such a growth-oriented BAU orientation is a major problem with much megaregional analysis.

Similarly, one of the arguments that SPUR uses to support high-speed rail in California is the threat of falling behind other global competitors, pointing out that 'Far smaller economies and regions have built or are building high-speed rail' (Terplan and Gao, 2012, p. 2). The group also backs HSR on the grounds that it 'provides armature for the state's growth' (ibid., p. 4). Although it provides some good suggestions for how land use could be improved in conjunction with HSR, the organization fails to condition its support on adoption of such land use planning, and like Landis and Reilly fails to express concern that California is expected

to add 20 million people by 2050. Rather, this population growth is taken for granted. While the City of San Francisco, whose development SPUR has historically advocated, is likely to benefit by being an HSR terminus and a main node in the development of a California megaregion, the organization fails to consider the overall sustainability of the growth-oriented trajectory it is recommending.

On the ground it is far from clear that rapid economic development, integration into the global economy and spatial expansion have been good for the Northern California Megaregion in the past. Certainly many jobs have been created and tax dollars generated by the expansion of industries related to computers, bio-technology, finance and other fields. But growth has created large and often unappreciated costs as well. Large amounts of farmland and open space have been lost to sprawl, large quantities of greenhouse gases have been generated, and many low-income residents have been burdened with pollution, expensive housing, poor schools and long commutes. Silicon Valley, long seen as a global model of economic development, is in fact a highly congested, extremely expensive locale with great social inequities, substantial pollution, bad traffic and a sprawling, poorly designed public realm. Rather than producing new centres of civilization such as London, Paris or Rome, past regional growth has created an amorphous sprawl of unattractive office buildings, freeways and subdivisions. San Jose, California's third largest city which often bills itself as the capital of Silicon Valley, is considering cutting pensions and health care for existing workers in an effort to avoid bankruptcy (Lyman and Walsh, 2013). Clearly the region's growth has had very mixed results and expanded megaregional development should be viewed with caution.

5.2.4 Local Solutions will be De-emphasized

Funding, institutional attention and advocates' energy can only be focused on so many places at once. An emphasis on megaregional planning and infrastructure is likely to decrease chances that more locally oriented development strategies are undertaken. Constructing high-speed rail, for example, may well tie up funding that could instead be spent on central city transit or less glamorous track and equipment upgrades within existing metropolitan areas. Developers and homebuyers may turn their attention to new outlying subdivisions near high-speed rail stops rather than inner-city infill. Large-scale energy and water infrastructure may distract from local conservation efforts. Political efforts to develop megaregional institutions and governance may sap energy from local and regional campaigns.

Large-scale systems, fast speeds and high technology are often sexy in

ways that simpler, lower-consumption, more local lifestyles are not. But while they may attract the attention of planning experts as well as large economic interests who stand to benefit, these larger-scale strategies are not necessarily the most sustainable or desirable in terms of quality of life. Several times before societies have turned away from the path of assuming that bigger, faster and high-tech is better. In the 1970s a concerted environmental organizing campaign as well as engineering and economic challenges limited production of supersonic transport (SST) planes to a small number serving only trans-Atlantic routes. Although this technology like HSR offered the potential of significantly reducing air travel times and knitting the world more closely together, policymakers deemed costs such as sonic booms and potential damage to the ozone layer not worth the benefits. Also, most societies chose not to pursue nuclear power beyond those facilities built during the 1960s and 1970s, often emphasizing the vastly more sustainable strategy of energy conservation instead. Again, large-scale, high-tech systems were found to have significant downsides. There is precedent, in other words, to the idea that planning for a megaregional future is not necessary and that smaller-scale solutions may be preferable.

Within Northern California, grass-roots movements for localism are relatively strong, shown for example by local foodshed planning (for example Thompson et al., 2008) and buy-local campaigns (for example Sustainable Business Alliance, 2013). However, these movements still operate on a niche scale, and larger organizations representing mainstream businesses such as the Bay Area Council are pushing strongly for megaregional-scale initiatives such as high-speed rail (for example Bay Area Council, 2012). Economic and lifestyle trends have also undercut a focus on local communities. Over the past 60 years or more the decentralization of retail and employment – abetted by suburban land use planning – has meant the abandonment of many downtowns and central city areas, a condition which cities such as Oakland, San Jose, Richmond and Stockton are still seeking to recover from. High housing prices have meant that many workers in core cities such as San Francisco, Oakland, San Jose and Sacramento have had to commute from great distances, and that large new ‘bedroom suburbs’ have sprung up in places like Tracy, Stockton and Elk Grove. Freeway expansions, commuter rail extensions and NIMBY (‘not-in-my-backyard’) opposition to affordable housing in infill locations have facilitated such dispersal away from existing communities. The most powerful forces at work in the megaregion, in short, are still strongly against localism. Although many nonprofit organizations and some local governments are promoting place-based lifestyles, they face an uphill battle.

5.2.5 Equity Loses Again

As others have noted (for example Benner and Pastor, 2011), whenever equity advocates make progress at a given scale of planning the emphasis has often shifted to a larger scale. When progressive political constituencies gained control of many North American cities in the mid-20th century, suburban growth moved the effective scale of development to the metropolitan level. Now, after a wave of ‘new regionalism’ in the 1990s and 2000s (Wheeler, 2002; Pastor et al., 2009a) that made modest progress toward some regional equity-related goals (growth management; balanced distribution of affordable housing; environmental justice organizing), the megaregion threatens that gain and may be a particularly difficult scale at which to address equity issues (Dewar and Epstein, 2007). Fainstein and Fainstein (2009, p. 192) argue that state governments in the US already have the capacity to address large-scale equity issues, if these can be made more prominent policy objectives, and that large-scale consolidation of planning institutions ‘holds little promise for erasing disadvantage’.

If increased wealth and opportunity can be distributed fairly within megaregions, then conceivably the old adage that ‘a rising tide lifts all boats’ will apply. Benner and Pastor (2012) argue that regional structural factors such as educational systems, governmental consolidation, more diverse economies and a common vision can potentially promote both equity and growth, and conversely that more equitable regions have higher chances for economic growth. However, ensuring equity in practice has been extraordinarily difficult at the regional scale let alone the megaregional level. Moreover, a focus on megaregions might well create additional disparities and poses four main equity threats.

The first of these equity challenges is continued spatial segregation of socioeconomic groups within the expanding geographical area. The sprawling metropolitan region of the 20th century allowed wealthier, predominantly white residents to leave the central city, decentralizing into gated enclaves and upscale suburbs typically with a conservative political character. People of different types had less need to see each other on a daily basis let alone share facilities such as parks and schools. Job and educational opportunities declined for less-advantaged populations; Hall (2009, p. 811) notes an increased ‘educational apartheid’ in British city-regions. Financial disparities between jurisdictions increased, resulting for example in the 2013 bankruptcy of the City of Detroit within a metropolitan region characterized by a reasonably healthy economy overall and many wealthy suburbs (Reich, 2013; Stiglitz, 2013). With the exception of the Minneapolis-St. Paul region, which

adopted a partial tax-base sharing program in 1982 (Orfield, 1997), regional governments have had little success in stemming these growing spatial inequities. Across megaregions, segregation would be of an even larger scale and mechanisms for sharing resources and promoting equity even weaker. The poorest communities would be literally hundreds of miles away from the wealthiest, and the latter would likely feel even less responsibility towards the former. The possibilities for resource distribution would be slight indeed.

A second, related equity threat is that gentrification of urban cores and other desirable locations within the megaregion may displace less affluent populations to far-flung fringes, burdening them with long commutes to work, lower levels of services and loss of their existing neighbourhoods. Within metropolitan regions such displacement has had a long history, but within the new megaregional form it may take place over much vaster distances, as discussed further in the Northern California discussion below.

A third main threat is that through a focus on megaregional planning, public and private institutions will neglect the 'white areas' between megaregions on maps. Investment in potentially catalytic facilities may go disproportionately to these favored areas, which after all account for a large share of the population and economy. Well-educated, creative people may also disproportionately flock to these megaregions, since those places have the social tolerance, quality of life, job opportunities and amenities they desire (Florida, 2008). Within the US, Appalachia, the Plains States, the Mississippi Delta, much of the Deep South and the Northern Rockies would be left behind as the coasts and a few other megaregions take off. Thus large-scale spatial inequities would increase. Yaro (2009) has proposed strategies to reduce such disparities, including a US Regional Development Fund and reforms to agricultural subsidies, but the prospects of these steps being enacted are slight. On a global scale, Roy (2009, p. 824) worries that emphasizing certain cities and regions then 'drops all other cities from the map'. This framework might recapitulate past 'core-periphery' dichotomies of global development, resulting in great injury to much of the developing world.

A final equity threat has to do with the extent to which megaregional planning promotes economic globalization and undercuts local businesses and progressive governance. Increased mobility within and between megaregions can potentially allow capital to play off different locations against one another to seek the lowest level of regulation and obligation. The Tieboutian world of public choice might come to its logical conclusion: extreme mobility of capital and elites would weaken local initiative and leave communities and the environment at the mercy of the private sector. The rich would locate in well-serviced locations within favored

megaregions, while the environment and less advantaged populations suffer.

Within the Northern California megaregion, many of these dynamics can already be seen at play. Spatial segregation is increasing at the megaregional scale for a number of reasons. As housing prices have risen, new residents moving into core areas such as San Francisco are increasingly wealthy (Pastor et al., 2009b). Meanwhile, low-income, predominantly ethnic populations have moved increasingly from the core to older inner ring suburbs or to Central Valley locations such as Fresno, Modesto and Sacramento. Many newer immigrants bypass the central Bay Area entirely for these cheaper locales. Also, soaring housing prices during the 1990s and 2000s displaced many middle-income Silicon Valley workers to the Central Valley cities of Stockton and Tracy, where 2–3-hour commutes to high-tech jobs became common. Wages for low-income Bay Area workers have fallen in the past decade, while salaries for the upper end have risen particularly rapidly (Avalos, 2012), further aggravating disparities. Analysis by the USC Program for Environmental and Regional Equity shows that blacks and Latinos in the Bay Area increasingly lack the educational background required for the new jobs being created there, a trend that promises increasing racial inequality in the future (Pastor et al., 2009b, p. 8). Although the State of California has sought to require jurisdictions in regions such as the Bay Area to build their fair share of affordable housing, such requirements have few teeth and have failed to stem the tide of spatial inequity.

5.3 CONCLUSION

Sustainability, of course, requires action at every scale of planning and government and development of mutually reinforcing initiatives across different levels. So some attention to the megaregional scale is desirable. But the above discussion should lead to great caution. Uncritical development of infrastructure, institutions and programs at the megaregional level could accelerate BAU trends that are leading to disastrous climate change, growing social inequity and other sustainability problems. It is imperative to avoid this future.

To the extent that megaregional planning is pursued, it will be important to rethink its goals. Environmental sustainability, quality of life and social equity should be leading objectives, rather than rapid economic expansion, increased mobility, or further integration of megaregions into the global economy. More specifically, policymakers might pursue the following strategies:

- Preserve open land between metropolitan regions through the creation of greenbelts, urban growth boundaries, or regional preserves, and through lower tax levels for agricultural land;
- Reduce commuting between metropolitan regions through appropriate road, rail and air transport pricing, and through restraint in building transportation infrastructure that encourages such commuting;
- Prioritize slower-speed, more local pedestrian, bike and public transit facilities instead of freeways, high-speed rail, airport expansions and other facilities for long-distance travel;
- Develop compact, well-balanced cities and towns whose residents do not need to commute elsewhere for jobs, housing, schools, or recreation;
- Adopt strong regulation to protect ecosystems on a bioregional scale;
- Support locally owned, small- or medium-scale businesses serving local and regional markets, rather than economic development strategies aimed at multinational corporations and export-oriented growth; and
- Reduce megaregional inequities through state, provincial, or national efforts aimed at tax base equalization as well as fair distribution of affordable housing, livable minimum wages, and adequate schools, transit and other services.

Undoubtedly other strategies could be added to this list. The end result would be more balanced, locally oriented communities where most of life is lived on a scale of a few miles rather than many hundreds. Such an alternative has many benefits in terms of quality of life, reduced environmental impact, improved social equity and enhanced social capital. Ideally a greater commitment to stewardship of particular places would go along with this change and an ethic of interdependence between socioeconomic groups.

Rather than being seduced by megaregional analysis and technologies such as high-speed rail, the need is for policymakers to develop visions of a sustainable society at all scales of planning. The megaregional scale may be a useful one in some cases. But it should probably remain a relatively small player in the planning universe, with much emphasis placed locally and regionally instead, or else at higher levels of government where mechanisms already exist to adopt strong sustainability initiatives.

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