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TOOLS IN THE RESILIENCE TOOLBOX, BUT ARE WE WILLING TO USE THEM?

Thomas Ruppert[1]

PLANNING FOR COASTAL RESILIENCE: BEST PRACTICES FOR CALAMITOUS TIMES. Timothy Beatley. Island Press, 2009.

Professional involvement with land use planning, resilience, and sea-level rise adaptation led me to be very interested when a colleague mentioned Timothy Beatley's *Planning for Coastal Resilience: Best Practices for Calamitous Times*.[2] Published in 2009, this book still merits review as we continue to grapple—or, in some cases, avoid—the impacts of a changing climate on our coastal communities. As Beatley indicates, this remains a critical task since around the world we continue to rush in ever-greater numbers to live in coastal areas at risk for hazards like flooding, storms, and sea-level rise.

In the book Beatley examines: what resilience means, the vulnerabilities faced by coastal communities, "key planning dimensions," barriers to coastal resilience, understanding the political setting and context, principles of coastal resilience, and tools and techniques for coastal resilience. Much of the second half of the book is devoted to case studies of five coastal communities' resilience actions as well as shorter vignettes about resilience activities of other communities and actors.

The title only hints at what the book's introduction makes very clear: the author sees climate change and associated sea-level rise as a significant driver for our need to improve coastal planning.[3] Beatley presents information on projected climate change impacts such as higher air temperatures, increased ocean water temperature and associated

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2. TIMOTHY BEATLEY, PLANNING FOR COASTAL RESILIENCE: BEST PRACTICES FOR CALAMITOUS TIMES (2009).

3. *Id.* at xi.

stronger tropical cyclones, and more extreme weather events generally. While new research continues to emerge on these topics, the basic conclusion remains that these things will very likely happen if we are not, indeed, already seeing signs of them today.

The news on the sea-level rise front continues to get worse since Beatley wrote this book. Before detailing that—let's get one thing straight: sea-level rise is not just a "predicted" change that will result from climate change. We have historical measurements of past sea-level rise in the United States dating back about 100 years.[4] Since 1993, we have added satellite altimetry measurements to the tide gauge record.[5] Measurements indicate that the rate of sea-level rise has about doubled over the past century.[6] More recent research estimates future sea levels could range between 0.8-1.8 meters by 2100.[7] While sea levels have been hundreds of feet lower and higher in the distant past, the past 6,000-10,000 years have seen remarkably stable sea levels, meaning that the changes we will be confronting in sea-level rise are truly unprecedented for modern coastal communities.[8]

In the face of sea-level rise and other threats to coastal areas, Beatley lays out the vision of how resilience is a far broader context than hazard mitigation and preparedness. While hazard mitigation might focus on making structures stronger and hazard preparedness looks at the ability to keep infrastructure functioning during or soon after a disaster, resilience, for Beatley, means the ability of a system to effectively and rapidly "bounce back" from a shock to the system.[9] Part of that resilience includes changes that make the community and system less vulnerable in future.[10] When defining resilience, Beatley notes what forms a foundation for the book: resilience and sustainability are inextricably linked since a system that is sustainable must be able to bounce back from perturbations.[11] This results in numerous instances where the book discusses general sustainability actions without even mentioning

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4. Anny Cazenave & William Llovel, *Contemporary Sea Level Rise*, 2 ANN. REV. OF MARINE SCI. 145, 146-47 (2010).

5. *Id.* at 146.

6. *Id.* at 147-48.

7. *Id.* at 146; Aslak Grinsted et al., *Reconstructing Sea Level from Paleo and Projected Temperatures 200 to 2100AD*, 34 CLIMATE DYNAMICS 461, 461-63, 470 (2009); Stefan Rahmstorf, *A New View on Sea-Level Rise: Has the IPCC Underestimated the Risk of Sea-Level Rise?*, 4 NATURE REPORTS: CLIMATE CHANGE 44, 44-45 (2010).

8. Grinsted et al, *supra* note 7, at 470.

9. BEATLEY, *supra* note 2, at 3-8.

10. *Id.* at 4-5.

11. *Id.* at 12.

resilience; this was especially apparent in some of the vignettes about resilience activities in Chapter 13. Later, I discuss a potential issue this can raise in communicating about resilience and climate change to broader audiences.

The book breaks resilience into four specific aspects: (1) "resilience of land use and built form," (2) "resilience of ecosystems and natural coastal environments," (3) "social resilience," and (4) "economic resilience."[12] Without seeking to reiterate what Beatley has ably said on each, I will mention select thoughts of Beatley on some of these before delving into more philosophical reflections inspired by this book and the topic of coastal resilience.

Beatley notes that part of recovering from a disaster involves reopening local businesses as quickly as possible in order to meet the community's needs for goods and the businesses' needs to remain viable.[13] Assessing the vulnerabilities of businesses and helping them prepare before a disaster can significantly improve a community's resilience. How many businesses are in vulnerable areas? How many have business continuity plans? What plans does the local government have to assist businesses in case of a disaster? Another aspect of economic resilience Beatley emphasizes repeatedly is the economic diversity of the local economy. He argues that if the local economy lacks diversity, it will, like a natural system that lacks diversity, be less resilient when confronting catastrophic events.[14] Beatley also emphasizes the importance of locally-owned and controlled businesses as they are typically more in touch with local needs, keep money circulating in the local economy rather than exporting it, and have emotional attachment to place and people that usually makes local businesses more dedicated to the community. Beatley gives the example of a locally owned grocery in New Orleans that re-opened quickly after Hurricane Katrina and has served as a stabilizing force and place of contact for the people in the community.[15]

As someone with legal background in Florida's coastal planning regime and its focus on required local plans governing development, my bias is towards hard laws and regulations and their role in hazard mitigation and resilience. My focus on built infrastructure and local planning decisions has made it too easy for me to overlook the role that social and economic factors play. Beatley demonstrates understanding of

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12. *Id.* at 29.

13. *Id.*

14. *Id.* at 38-42.

15. BEATLEY, *supra* note 2, at 34-35.

how the importance of infrastructure and zoning/land use planning overshadow "softer" determinants of vulnerability and resilience. Beatley points out that indicators of "social vulnerability include age, income and poverty, housing stock, race, and the presence or absence of social networks and social support structures that could help in the event of a disaster."[16]   The impact of Hurricane Katrina in New Orleans highlighted many of these social vulnerabilities.

Beatley repeatedly highlights the importance of social networks to resilience because they are "sometimes overlooked."[17] As an example, Beatley cites the resilience of the Vietnamese neighborhood of Versailles in New Orleans after Katrina.[18] This community has rebounded much more rapidly and effectively than most in New Orleans. This is due, in large part, to the community's ability to work together effectively to help families and the community achieve their goals, such as avoiding the dumping of debris around their neighborhood and getting electrical service restored quickly.[19] Beatley and others attribute the "Miracle of Versailles" to the tight-knit community centered around the local Catholic church and cultural underpinnings that emphasize community needs over individual rights and interests; in turn, this strong community contributes to individual survival.[20]

For Beatley, the resilience of a coastal community—especially its social resilience—directly relates to this strength of the feeling of community itself and the strength of social ties within the community.[21] Unfortunately, intimate knowledge and a real sense of place, along with a commitment to place is often in short supply today. We live in an increasingly mobile society, and our frequent relocations undermine deeper connections and the ability to build networks of friends and family in a place. Florida could serve as the poster-child for lack of connection to place in some ways since most of our population comes from other states and countries and lacks the deeper roots that come with growing up in a community and sharing it with your extended family and lifelong friends.

At the same time the book discusses what makes communities more resilient, it also discusses barriers to resilience.[22] The list includes the usual suspects for those working in hazard mitigation and planning: a

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16. *Id.* at 22.
17. *Id.* at 24.
18. *Id.* at 34-35.
19. *Id.*
20. *Id.* at 34-35.
21. BEATLEY, *supra* note 2, at 36-37.
22. *See id.* at 43.

low priority to natural disasters and hazard mitigation; limited effort or capacity to address significant issues that loom further off in the future; lack of resources; more pressing short-term concerns; political impediments; weak planning systems; short decision time frames; concerns about protecting private property rights; and concerns that the up-front costs for resilience are too high.[23] Many of these inter-related barriers have been confirmed by the experiences of colleagues and research.[24]

One additional barrier mentioned is "excessive individualism."[25] Initially, this one surprised me; upon greater reflection, it pleased me to see this included. Beatley sees "excessive individualism" as a force that limits the social ties and strength of community that can contribute so strongly to resilience, as in the example of New Orleans' Versailles community. As he observes, trends on social connections are not encouraging—individuals in the United States demonstrate a substantial decline in the number of people with whom they have discussion networks—people that one can really trust.[26] Without the social connections created by such strong personal links, social resilience will remain a weak point for us in the U.S.

The historical focus on individualism in the U.S. and difficulty seeing ourselves as enmeshed within a larger community has other impacts as well. For one, it has colored our popular understanding of the institution of private property.[27] Many seem to believe that the government should have very limited ability to regulate a person's use of private property and that landowners should be able to do as they wish. The public is often presented with this image and the suggestion that, at one time, private property owners could do as they wished with their property free of "interference" from the government. In reality, this is a myth. It is also an impossibility in any but the most unpopulated, least-utilized areas. It is a myth because historically there is no precedent for a

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23. *Id.*

24. *See, e.g.,* BOOZ ALLEN HAMILTON, INC., NAT'L OCEANIC AND ATMOSPHERIC ADMIN. COASTAL SERVS. CTR., HAZARD AND RESILIENCY PLANNING: PERCEIVED BENEFITS AND BARRIERS AMONG LAND USE PLANNERS (2010), *available at* http://csc.noaa.gov/publications/social_science/NOAACSCResearchReport.pdf.

25. BEATLEY, *supra* note 2, at 50.

26. *Id.*

27. How we view property arguably says much about our culture and society. ERIC T. FREYFOGLE, THE LAND WE SHARE: PRIVATE PROPERTY AND THE COMMON GOOD 36 (2003) [hereinafter THE LAND WE SHARE]; *cf. also id.* at 37-43 (comparing and contrasting competing views of the role of property and land and how they reflect competing views of life).

society where the rules of property ownership allowed the owner free reign to do as he or she pleased without regard for the larger community[28] and because the meaning of "property" has always changed and evolved. [29] It is an impossibility because it does not even make sense to say one can do anything on one's property at the same time one's neighbor can because, at some point, uses come into conflict over how one person's use of property impacts the other property.[30] For those that doubt these assertions, some excellent work traces the impossibility of all property owners having "unlimited" property rights.[31]

Our historically unfounded mythology of real property as purely a possession of isolated individuals doing as they please hampers efforts to improve resilience. The most common-sense and frequently mentioned strategy, referred to by Beatley, for a community to improve its resilience is to avoid building in the most hazard-prone areas. However, these areas near the beach and near the water are often the most sought-after real estate. Should we not allow development on these parcels because of the high risk that flooding, storm surge, and sea-level rise pose? What about if they are already developed and the buildings are destroyed or significantly damaged by a disaster? Should owners be allowed to rebuild? A limited understanding of the history and evolution of real property combined with an excessive focus on the individual—and a view of real property as a vehicle for investment and personal wealth creation—often result in an insistence that either the owner be allowed to build or rebuild unless the government pays the owner for the property. For example, here in Florida, a statutory takings law known as the Bert J. Harris, Jr., Private Property Rights Protection Act[32] forces state or local government to pay if regulations "unduly burden" private

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28. U.N. Commission on Human Rights, The Right of Everyone to Own Property Alone as Well as in Association with Others, ¶ 479, U.N. Coc. E/CN.r/194/19 (Nov. 25, 1993); *see also* THE LAND WE SHARE, *supra* note 27, at 7.

29. ERIC T. FREYFOGLE, ON PRIVATE PROPERTY: FINDING COMMON GROUND ON THE OWNERSHIP OF LAND xvii-xix, 19, 117, 145-56 (2007) [hereinafter ON PRIVATE PROPERTY].

30. *See, e.g.*, THE LAND WE SHARE, *supra* note 27, at 11-12, 15 (describing conflict between private property owners related to one owners desire to use property for a confined-animal feeding operation and other land owners to continue to enjoy their property without the noise, pollution, smell, and rodents associated with the proposed feeding operation); *see also, e.g.*, ON PRIVATE PROPERTY, *supra* note 29, at 1-3 (discussing a dispute over management of ranch land by neighboring property owners in Kansas).

31. THE LAND WE SHARE, *supra* note 27, at 17-18; *see also* ON PRIVATE PROPERTY, *supra* note 29.

32. FLA. STAT. § 70.001 (2010).

property. Laws such as this cripple the ability of our government to protect the public's interests in how private property is used. While some see this as a problem, others see that as the very point of the law. After all, "It's my property, I should be able to do what I want."

Everyone seems to understand when government regulation decreases property value. But how often do people acknowledge that much of a property's value is determined by the actions of others, especially neighboring owners and the government? Thus, part of what is often missing from discussions of property rights and responsibilities is consideration of how the value of an individual's property is supported by the state: the property title has value because of the socially supported, complex legal-judicial system that will protect the rights assigned to the owner by title; access to property is typically via publicly funded roads; protection of the property from interference by neighboring properties is by the legal-judicial system; infrastructure that supplies the property is often publicly or cooperatively owned or at least a monopoly regulated by government to provide services (water, sewer, electricity, telephone, cable, internet); and, finally, much of a property's value is determined by types of other land uses around a property, which themselves are usually regulated for safety and predictability. All these important factors that contribute to the value of a private parcel of land are much larger than the individual.[33] If so much of a property's value is due to government, should the government be forced to countenance actions on that property that result in costs to the public?[34]

If "excessive individualism" hampers societal efforts to promote resilience, maybe we can begin by at least avoiding "anti-resilient" activities. Again, using Florida as an example, as I write this Review, a bill has been introduced into the Florida legislature with an amendment[35] that would stop our state-backed property insurance company from writing any insurance policies for properties sea-ward of Florida's

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33. *Cf.* ON PRIVATE PROPERTY, *supra* note 29, at 95-99 (noting the weak moral claim of land speculators to increased land values that the speculators had no hand in creating but which were created by the actions of others and the community).

34. In Latin American countries and many other areas of the world, private property is viewed as a creation of the state and is subject to a requirement that use of the private property by the individual contribute at least some generalized benefit to society as a whole since the resources of society—represented by the government and its legal and judicial systems—make the institution of private property viable. *See, e.g.*, Thomas T. Ankersen & Thomas Ruppert, *Tierra y Libertad: The Social Function Doctrine and Land Reform in Latin America*, 19 TUL. ENVT'L L.J. 69 (2006).

35. S.B. 1714, 2011 (Fla. 2011) (amendment 353118), *available at* http://www.flsenate.gov/Session/Bill/2011/1714.

coastal construction control line. An interesting coalition of conservative and Tea Party supporters and environmentalists back this measure. Those with an individualism focus believe it is the responsibility of those who undertake a risk to shoulder the cost; those who favor smaller government do not see a reason for the state to be involved in the insurance business; environmental concerns see state-backed insurance as a subsidy to developments that threaten coastal ecosystems. It is far from clear right now whether the bill will pass. Perhaps it indicates that people are realizing that subsidizing insurance for those that choose to live in the most hazard-prone areas by tacking fees and taxes onto everyone's car insurance and the property insurance of those that live in safer places is unwise from either a resilience or economics perspective.

Many dedicated individuals and organizations are currently working towards improving the resilience of coastal communities and addressing the need for adaptation to climate change and sea-level rise. Cultural— and cognitive—barriers play prominent roles in the ongoing effort to make coastal communities more resilient. Social science warns against reliance on fear to motivate action on climate change.[36]   Instead, researchers say we need *positive* messages to promote adaptation to climate change and sea-level rise.[37] Confronted with a public retreating from belief in climate change despite virtual scientific consensus on the major points of climate change, one group has even published a guide about how to "sell" the reality of climate change more effectively.[38] Futerra Sustainability Communications' report, "Sizzle: The New

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36. *See, e.g.*, Matthew Feinberg & Robb Willer, *Apocalypse Soon? Dire Messages Reduce Belief in Global Warming by Contradicting Just-World Beliefs*, 22 PSYCHOLOGICAL SCIENCE 34, 34-38 (2010), *available at* http://willer.berkeley.edu/FeinbergWiller2011.pdf; CTR. FOR RESEARCH ON ENVTL. DECISIONS, THE PSYCHOLOGY OF CLIMATE CHANGE COMMUNICATION: A GUIDE FOR SCIENTISTS, JOURNALISTS, EDUCATORS, POLITICAL AIDES, AND THE INTERESTED PUBLIC 20-23 (2009), *available at* http://www.cred.columbia.edu/guide/.

37. *See, e.g.*, CENTER FOR RESEARCH ON ENVIRONMENTAL DECISIONS, THE PSYCHOLOGY OF CLIMATE CHANGE COMMUNICATION: A GUIDE FOR SCIENTISTS, JOURNALISTS, EDUCATORS, POLITICAL AIDES, AND THE INTERESTED PUBLIC 21-23 (2009).

38. *See* CHRISTOPHER P. BORICK ET AL., CLIMATE COMPARED: PUBLIC OPINION ON CLIMATE CHANGE IN THE UNITED STATES AND CANADA (Brookings Institution, 2011), *available   at* http://www.brookings.edu/papers/2011/04_climate_change_opinion.aspx)(providing analyses that public belief in the reality of climate change dipped significantly from 2008 to 2009/early 2010 and has since begun to climb again); *see also* ANTHONY LEISEROWITZ ET AL., CLIMATE CHANGE IN THE AMERICAN MIND: AMERICANS' GLOBAL WARMING BELIEFS   AND   ATTITUDES   IN   JUNE   2010   (2010),   *available   at* http://www.climatechangecommunication.org/images/files/ClimateBeliefsJune2010%281 %29.pdf.

Climate Change Message,"[39] exhorts those communicating about climate change to focus on selling an appealing, emotive image of a future that addresses climate change, while contrasting this desirable future with a "hellish" future of climate change without adaptation/mitigation, thus presenting people with a choice.[40] One then needs to present people with concrete actions they can take to contribute to the future they have chosen.

While this sounds great it may be that, in the U.S. context at least, this approach has a similar weakness as Beatley's vision of selling sustainability as central component of resilience: many in the U.S. react negatively to some of the images associated with "sustainability." For example, the cover of the report Sizzle has images of recycling bins, picking fruit, mowing a green roof, chickens, wildlife, flowers, used clothing sales, public transit, trains, camping, and clothes drying on a clothesline. These are not necessarily positive images for everyone. Some might react with disdain for such warm and fuzzy "granola" or "environmentalist" images, or view them as impractical or undesirable. If we are going to develop positive images of a future where we address climate change, we need to ensure that the image appeals to the audiences from which we most need support to move forward towards greater coastal resilience, including adaptation to climate change.

My reading of some of the literature on opinions towards climate change is that we probably need to focus mostly on those in the middle or on the fence about climate change. No need to preach to the choir. No sense in spending inordinate resources seeking to change the mind of those unlikely to change their minds. Focus on those who do not have strong opinions—or knowledge—either way and who may have an open mind about the evidence and possibilities to improve coastal resilience as we confront climate change. This requires understanding what appeals to those in the middle. According to the 2009 report "Global Warming's Six Americas 2009: An Audience Segmentation Analysis," some of the groups towards the middle[41] hold values that largely track American averages[42] and hold traditional religious beliefs.[43] We need to find ways

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39. FUTERRA SUSTAINABILITY COMMUNICATIONS, SIZZLE: THE NEW CLIMATE MESSAGE, *available at* http://www.futerra.co.uk/downloads/Sellthesizzle.pdf.

40. *Id.* at 4.

41. I include the groups "concerned," "cautious," and "disengaged" from the report as "in the middle."

42. EDWARD MAIBACH ET AL., GLOBAL WARMING'S SIX AMERICAS 2009: AN AUDIENCE SEGMENTATION ANALYSIS 24 (2009), *available at* http://www.americanprogress.org/issues/2009/05/pdf/6americas.pdf (noting this for the "cautious" segment).

to connect to these audiences. Gaining support for resilience measures from these "middle" audiences could help overcome many of the other barriers to resilience and adaptation to sea-level rise in coastal communities.   For example, strong community support can force political leaders to temper their focus on short-term election cycles and the desire to see immediate payoffs for public investments. Similarly, public awareness and support help overcome the barriers of failing to address large issues in the future and the low importance assigned to hazard mitigation and resilience.

Beatley has done an admirable job of summarizing the large, salient points about resilience planning, barriers, and tools. If he shies away from venturing into more detail on the difficulties inspired by our "excessive individualism," that should be easy to forgive since it is something that can quickly derail a substantive conversation about resilience into polemical cultural debates. Rather than getting bogged down in such debates, those who seek to communicate about and promote resilience need to be aware of the potential arguments and the values held by their target audiences. This helps craft communication and information in ways that make it most appropriate to the target audience. Careful understanding of the values and viewpoints of a communicator's target audiences can also make possible interesting dialogue and alliances such as the example in Florida of those seeking to limit state-backed property insurance. Effectively communicating with multiple audiences and maintaining positive dialogue is imperative to realize the full value of the tools and insights one can gain by reading Beatley's book. After all, the valuable tools Beatley discusses are of no use if communities do not have the will to take them out of the toolbox and use them.

Overall, I highly recommend this book to anyone concerned about the future of his or her coastal community. The book is written in a way that those who do not specialize in land use planning, hazard mitigation or a related field can still understand and appreciate what is being said. At the same time, very few planners and hazard mitigation specialists will not gain some new—or deeper—appreciation for the meaning of resilience by reading this book. And from looking around at our headlong rush to live in hazard-prone areas, we need all the appreciation of hazards that we can get.

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43. *Id.* (noting this for the "cautious" and "disengaged" segments).