# LIVING THE GOOD LIFE IN THE ANTHROPOCENE

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## SUMMARY

**The Stockholm Resilience Centre has concluded that the number of "planetary boundaries" we are crossing has increased from three in 2009, when the Centre's researchers first introduced the concept, to six in 2023. Crossing these boundaries means humans are changing basic attributes of planetary systems to the point of risking the future of civilization. And the distinction between "safe" and "just" planetary boundaries raises questions regarding how to conceptualize the "good life." In this latest in a biannual series of essays, members of the Environmental Law Collaborative explore conceptions of the "good" as well as the various elements necessary to a good life in the Anthropocene, from choice to respect to requirements like freshwater to amenities like outdoor recreation.**

The Environmental Law Collaborative (ELC)[1] comprises a rotating group of law professors who assemble every other year to think, discuss, and write on an important and intriguing theme in environmental law. The goals of this meeting are both scholarly and practical, as ELC participants seek to use their diverse areas of scholarly expertise to study trends and important events in the law and ultimately to improve the environmental conditions of the world in which we live.

Participants at the ELC's most recent meeting in July 2023 were asked to consider what it means to live the good life in the Anthropocene. To frame the conversation, participants first considered the Stockholm Resilience Centre's concept of "planetary boundaries."[2] As the Anthropocene progresses, the Centre has concluded that the number of planetary boundaries that we are crossing is steadily increasing, from three in 2009, when the Centre's researchers first introduced the concept, to six in 2023.[3]

Planetary boundaries represent a safe operating space for humanity[4]; crossing them, in turn, means that

*Authors' Note: The 2023 Environmental Law Collaborative thanks the University of Southern California Gould School of Law and Vanderbilt Law School for their generous support of the collaborative's July 2023 meeting in Hood River, Oregon.*

1. ELC was founded in 2011 by Michael Burger, Elizabeth Burleson, Keith Hirokawa, and Jessica Owley to collaborate on important environmental issues. ELC has since hosted more than a dozen conferences and published countless blog posts, law review articles, and books—shaping contemporary legal scholarship on vital environmental topics. *See* Jessica Owley & Keith Hirokawa, Rethinking Sustainability to Meet the Climate Change Challenge ix-xi (2015).
2. Stockholm Resilience Centre, *Planetary Boundaries*, https://www.stockholmresilience.org/research/planetary-boundaries.html (last visited Aug. 13, 2024).
3. *All Planetary Boundaries Mapped Out for the First Time, Six of Nine Crossed*, Stockholm Resilience Ctr. (Sept. 13, 2023), https://www.stockholmresilience.org/research/research-news/2023-09-13-all-planetary-boundaries-mapped-out-for-the-first-time-six-of-nine-crossed.html.
4. Johan Rockström et al., *Planetary Boundaries: Exploring the Safe Operating Space for Humanity*, 14 Ecology & Soc'y art. 32 (2009), https://www.ecologyandsociety.org/vol14/iss2/art32/.

humans are changing basic attributes of planetary systems—such as biodiversity, climate change, freshwater use, and toxic loadings—to the point of risking the future of human civilization.

However, for the first time, in May 2023 in *Nature*, these researchers assessed not only the *safe* planetary boundaries but also the *just* ones.[5] Considerations of equity and justice, the authors concluded, require that we rethink three of the planetary boundaries: (1) nitrogen, which is critical for fertilizing crops but also creates water pollution, harmful algal blooms, and marine dead zones; (2) aerosols; and (3) climate change, which imposes disproportionate impacts on some populations.

The distinction between "safe" and "just" planetary boundaries raises several questions regarding how to conceptualize the "good life" in the Anthropocene. The ELC discussions and the essays that follow played with various conceptions of the "good"—from "enjoyable" to "moral"—as well as the various elements necessary to a good life in the Anthropocene, from choice to respect to requirements like freshwater to amenities like outdoor recreation.

## I. A "Good Life" in the Anthropocene

*This section was authored by Karen Bradshaw, Professor of Law and Mary Sigler Research Fellow, Sandra Day O'Connor College of Law, Arizona State University; Senior Sustainability Scientist, Global Institute of Sustainability, Arizona State University; and Faculty Affiliate Scholar, Classical Liberal Institute, New York University School of Law.*

What is the good life in the Anthropocene?[6] For three days in July 2023, roughly 15 environmental law professors met in Hood River, Oregon, to discuss this question. Throughout the conference, a brain trust of legal minds worked on some of the trickiest questions of our time, unpacking topics as varied as unsheltered populations in the heat[7] to solar geoengineering. This was an ordinary academic meeting, with a typed, preset agenda, structured presentations, and formal meal and break times. Although interesting, however, it was not the conversations at the formal meeting times that interested me most.

Instead, what caught my attention was what was happening outside of the formal discussions. What did people do during breaks? Where did their interests tend after hours? What were the "off-point" conversations people made?

It was here, in these spaces between what we were "supposed" to be doing, that law professors—unaware that they were being observed—unconsciously revealed their preferences of what the "good life" meant to them. What came forward was observations of tactile, physical connection with the natural world. When academics aren't performing the job of being academics, they are humans—humans on a planet spinning around the sun, one species among countless others with a thirst for contact with the natural world.

Here are some of the things I observed my colleagues doing:

- Swimming in the Columbia River Gorge at 9 PM. They submerged their bodies in lukewarm water, dark blue, framed by the hunter green fringe of a tree line contrasting against the warm pink of a not-quite-visible sunset.
- Standing in the sun between meetings, arms outstretched. "I am like a lizard, taking in the sun," my colleague said. Her animal body wanted sunlight as a repose from the air-conditioning.
- Wandering down to wild blackberry bushes and picking a few misshapen ripe berries to share with others back in the conference room. The store-bought blackberries in a plastic carton were larger and sweeter—almost double the size of the berries held in the hands. But, although a bit more bitter, the wild ones touched something in the soul.
- Sneaking off to a yarn store during a break, in pursuit of the texture of wool shorn from a sheep to pass through one's hands during long hours of meetings. Knitting, fingers against the soft blue and dark blue yarn, looping over needles as voices spoke.
- Holding a colleague's squishy, smiley little baby—tickling toes and making eye contact to elicit a smile from the tiny person. Parents whose children were grown held the baby's back against their chest, rocking it with an instinct once gained and never lost—body to body in a gentle bouncing motion.
- Walking with dogs, bringing them to the river, and watching them bark, stretch their leashes, and pull.
- Drinking wine at a tasting at a local vineyard. Allowing the sensation of elements on grapes wash over the tongue to compare different vintages and varietals.

These observations reveal people in animal bodies, interacting with space and one another in unguarded ways; this is the good life and what we all want. It is true that without shelter or physical safety, or adequate health care,

5. Johan Rockström et al., *Safe and Just Earth System Boundaries*, 619 Nature 102 (2023), https://doi.org/10.1038/s41586-023-06083-8.
6. Robin Craig provides a useful definition of the "Anthropocene" as "the era in which human interactions with ecological processes at multiple scales has become the major driver of planetary function and dysfunction." Robin Kundis Craig, *George Perkins Marsh: Anticipating the Anthropocene*, *in* Pioneers of Environmental Law 3, 3 (Jan G. Laitos & John Copeland Nagle eds., Carolina Academic Press 2020). An essential part of this is grappling with reactions to climate change. *See* Cinnamon P. Carlarne, *Climate Creep*, 52 ELR 10374, 10374 (May 2022) ("By now, we know that climate change is ongoing and unavoidable—that climate change is not just coming, but is here and is reshaping our world before our eyes.").
7. For a fascinating study of thermal inequity in Richmond, Virginia, see Danielle Stokes, *From Redlining to Greenlining*, 71 UCLA L. Rev. 628 (2024).

many cannot access the good life.[8] But it is also true that by reducing life to things and possessions, we forget what my colleagues' actions revealed: the good life exists in small bits of pleasure that are inexpensive, easily obtainable, and nearly universal. We like different experiences but are drawn to some physically comforting intersection between where we are in a moment.

It is easy to critique the attempt to thus broaden my set of observations as oversimplified in two ways. *First*, without coordinated environmental action of the type discussed in meetings, these small moments of joy will not be so joyful. Sure, if the river is polluted, people cannot swim in it. If wildfires ruin grape crops, the wine will not taste good.[9] So this line of critique might go. However, not all the things we enjoy are available for engagement with legal and economic structures.

This is true; it does not diminish how good the heft of a baby feels in one's arms to know that the child may grow up in a world wildly different than our own. To deny the sensual pleasure is to deny humanness, beingness. We can know one thing but physically feel another in our bodies; the physical feltness is not wrong, even if it is not what our intellect would have us feel.

*Second*, the pleasures available through yarn and wine enjoyed on a weekday reflect the privilege of professionals. There is undoubtedly privilege embedded in structural systems that allowed this group to be in a beautiful place, the carbon emissions spent flying, the social inequalities underlying long breaks on a workday, the taken-for-granted access to clean water.[10]

This, I think, is right. But it does not diminish the universality of the joy of place. Like music or art, one's capacity to enjoy nature and physical connectedness to place are not the exclusive providence of the privileged or even the human.[11] Most people know what it is to enjoy the feel of sunshine, water against the skin, and food texture in the mouth.

The good life in the Anthropocene must include connection to the physical world. It is easy to treat the body as a vehicle for shuttling about minds, but our animal bodies crave sensations and drive us to explore and experience place. We want to touch yarn with our fingers and taste warm blackberries, feel the sensation of water and sun against our skin, and experience with our tongue the physical manifestation of a winemaker's gift. We are physical beings in a material world. Perhaps honing into these aspects of the good life—simple, universal, physical, felt—might reveal new answers about how we can enjoy one even in a changed, changing world.

## II. Baking in Inclusion

*This section was authored by Rebecca Bratspies, Professor of Law at CUNY School of Law and Director of the Center for Urban Environmental Reform.*

It was my privilege to be part of the planning committee for the ELC 2023 meeting organized around the theme *Consumption and the Good Life in the Anthropocene*. Planning this meeting prompted some deep thought about what the "good life" means. For me, the answer involves being part of a community; being welcomed, valued, and included. So, I decided to focus my attention on the specific people gathering in Oregon, and what it would mean for us to share the "good life" during our time together.

Law schools, like many other organizations, have been criticized for being white spaces—settings in which diversity is absent, not expected, or marginalized.[12] This criticism is not an assertion that law schools, law organizations, and law societies are off-limits to people of color, or to religious and gender minorities. Instead, the critique is that these spaces are structured with cis-hetero-whiteness as the default, as what is normal, unremarkable, and given.

Deviations from this presumed "regular" person are always noteworthy—and often suspect. Such spaces only accommodate the "other" willing to alter themself to conform with preexisting practices. Sandy Levinson characterized this phenomenon as a form of inclusion that is predicated on newcomers "bleaching out" their self-identity.[13]

In the wake of the racial reckoning sparked by the murder of George Floyd, critiques of bleached-out inclusion gained increased traction. Even as the U.S. Supreme Court

8. It is important to note that the good life is not just randomly available, but is instead a function of structural forces, a key consideration of the important and growing field of environmental justice. See, for example, a discussion about environmental injustice in energy utility regulation by Ruhan Nagra, Jeanne Bergman, and Jasmine Graham, in which they note how "bland and purportedly neutral" policies can "conceal a system that is designed to protect and benefit the very industry subject to regulation." Ruhan Nagra et al., *Regulatory Theater: How Investor-Owned Utilities and Captured Oversight Agencies Perpetuate Environmental Racism*, 25 CUNY L. Rev. 355, 356 (2022). This is exacerbated by processes that are difficult for average citizens and requires highly specialized knowledge inaccessible to less-well-resourced parties. *Id.* at 396-98. Sarah Fox notes that even environmental laws that encourage cleanup and remediation can have detrimental effects on communities of color. Sarah Fox, *Environmental Gentrification*, 90 U. Colo. L. Rev. 803, 806 (2019).
9. Of course, the damage caused by wildfire extends far beyond the effects on wine grapes; for a discussion of wildfire as a complex adaptive social-ecological system, see Robin Kundis Craig & J.B. Ruhl, *Adaptive Management for Ecosystem Services at the Wildland-Urban Interface*, 14 Int'l J. Commons 611 (2020).
10. Michele Okoh, *Forgotten Waters*, 111 Geo. L.J. 723, 725-26 (2023) (describing that 15% of the American population depends on well water, which has widely divergent state regulation); Camille Pannu, *Bridging the Safe Drinking Water Gap for California's Rural Poor*, 24 Hastings Env't L.J. 253, 254 (2018) (noting "that decades of disinvestment in rural, disadvantaged communities had created severe water contamination, limited water access, and degraded water infrastructure").
11. Although everyone lives in a physical environment, Rebecca Bratspies reports that "[i]n nearly all of my discussions with the very urban youth of New York City, I met with students who responded to the question 'do you live in the environment' with a negative." Bratspies viewed this externalization of the self and the environment as a "crisis" and responded by publishing *Mayah's Lot*, a comic book about environmental justice. Rebecca M. Bratspies, *Mayah's Lot: Teaching Environmental Justice With Comic Books*, *in* The Media Method: Teaching Law With Pop Culture 505 (Christine A. Corcos ed., Carolina Academic Press 2019).
12. Bennett Capers, *The Law School as a White Space*, 106 Minn. L. Rev. 7 (2021); Elijah Anderson, *"The White Space,"* 1 Socio. Race & Ethnicity 10 (2015).
13. Sanford Levinson, *Identifying the Jewish Lawyer: Reflections on the Construction of Professional Identity*, 14 Cardozo L. Rev. 1577 (1993).

actively undermines voting rights, reproductive rights, and affirmative action, critics nevertheless demand radical transformation of white spaces. Rather than expecting historically excluded groups to adapt themselves to the social architecture of white spaces *as they have already been made* (to paraphrase Lawrence Lessig),[14] they instead demand that white spaces change in order to reflect the full diversity of those who use them.

This transformative vision of diversity, equity, and inclusion (DEI) has triggered a virulent, sometimes violent, backlash. We see this backlash when trans children want to use bathrooms or compete in sports, or when a "Wise Latina"[15] brings empathy to the Supreme Court. This backlash emerges whenever, instead of gratefully conforming themselves to existing practices, the newly admitted instead try to alter the preexisting social architecture.

Many scholarly descriptions of "white spaces" emerge from a specific racialized context in the United States, but subaltern critiques[16] and decolonization studies[17] make similar points. As part of a summer writing collaboration, Prof. Carmen Gonzalez and I applied these insights to what she termed the "unbearable whiteness" of environmental law.[18]

I am convinced that these ideas have wide salience for how to make any group a welcoming community. So, as part of organizing this conference on the "good life," I decided to apply them to my portion of the planning process—the food. That meant thinking about how (and whether) our catering practices could make every person joining us feel fully part of the community we were creating.

Maybe, having gotten this far, you, dear reader, conclude that I was overthinking. Maybe I was. An extremely poor cook myself, I am remarkably unqualified to assess what commitment to authentic DEI should look like in the context of feeding conference participants. Fortunately, I found an excellent caterer willing to think this through with me.[19] More importantly, she had the expertise to make it happen.

Together we constructed a menu that took on the task of feeding the conference locally grown, culturally appropriate food. Our attendees had a lot in common (we *are* environmental law profs after all), but this seeming homogeneity cloaked wide divergences. Our relatively small group adhered to a remarkable range of eating practices—some vegans, some vegetarians, and some omnivores. There was also an array of food allergies to accommodate, some of which were life-threatening.

Our commitment from the beginning was to create meals that would work equally well for everyone. The goal was to make sure every participant had the Lockean "enough and as good" that undergirds the social commons.[20] "Enough" was easy; in a country awash with food waste, it was not even a question. Indeed, overconsumption emerged repeatedly as an important subtheme in our conference conversations about the "good life."

"As good" seemed much more challenging. As a vegetarian, I am quite familiar with scrounging for food at meetings when the convenors fail to plan for dietary diversity. I am equally used to eating uninteresting, veggie platters—the vegetarian afterthought thrown together from side dishes. Such food makes it clear that vegetarians rate far less attention than "regular" eaters. The food comes with the (often unspoken) message that all too often undergirds such inclusion—keep quiet and be grateful we gave you something.

It was this division into "regular" and "other" that we hoped to avoid. That is where the real work of DEI happens—making sure that everyone feels equally welcomed, equally valued, equally part of the community. Surprisingly, it turned out that providing "as good" to our participants was not that hard, at least when the issue was food. It just took prioritizing inclusion, and remembering that eating is also about culture, not just about nutrition and taste.

We skipped ingredients that posed either danger or cultural issues for any of our group members. Our incredible caterer then constructed delicious meals that shared a common core of ingredients but allowed customization for the finishes. Everyone could personalize their own portion. Those who wanted meat could add it, those that did not could add other proteins. We all had both the same and different—at the same time. There is surely a metaphor for the good life in there somewhere.

Did we solve the world's problems through inclusive catering? No, of course not. The food merely fueled frustrating, painful, and often frightening conversations about our rapidly warming world. But did everyone enjoy the food? Did the food help every participant know that their unique presence was valued? I hope so.

My takeaway: If we want to solve big problems, perhaps we should start by solving the small ones. Centering difference and respecting diversity on the microscale may offer a model for doing it on the macroscale. After all, if we want things to be different, we must do things differently.

14. Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach*, 113 Harv. L. Rev. 501, 507 (1999).
15. Aaron Hess & Miriam Sobre-Denton, *Setting Aside the "Wise Latina?": Postracial Myths, Paradoxes, and Performing Enculturation in the Sotomayor Confirmation Hearings*, 65 Commc'n Stud. 1 (2014).
16. Gayatri Chakravorty Spivak, *Can the Subaltern Speak?*, *in* Colonial Discourse and Post-Colonial Theory 66 (Patrick Williams & Laura Chrisman eds., Routledge 1994).
17. *See, e.g.*, Farhana Sultana, *The Unbearable Heaviness of Climate Coloniality*, 99 Pol. Geography 102638 (2022).
18. Carmen Gonzalez & Rebecca Bratspies, *The Unbearable Whiteness of Environmental Law*, CPR Blog (Nov. 1, 2023), https://progressivereform.org/cpr-blog/the-unbearable-whiteness-of-environmental-law/.
19. Our caterer was Sara from White Buffalo Wine Bar and Bistro in Hood River, Oregon, http://www.whitebuffalowines.com (last visited Aug. 13, 2024). If you are in need of a caterer in that area, we highly recommend her.
20. John Locke, Two Treatises of Government 118-20 (Peter Laslett ed., Cambridge Univ. Press 1988) (1689).

## III. Finding Beauty in the Anthropocene

*This section was authored by Michele Okoh, Assistant Professor at Lewis & Clark Law School.*

> *If you are silent about your pain, they'll kill you and say you enjoyed it.*
>
> —Zora Neale Hurston[21]

We sat in a circle, shoulders slumped, eyes bared down to the floor. We were surrounded by nature yet engulfed in steel, lumber, and stone. We reflected on the natural world around us through a protective cage crafted through the ingenuity of that singular beast called "human." Light shone in through the windows beckoning us to release our stress, our mind, our thoughts, to the boundless sun beyond, but instead, we sat together, facing each other.

Together yet apart. Facing each other without truly seeing the other person who sat across from us. Because to do so would mean to be exposed. In truth, we were all guilty in some way. Guilty of falling prey to the false idol of unsustainable consumption. As we went over the theme that would consume us for the coming two years, our conference became more of a confessional than a structured discussion of scholarly pursuits.

What does it mean to live the good life in the Anthropocene? There is something very personal about this particular topic, something that rips one from the tender comforting hold of objectivity. This question naturally prompts one to self-reflection. This question is not just about the good life. It intrinsically asks, "The good life for whom?" Normally, when posed the question of "whom?," my mind begins thinking in terms of populations. This time, however, I found my thinking repeatedly orienting toward a population of one: me.

Yes, the person who unflinchingly crosses out every "I," "me," and oh "my" has found herself speaking as, well, myself. After all, isn't that what the Anthropocene is all about, us, humans? It is the result of a world ruled by humans for humans. A world centered around human comfort and human needs.

We consume. We develop unabashedly. What is life if not growth? And what is growth without consumption? It doesn't take much deep thought to realize that where there is consumption there is also waste—ugly, hideous, destructive waste. Nevertheless, there is beauty in the Anthropocene. Yes, while the Anthropocene is marked by the devastation of the earth and the proliferation of a toxic environment, the Anthropocene is also beautiful.

If we want people to change their behavior to protect the environment and their health, we need to see beyond the ugliness and destruction. We also need to see the beauty that lies within the Anthropocene. This beauty will look different to everyone depending on their values, but it is an effort worth taking if we want to achieve real change. It also means taking the time to be still, reflect, and, yes, confess.

Effective communication will require more than a top-down approach where we deliver our all-powerful messages as experts and scholars.[22] It will require empathy and the uncomfortable admission that we too, for our own personal reasons, find something uniquely beautiful about the Anthropocene. After all, the Anthropocene is the result of humanity reshaping the world into its own image. As much as it poisons, kills, and destroys, it is the product of our creation. To turn away from it means to also turn away from a part of ourselves, to place a limit on our own desires. It means giving up a part of ourselves.

### A. *Painting in the Sky With Pollution*

"Pollution is beautiful," my friend said to me as we sat together sharing a locally sourced organic meal. My friend worked at a small airport, and he was describing the barrage of air contaminants he observed almost daily at his place of employment. I watched as he sat there for a moment completely enraptured by the image unfurling before his mind's eye, an image so vivid that its very mentioning infected my vision. I was transfixed. These were the same pollutants we knew to be toxic, unhealthy.

However, we sat there in silent acknowledgment that the visual signs of their poison—the unnatural mix of colors dancing, flowing, intermixing before a retreating sun—were beautiful. We agreed to this despite knowing that they represented the cost of health and life, a cost that was inequitably distributed among the beings inhabiting this planet. Just by looking into my friend's eyes, I understood that it was a beauty that despite his near daily observance of it never grew old and never tired. Its vitality never waned.

Suddenly, I found my awe twisting and mutating into horror. The once captivating image slowly morphed from a nebula of color to a vacuous all-consuming cloud. Its beauty, its vitality, was based on the consumption of our vitality, our health, and our life. I suddenly realized that I was not merely vicariously experiencing beauty through my friend's eyes, but also—death.

### B. *Confessions of a Middle-Aged Millennial on the Road to Utter Fabulousness*

I have decided that 40 will be the year of "me." Finally, I am prioritizing self-care and pampering myself. As a young mother, I never gave myself time for such things. There was always something that I foolishly prioritized over myself. My well-being somehow always seemed to take a back seat to my son and career, but not anymore. Midlife is going to be about me and me with a little more me. The first thing

21. Their Eyes Were Watching God (1978).

22. *See* Patchanee Malikhao, *Health Communication: Approaches, Strategies, and Ways to Sustainability on Health or Health for All*, *in* Handbook of Communication for Development and Social Change 1015, 1035 (Jan Servaes ed., Springer 2020).

on my list of utter fabulousness is to tend to my appearance. That's right.

- No more secondhand clothing.
  *Yes, despite the fashion industry's abysmal impacts on the environment and health.*[23]

- And I am booking my very first mani-pedi.
  *Yes, also, despite nail salons' negative impacts on the environment and health.*[24]

- The hair will be done.
  *Now, this is where I can be both green and fabulous.*

### C. Now, This Is Where I Can Be Both Green and Fabulous

I have not used chemical straighteners for the past 20 years, and I have no intention of doing so now. I decided this even before the National Institutes of Health study indicated that there is an increased risk of uterine cancer associated with chemical straighteners[25] and the now-pending lawsuits[26] against chemical hair straightening companies. I chose the difficult road of going natural.

This time around, I decided to get extensions added to my hair. This was the first challenge to my commitment to green hair fabulousness. As I walked into the beauty supply store, I saw a small section of nontoxic braiding hair. I also noticed that this small selection of hair was bone straight. It looked nothing like the hair growing from my head. Finding a texture similar to my hair led me to modacrylic fiber Kanekalon hair, a product composed of fibers that are toxic to human beings.[27]

I also needed other supplies for maintaining my hair. I picked up a shower cap with an image of a Black woman on it, but when I flipped it over, I saw a California Proposition 65 warning label on the back. I then inspected a shower bonnet with the image of a white woman on the front and noticed no such label. I purchased the product with the white woman on the front. I then used my phone to scan product barcodes to identify Black hair products that I would want to avoid because of toxic ingredients. Scan after scan revealed the same result: "That product isn't in our database yet. . . ."

Finally, I arrived at my refuge, the beauty salon. Getting my hair done meant spending my entire day at the salon. It was to be a place of peace where a Black woman could find community. However, my peace was quickly disturbed by the sound of a curious visitor. I opened my eyes to see an inquisitive white woman standing over me.

I now knew what all those poor animals felt like at the zoo, objectified and examined. The temptation was too strong to observe a Black woman in her natural environment. My stylist later informed me that our visitor had tried to reach out and touch my hair while my head was down. Thankfully, my stylist stopped her. I guess she had confused the salon with a petting zoo.

I observed her eyes darting back and forth nervously as she tried her best not to look uncomfortable surrounded by Black bodies. Of course, we had not surrounded her. It was she who chose to step into the middle of a Black hair salon. Nevertheless, she persisted. She struggled to get her questions and comments out until she got to the one she really meant to say. "Do you do—um—normal hair," clumsily stumbled out of her mouth.

My mouth fell open. I heard a gasp from my stylist standing behind me and the indignant exclamation of the stylist next to me. Our visitor's, or rather intruder's, reaction was to desperately explain that *that* was not what she meant, but I think we all knew what she meant.

Despite all my knowledge, I still struggle with the idea that my natural hair may not be considered "professional" enough. All too often "professional" is code for "white" or "Eurocentric." Even without hair extensions or chemical hair straighteners, the road is difficult for Black women and our hair. The attitude that our natural hair is somehow unnatural still prevails.

Across the United States, there are efforts to pass legislation known as the CROWN Act (Creating a Respectful and Open World for Natural Hair Act) to prohibit race-based hair discrimination. However, a law is only as good as its enforcement, and it remains to be seen how much enforcement will happen.[28] One Texas high school celebrated the passage of Texas' CROWN Act by suspending one of its students for wearing dreadlocks. Apparently, the student's "outward expression of his Black identity and culture" did not meet the school's standards of appropriate "grooming."[29]

Perhaps limiting this problem to Black women fails to acknowledge the importance of hair to Black identity and culture. It is all too easy to limit this issue to a single gender. There will be no divide and conquer today.

No, there is no such thing as an easy road when it comes to Black hair, no matter how utterly fabulous one may be.

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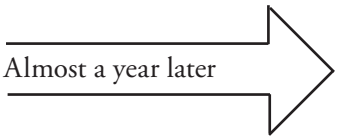
23. *See* Kelsea Schumacher & Amanda L. Forster, *Facilitating a Circular Economy for Textiles Workshop Report* (National Institute of Standards and Technology, Special Publication No. 1500-207, 2022).
24. *See* Occupational Safety and Health Administration, U.S. Department of Labor, Stay Healthy and Safe While Giving Manicures and Pedicures: A Guide for Nail Salon Workers (2012).
25. *See* Che-Jung Chang et al., *Use of Straighteners and Other Hair Products and Incident Uterine Cancer*, 114 JNCI 1636 (2022).
26. *See* Michelle Llamas, *Chemical Hair Straightener Lawsuits*, ConsumerNotice.org (Aug. 2, 2024), https://www.consumernotice.org/legal/chemical-hair-straightener-lawsuit.
27. *See* Chrystal G. Thomas, *Carcinogenic Materials in Synthetic Braids: An Unrecognized Risk of Hair Products for Black Women*, 22 Lancet Reg'l Health—Ams. 1 (2023).
28. *See* The CROWN Act, *Home Page*, https://www.thecrownact.com/ (last visited Aug. 13, 2024).
29. Juan A. Lozano & Cheyanne Mumphrey, *Texas High School Black Student Suspended Over Hair Likely Won't Return to His Class Anytime Soon*, Associated Press (Dec. 13, 2023), https://apnews.com/article/hairstyle-texas-crown-act-racial-discrimination-student-9fdf5384db15b925a6d601d746da3367.




A lot can change in a year. I have seen significant progress made in relation to legal protections related to toxics in beauty products. Since then, the U.S. Congress has greatly expanded the Food and Drug Administration's (FDA's) authority to regulate cosmetics through the Modernization of Cosmetics Regulation Act of 2022 (MoCRA),[30] the biggest expansion of FDA's authority since the Federal Food, Drug, and Cosmetic (FD&C) Act, which was passed in 1938.[31] Additionally, states such as California, Washington, and New York have also followed suit and have acted to regulate toxics in personal care products.[32] However, it still remains to be seen how these laws will be implemented.

As I reflect now almost a year later on my fabulous adventure, I see new beauty. Or perhaps it is better described as old beauty. I am now excited to shed my outer coverings of the previous year and convert them into new visions for my visage. Mixing and matching fails to truly capture the joy of whisking new combinations of the apparel that felt all too familiar going into the end of last season.

Can one truly transform the old into something new? Challenge accepted! Let the reuse begin and the creativity flow through me like a bankless river, overflowing and consuming all its surroundings. As I look down at my hands, I no longer see acrylic nails, but instead I am awestruck by the subtle shades and strength underlying the bed of my natural nails. My hair, at least for now, is no longer purple and is free from the anvil of synthetic hair that adorned my locks almost a year ago.

I have been using my trusty toxics apps; and more and more Black beauty products are now identifiable in my app. I have come to realize that this change had nothing to do with the app but was instead catalyzed through me. Over the course of that almost year, instead of deleting that app and simply resolving that it wasn't designed for someone like me, little by little, I started adding the products I used into it. Most of the people using the app probably don't look like me, but that doesn't mean they get to pretend I don't exist. No, you don't get to pretend I am invisible or a novelty. My Blackness isn't new, and I bear it all, whether willingly or unwillingly, for all to see.

Then again, whoever said that something had to be new to be beautiful? Yes, there is beauty in the Anthropocene, but there is also beauty in the natural world. We must not forget that we are, in fact, part of that natural world, and, therefore, are also beautiful.

I also look back at that group of scholars and see that they have taken those admissions made in our shared confessional almost a year ago and have transformed them into action. Further, I have acted as a scholar and committed my skills to educating those on the frontlines of maternal health about how the environment impacts maternal health.[33]

Yes, there is beauty in the Anthropocene. Boundless colors extending beyond the bounds of what the human mind can perceive. Countless textures vying to be discovered, to be exploited. After all, the world is our canvass. Shall we paint it, forge it, mold it into our image? Aren't we only limited by our own imagination? No, we are limited by far more. We are limited by our health and an earth that we have exploited for temporary gains.

Despite these limitations, we are not powerless. We all have agency, power pulsing within our being, waiting to be released. Its existence is not dependent on acknowledgement, neither our own nor anyone else's. The only question is what will we do with that power?

## IV. Governing for the Good Life

*This section was authored by Danielle Stokes, Associate Professor at the University of Richmond School of Law.*

When contemplating the "good life" in connection with consumption and planetary boundaries, one might presume that a group of law professors would think *big*—something along the lines of how to save the world by developing international policies that reduce consumption and change our collective lives for the better. Yet, the group's discussion quickly shifted to individual notions of the good life and local consumption patterns. Is this inclination because we are inherently individualists who happen to live in a global society, or do we simply believe that effective change begins at home?

When we do think *big*, we praise the Intergovernmental Panel on Climate Change for considering climate impacts on a global scale and champion the United Nations for gathering the Conference of Parties annually to try to tackle the thorniest of issues. But how effective are these insights in the absence of legitimate government buy-in and enforcement mechanisms?[34] During a final group discussion, someone posed the question, "Can law lead?" The limitations of the United Nations might suggest that it cannot, particularly not at a global scale. Even when scaling down to a national level, governing for the good life seems fraught.[35]

Will the United States, or any country for that matter, rise to the occasion and govern for the good life, however it may be defined? Maybe the ethos of the good life is pri-

30. *See* 21 U.S.C. §§604 et seq.
31. *See id*. §§361 et seq.
32. Cal. Health & Safety Code §§108980-108982 (West 2024); Toxic-Free Cosmetics Act, Wash. Rev. Code §70A.560 (2023), https://app.leg.wa.gov/RCW/default.aspx?cite=70A.560; N.Y. Env't Conserv. Law §37-0117 (McKinney 2024).
33. Michele Okoh, *Environmental Impacts on Maternal Health*, *in* The Practical Playbook III: Working Together to Improve Maternal Health 247 (Natalie D. Hernandez et al. eds., Oxford Univ. Press 2024).
34. *See* KPMG, *Climate and Sustainability: 2023 Regulatory Challenges*, https://kpmg.com/us/en/articles/2022/ten-key-regulatory-challenges-2023-climate-sustainability.html (last visited Aug. 13, 2024).
35. *See, e.g.*, Benjamin K. Sovacool, *The Best of Both Worlds: Environmental Federalism and the Need for Federal Action on Renewable Energy and Climate Change*, 27 Stan. Env't. L.J. 397, 415-16 (2008).

oritizing intergenerational and intragenerational justice,[36] managing transitions equitably,[37] distributing benefits and burdens such that cycles of harm are not perpetuated,[38] and establishing resilience as a tenet for communities and ecosystems.[39] Maybe governing for the good life starts small, establishing a sense of collectivism by exploring individual perspectives about the goods and resources we consume and why we consume them.[40] Maybe it encourages thoughtful engagement with principles of sustainability from both an educational and practical perspective.[41] If so, then perhaps incorporating these quintessential elements at a community level can expand broadly to states, regions, and nations. From this place, climate challenges can be managed globally with dynamism and collaboration.[42]

This sounds like a lofty, and unlikely, goal. But even if the good life as I've described it is not a likely outcome, should we forgo the possibility of governing in a way that at least promotes a better life for the collective? Of course not.

As with any complex law or policy, priorities can be reassessed in ways that allow for incremental changes. This may be perceived as ineffective or insufficient given the intensity of the climate crisis and the calls for urgent action. If left unaddressed, the dichotomy between urgency and equity may result in a better life for particular people in particular places while leaving those who are under-resourced the least protected.[43]

Finding consensus is at the crux of governing for the good life. Yet, building consensus in a local community, not to mention in a country as vast and diverse as the United States, is a daunting task especially in the current political climate. Scholars and other experts have suggested incorporating new voices (in addition to scientists, environmentalists, and liberal politicians) and framing issues around economic development or disaster resilience[44] as a means of building consensus around environmental policies.[45]

Even when providing guidance to its international partners, the U.S. Environmental Protection Agency (EPA) identified public participation as critical to environmental governance.[46] In July 2023, EPA updated its public participation guide's tool kit on consensus-building and emphasized the need to build trust in order to reach agreements. Specifically, the Tools for Consensus Building and Agreement Seeking prioritizes small group meetings ranging from 10 to a few hundred people.[47] The groups vary in size depending upon how contentious a particular decision may be.[48] These public sessions create opportunities for open and honest dialogue and knowledge sharing, which in turn promotes an informed electorate that shapes the values of its government.

Law alone cannot lead. To reconcile the intricacies of the good life with the need for expedient climate action, small changes and shifts in perspective have to be part of the governance strategy. Transitioning toward renewable energy sources, sustainable agriculture, and resilient development will require new governance priorities. Making big changes often starts small. Change requires consensus. Consensus takes time.

The impending climate crisis may dictate an expedited timeline, but it does not guarantee an expedited change in human nature. In the United States, a shift from individualism to collectivism may be warranted if we are to define the "good life" to include the current and future generations and govern in a way that meets their needs.[49] In the meantime, small steps can be taken on a local level to shift us toward a life that is good.

## V. The Tragedy of Living in the Anthropocene

*This section was authored by Amber Polk, Assistant Professor of Law, University of Alabama School of Law.*

The possibilities for a human life in the Anthropocene are well beyond what prior eras of human history could have ever imagined. We can provide clean drinking water to millions of people, on demand.[50] We can cure (most) bacterial infections.[51] We are capable of eradicating deadly dis-

36. Rockström et al., *supra* note 5.
37. *See* Piyush Verma, *Reimagining Governance for a Just Energy Transition*, U.N. Dev. Programme (May 4, 2023), https://www.undp.org/blog/reimagining-governance-just-energy-transition.
38. Alice Kaswan, *Distributive Justice and the Environment*, 81 N.C. L. Rev. 1031 (2003).
39. Sarah J. Adams-Schoen, *Beyond Localism: Harnessing State Adaptation Lawmaking to Facilitate Local Climate Resilience*, 8 Mich. J. Env't & Admin. L. 185 (2018).
40. *See* Karl Coplan, Live Sustainably Now: A Low-Carbon Vision of the Good Life 25-36 (2021).
41. *See* Heather Burns et al., *Teaching Sustainability: Recommendations for Best Pedagogical Practices*, 19 J. Sustainability Educ. 1 (2019).
42. *See* Erin Ryan, *Environmental Federalism's Tug of War Within*, *in* The Law and Policy of Environmental Federalism: A Comparative Analysis 355 (Kalyani Robbins ed., Edward Elgar 2015); Hari M. Osofsky et al., *Arctic Energy Cooperation*, 49 U.C. Davis L. Rev. 1431, 1504-08 (2016).
43. Maxine Burkett, *Behind the Veil: Climate Migration, Regime Shift, and a New Theory of Justice*, 53 Harv. C.R.-C.L. L. Rev. 445 (2018).
44. *See* Hari M. Osofsky & Jacqueline Peel, *Energy Partisanship*, 65 Emory L.J. 695, 703-18 (2016).
45. Anthony Leiserowitz, *Building Public and Political Will for Climate Change Action*, Yale Sch. Env't (June 30, 2020), https://environment.yale.edu/news/article/building-public-and-political-will-for-climate-change-action.
46. U.S. Environmental Protection Agency (EPA), *Public Participation Guide*, https://www.epa.gov/international-cooperation/public-participation-guide (last updated July 3, 2024).
47. U.S. EPA, *Public Participation Guide: Tools for Consensus Building and Agreement Seeking*, https://www.epa.gov/international-cooperation/public-participation-guide-tools-consensus-building-and-agreement-seeking (last updated July 3, 2024).
48. *Id.*
49. Richard Weissbourd & Chris Murphy, *We Have Put Individualism Ahead of the Common Good for Too Long*, Time (Apr. 11, 2023), https://time.com/6269091/individualism-ahead-of-the-common-good-for-too-long/.
50. U.S. EPA, Report on the Environment: Drinking Water (2023), https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=45.
51. The discovery of penicillin in 1928 dramatically altered modern medicine and spurred an antibacterial revolution in pharmacology. Richard Sykes, *Penicillin: From Discovery to Product*, 79 Bull. World Health Org. 778, 779 (2001), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2566502/pdf/11545336.pdf. Antibiotics are credited with increasing human life expectancy dramatically in developed countries in the 20th century, *see* Waheed A. Adedeji, *The Treasure Called Antibiotics*, 14 Annals Ibadan Postgraduate Med. 56, 56 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5354621/, though antibiotic-resistant bacteria are an increasing concern. *See, e.g.*, Ruggero La Rosa et al., *Persistent Bacterial Infections, Anti-*

eases through the development of vaccines.[52] We can treat many chronic illnesses, saving some from early death and providing a life worth living to many.[53]

We have heat, air-conditioning, refrigerators, stoves, and ovens. We have washers and dryers, eliminating the time-consuming requirement of washing things by hand.[54] We live in modern housing, which protects us from incessant natural threats, such as insects and other predators.

We can travel thousands of miles in the span of a few hours, bridging the chasm that geographic distance puts between individuals.[55] We can drive to remote and wild places in the world, chasing new adventures.[56] We can develop new hobbies and find new friends because we are no longer captive to a life confined to a few-mile radius from our homes.

We can pursue an entire course of study from our bedrooms.[57] We can figure out how to fix our stuff by watching videos on the Internet.[58] We have real-time navigation in the palm of our hands.

The Anthropocene has made available the possibility of the good life to so many people, in both relative and absolute terms. During the Anthropocene, we have eliminated so many natural challenges to the survival of the human organism that what a person can learn and do, and who they can be, is effectively limitless. There is not enough time in a single human life to pursue all the ends worth pursuing made available in the Anthropocene.

Yet, living through the Anthropocene reveals that the creation of these new ends as part of the good life was pursued at the cost of sharing participation in the good life with others. There are approximately 760 million people globally that lack access to electricity.[59] Another two billion people lack access to clean drinking water.[60] More than half a million people die annually from malaria, a treatable parasitic disease.[61]

Many poor countries already and will continue to bear a disproportionate burden of climate change impacts, while receiving few of its benefits.[62] There are countries at risk of disappearing entirely as a result of sea-level rise.[63]

The Anthropocene, the possibility of a good life with boundless ends worth pursuing, was not only built unjustly, on the basis of denying others that same possibility, it was also built on borrowed time. Natural disasters do not discriminate. The Pacific Northwest heat wave of 2021 killed hundreds.[64] Heat waves in France have killed tens of thousands.[65] Wildfires kill indiscriminately and expose millions to unhealthy air quality. Major hurricanes can get to be so strong that we might need to revise our hurricane rating system to recognize Category 6 storms.[66]

We are likely at an inflection point in the endless creation of new ends. For all the joy and excitement that a *privileged* life in the Anthropocene rightfully brings, there should be significant regret that the *way* this life was made excluded so many and will prevent it from enduring into future generations.

This inflection point was not inevitable. Mankind is not required to pursue any end, not even her natural ends. Our capacity for practical reason allows us to decide whether

*biotic Treatment Failure, and Microbial Adaptive Evolution*, 11 Antibiotics 419 (2022), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8944626/.

52. The most well-known and deservedly heralded eradication was of the smallpox virus in 1980. Centers for Disease Control and Prevention, *Smallpox*, https://www.cdc.gov/smallpox/index.html (last reviewed July 12, 2017). The more common variant of smallpox, *variola major*, carried a mortality rate of 30%. World Health Organization, *Smallpox*, https://www.who.int/teams/health-product-policy-and-standards/standards-and-specifications/vaccine-standardization/smallpox (last visited Aug. 13, 2024).
53. A great example of the power of modern medicine in this regard is its response to human immunodeficiency virus (HIV). HIV was once an early death sentence. *See* Caroline A. Sabin, *Do People With HIV Infection Have a Normal Life Expectancy in the Era of Combination Antiretroviral Therapy?*, 11 BMC Med. 251 (2013), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4220799/ (noting that the median survival time for untreated HIV is eight to 10 years). Now, with early detection and access to modern antiretroviral treatment, HIV+ individuals have a nearly normal life expectancy. *See* Adam Trickey et al., *Life Expectancy After 2015 of Adults With HIV on Long-Term Antiretroviral Therapy in Europe and North America: A Collaborative Analysis of Cohort Studies*, 10 Lancet HIV e295, e295 (2023), https://www.thelancet.com/journals/lanhiv/article/PIIS2352-3018(23)00028-0/fulltext.
54. Economist Jeremy Greenwood has argued that the washing machine played a role in "liberating married women from household tasks and leading to a dramatic increase in their labor-force participation." Michele W. Berger, *How the Appliance Boom Moved More Women Into the Workforce*, Penn Today (Jan. 30, 2019), https://penntoday.upenn.edu/news/how-appliance-boom-moved-more-women-workforce.
55. The average commercial airline will cruise at 550 to 600 miles per hour. *How Fast Do Commercial Planes Fly?*, Flying (Aug. 17, 2022), https://www.flyingmag.com/guides/how-fast-do-commerical-planes-fly/.
56. For the adventurous car traveler, there is a little-known National Radio Quiet Zone in Central Appalachia, comprising 13,000 square miles around the Green Bank Observatory, a deep space telescope. West Virginia Explorer, *National Radio Quiet Zone*, https://wvexplorer.com/communities/regions/national-radio-quiet-zone/ (last visited Aug. 13, 2024); Green Bank Observatory, *What Is the Green Bank Observatory?*, https://greenbankobservatory.org/what-is-the-green-bank-observatory/ (last visited Aug. 13, 2024). Driving through this area is both incredibly scenic and quite humbling for those conditioned to rely on technology and constant grid-connectedness, as cell phone service is mostly nonexistent for hours in all directions.
57. Recent estimates indicate that online colleges and universities enroll nearly 2.79 million students, 15% of all U.S. postsecondary learners. Ilana Hamilton, *2024 Online Learning Statistics*, Forbes Advisor (May 31, 2024), https://www.forbes.com/advisor/education/online-learning-stats/.
58. Personally, I have learned how to change my car's engine and cabin filters and headlights through the help of YouTube videos.
59. International Energy Agency, Sustainable Development Goal 7: Access to Electricity (2023), https://www.iea.org/reports/sdg7-data-and-projections/access-to-electricity.
60. Haruna Kashiwase & Tony Fujs, *World Water Day: Two Billion People Still Lack Access to Safely Managed Water*, World Bank Data Blog (Mar. 22, 2023), https://blogs.worldbank.org/opendata/world-water-day-two-billion-people-still-lack-access-safely-managed-water.
61. World Health Organization, *The Global Health Observatory: Malaria*, https://www.who.int/data/gho/data/themes/malaria (last visited Aug. 13, 2024).
62. Ruma Bhargawa & Megha Bhargava, *The Climate Crisis Disproportionately Hits the Poor. How Can We Protect Them?*, World Econ. F. (Jan. 13, 2023), https://www.weforum.org/agenda/2023/01/climate-crisis-poor-davos2023/.
63. Sustainability for All, *Countries at Risk of Disappearing Due to Climate Change*, https://www.activesustainability.com/climate-change/countries-risk-disappearing-climate-change/ (last visited Aug. 13, 2024).
64. Nadja Popovich & Winston Choi-Schagrin, *Hidden Toll of the Northwest Heat Wave: Hundreds of Extra Deaths*, N.Y. Times (Aug. 11, 2021), https://www.nytimes.com/interactive/2021/08/11/climate/deaths-pacific-northwest-heat-wave.html.
65. Delphine Roucaute, *Heat Waves Have Caused Nearly 33,000 Deaths in France Since 2014*, Le Monde (July 12, 2023, 5:45 PM), https://www.lemonde.fr/en/environment/article/2023/06/26/heat-waves-have-caused-nearly-33-000-deaths-in-france-since-2014_6037460_114.html.
66. Jeff Masters, *Hurricane Dorian Was Worthy of a Category 6 Rating*, Sci. Am. (Oct. 3, 2019), https://blogs.scientificamerican.com/eye-of-the-storm/hurricane-dorian-was-worthy-of-a-category-6-rating/.

and how to pursue an end. Choosing to permit a reckless pursuit of self-interest at the cost of others, both contemporary and future, is (and was) a choice. To think that we could only get here through a proprietarian profit motive was (and continues to be) mankind's fatal flaw. Endorsement of the values that got us here as the means of avoiding this inflection point is (and will be) history's greatest bluff.

## VI. Consuming Our Way to Clean Energy

*This section was authored by Melissa Powers, Jeffrey Bain Faculty Scholar and Professor of Law, Lewis & Clark Law School.*

"Electrifying everything" has emerged as one of the most viable strategies to decarbonize the energy system.[67] Through this approach, renewables, and perhaps some new nuclear power, will replace fossil-fueled electricity generation; electric vehicles, appliances, and other equipment will replace their fossil-fueled counterparts; and storage technology will be integrated throughout the energy system.[68] While some equipment in hard-to-electrify industries may be powered with biofuels and zero-emitting "green" hydrogen,[69] the vast majority of the U.S. energy system will become all-electric.[70]

Unlike other decarbonization approaches, electrifying everything treats demand side equipment replacement as seriously as it treats decarbonization of energy supplies. This fuel-switching approach would accelerate the transition away from fossil fuels and create an energy system that could be more reliable, resilient, flexible, efficient, and affordable.[71]

Electrifying everything, however, hinges not only on changing modes of consumption, but likely on accelerating our consumption of the devices necessary to enable this all-electric future. According to one analysis, electrifying everything will require Americans to replace within the next 20-25 years more than one billion pieces of equipment that currently use fossil fuels or inefficient electric technology with modern electric equipment.[72] These billion machines include approximately 275 million electric vehicles, 275 million vehicle chargers, 98 million heat pumps, and 49 million stoves and ovens.[73]

While each piece of equipment could, in concept, be replaced at the end of its useful life,[74] the drive to electrify everything will almost certainly motivate some consumers to retire fossil fuel equipment early.[75] This may in fact be optimal, as equipment turnover rates will likely need to accelerate to meet U.S. climate goals.[76] The more electric vehicles and heat pumps we install today, the fewer fossil fuels we will burn now and in the future.

The fact that energy decarbonization hinges so much on consumer choices makes electrifying everything both highly attractive and challenging. It is attractive in part because it makes the clean energy transition appear quite simple: to save the planet from climate change's worst impacts, a person simply needs to buy modern electric equipment.[77] Much as Americans responded to the call to "go shopping" to show our resilience after the attacks of September 11, 2001,[78] we're being asked to use our shopping muscles again in the name of climate change.

We can surely do that. Even better, the "electrify everything" movement has helped deflect criticism that climate mitigation requires untenable levels of sacrifice and depri-

67. Saul Griffith et al., Rewiring America: A Field Manual for the Climate Fight (2020) (describing the "electrify everything" approach); Mark Z. Jacobson et al., *Zero Air Pollution and Zero Carbon From All Energy at Low Cost and Without Blackouts in Variable Weather Throughout the U.S. With 100% Wind-Water-Solar and Storage*, 184 Renewable Energy 430 (2022) (explaining the resiliency benefits of electrifying everything). *See also* David Roberts, *The Key to Tackling Climate Change: Electrify Everything*, Vox (Oct. 27, 2017, 8:48 AM), https://www.vox.com/2016/9/19/12938086/electrify-everything.
68. Griffith et al., *supra* note 67, at 28.
69. *See* Umair Irfan, *The Hydrogen Energy Dream*, Vox (Apr. 18, 2022), https://www.vox.com/recode/22973204/hydrogen-energy-power-toyota-mirai-climate-change.
70. Griffith et al., *supra* note 67, at 28.
71. Clean electrification will involve the development of much more equipment of varying sizes and types dispersed across a much greater footprint. Jacobson et al., *supra* note 67; *see also* National Renewable Energy Laboratory, Renewable Electricity Futures Study viii-xi (M.M. Hand et al. eds., 2012) (discussing a grid with 80% renewable energy). The diverse sizes and types of renewable energy resources, combined with the broader geographic distribution of energy infrastructure, will reduce the probability that a weather event can knock out an entire segment of the electricity grid and allow renewable resources to provide backup energy supply for other renewable resources. Alexandra Klass et al., *Grid Reliability Through Clean Energy*, 74 Stan. L. Rev. 969, 988 (2022).

    Greater integration of storage resources throughout the electric grid will also help prevent some power outages and facilitate quicker restoration of electricity service. Justin Gundlach, *Microgrids and Resilience to Climate-Driven Impacts on Public Health*, 18 Hous. J. Health L. & Pol'y 77, 107-11 (2018). Finally, the transition away from fossil fuels will reduce overall energy consumption and increase affordable energy access. *See The Green New Deal: The Enormous Opportunity in Shooting for the Moon*, Otherlab (Feb. 20, 2019), https://www.otherlab.com/blog-posts/the-green-new-deal-the-enormous-opportunity-in-shooting-for-the-moon; James M. Van Nostrand, *Keeping the Lights on During Superstorm Sandy: Climate Change Adaptation and the Resiliency Benefits of Distributed Generation*, 23 N.Y.U. Env't L.J. 92, 121-25 (2015).
72. Saul Griffith & Sam Calisch, One Billion Machines 1 (2021), https://content.rewiringamerica.org/reports/one-billion-machines-one-pager.pdf.
73. *Id.* at 4 tbl.6.
74. *See* Saul Griffith, *From Homes to Cars, It's Now Time to Electrify Everything*, Yale Env't 360 (Oct. 19, 2021), https://e360.yale.edu/features/from-homes-to-cars-its-now-time-to-electrify-everything:

    > The best climate outcome we can achieve is to upgrade all of these demand-side machines to higher performing electric machines at their next retirement. This needs to be in combination with increasing the electricity supply to power these machines, and to do so with clean renewables, while also retiring coal plants and other heavy emitters ahead of schedule.

75. *See* Press Release, EY, EY Research: Nearly Half of U.S. Car Buyers Intend to Purchase an EV (June 27, 2023), https://www.ey.com/en_us/news/2023/06/ey-research-nearly-half-of-us-car-buyers-intend-to-purchase-an-ev; Maria Virginia Olano, *Chart: Americans Bought More Heat Pumps Than Gas Furnaces Last Year*, Canary Media (Feb. 10, 2023), https://www.canarymedia.com/articles/heat-pumps/chart-americans-bought-more-heat-pumps-than-gas-furnaces-last-year.
76. Rewiring America, Pace of Progress 4 (2023), https://assets.ctfassets.net/v4qx5q5o44nj/6eKgbAoM2PAWXfDmo1D6YD/74b703efb93a0ba872b4e0970b6e2f92/Pace_of_Progress_Rewiring_America_062323.pdf.
77. Griffith et al., *supra* note 67.
78. *See* Emily Stewart, *How 9/11 Convinced Americans to Buy, Buy, Buy*, Vox (Sept. 9, 2021), https://www.vox.com/the-goods/22662889/september-11-anniversary-bush-spend-economy; Peter D. Feaver, *Now I Remember Why President Bush Urged People to Go About Their Daily Lives*, Foreign Pol'y (Apr. 17, 2013), https://foreignpolicy.com/2013/04/17/now-i-remember-why-president-bush-urged-people-to-go-about-their-daily-lives/.

vation.[79] Electrifying everything offers a viable, positive, and simple way for people to do good by purchasing well.[80]

But of course, it's not so easy. Electrifying everything has potential downsides that must be resolved. The first involves the inequities that will likely result from a consumer-driven equipment replacement approach. The transition to all-electric end uses will be expensive due to the high equipment costs of retrofitting homes with electric devices, as well as the high "soft costs" associated with customer outreach, permitting, inspection, and labor necessary to incrementally transition each fossil-fueled vehicle, heater, stove, and appliance with new electric ones.[81]

Wealthier households are much more likely to have the economic resources to purchase electric vehicles and new electric heat pumps (and the associated charging systems and upgraded electric panels).[82] While later adopters of clean electric devices may benefit from declining equipment costs as technologies mature and manufacturers improve and diversify their electric product lines, the piecemeal nature of end-use electrification makes it likely that the soft costs of building electrification will stay high, as they have with rooftop solar deployment.[83]

Even with subsidies that aim to make clean electrification more accessible, lower-income households may not be able to afford the transition. For example, while the Inflation Reduction Act offers up to $14,000 in lifetime rebates for low- and moderate-income (LMI) households to install heat pumps and other efficient electric equipment,[84] the equipment and installation costs for a heat pump alone might swallow the total available rebates available to LMI households.[85] LMI households also may use the rebates for other urgent energy projects that do not advance the electrification of everything.[86] It is very possible, if not probable, that existing economic inequities will lead to disparate rates of clean electrification between wealthier and less wealthy households.

Moreover, if wealthier households do pursue electrification at a faster clip than other households, a higher share of the costs for natural gas utility service could be shifted onto lower-income households,[87] perhaps precipitating a utility death spiral[88] that would exact an even greater toll on the lowest-income gas customers who have been unable to afford electrification. Gas utilities have already successfully invoked these risks to oppose clean electrification policies. Absent better and more coordinated strategies to streamline deployment of electric equipment to all end-users, an equitable transition to clean electrification could be at risk.

The consumption-oriented approach inherent in electrifying everything also does little to address the problem of overconsumption that has pushed the earth past many of its planetary boundaries.[89] To be sure, the transition to clean electrification will drastically reduce fossil fuel consumption and the vast harms that fossil fuel extraction, transportation, and use inflict upon the environment and human health.[90] Some clean electric technologies will also lower equipment demand—an electric heat pump, for example, will replace separate heating and cooling appliances.[91]

Nonetheless, the electrifying-everything approach generally assumes that Americans will maintain the same

79. *See* Priya Satia, *The Way We Talk About Climate Change Is Wrong*, Foreign Pol'y (Mar. 11, 2022), https://foreignpolicy.com/2022/03/11/climate-change-sacrifice-colonial-language-history-economics/ (arguing the language of "sacrifice" in climate activism is counterproductive).
80. *See* Griffith, *supra* note 74. *See also* Wouter Peeters et al., *Moral Disengagement and the Motivational Gap in Climate Change*, 22 Ethical Theory & Moral Prac. 425, 439-40 (2019) (explaining how people's perceptions of self-efficacy with respect to climate change could motivate individual action to mitigate climate change).
81. *See* Andrew G. Campbell, *Filling in Home Electrification Gaps*, U.C. Berkeley: Energy Inst. Blog (Oct. 23, 2023), https://energyathaas.wordpress.com/2023/10/23/filling-in-home-electrification-gaps/; Jesse D. Jenkins, *What "Electrifying Everything" Actually Looks Like*, Mother Jones (May/June 2023), *available at* https://www.motherjones.com/environment/2023/04/electrify-everything-scope-data/ (describing the scale of changes that are necessary without providing cost estimates); Nick Lawton, Green Energy Institute, Shrinking Solar Soft Costs: Policy Solutions to Make Solar Power Economically Competitive 33 (2014), https://law.lclark.edu/live/files/17499-shrinking-solar-soft-costs (explaining soft costs).
82. *See* Severin Borenstein & Lucas W. Davis, *The Distributional Effects of U.S. Clean Energy Tax Credits*, 30 NBER Tax Pol'y & Econ. 191 (2016). *But see* Lucas W. Davis, *The Economic Determinants of Heat Pump Adoption* (Energy Institute at Haas, Working Paper No. 337R, 2023), https://haas.berkeley.edu/wp-content/uploads/WP337.pdf. Lucas Davis has found, surprisingly, very little correlation between heat pump adoption and household income. *Id*. at 2. Whereas high-income households received nearly 60% of the subsidies for rooftop solar and nearly 90% of the subsidies for electric vehicles, heat pump adoption was more correlated with weather, geography, and energy prices. *Id*. at 1-2. Davis' analysis applies to heat pump adoption rates before the Inflation Reduction Act's tax credits and rebates became available.
83. *See* Campbell, *supra* note 81.
84. Inflation Reduction Act §50122; *see also* Hadley Tallackson & Sara Baldwin, Implementing the Inflation Reduction Act: A Roadmap for Federal and State Buildings Policy (2022), https://energyinnovation.org/wp-content/uploads/2022/11/Implementing-The-Inflation-Reduction-Act-A-Roadmap-For-State-And-Federal-Buildings-Policy.pdf.
85. *See* Michael J. Coren, *I Tried, and Failed, to Install a Heat Pump. Here's How to Do It Right.*, Wash. Post (Feb. 28, 2013), https://www.washingtonpost.com/climate-environment/2023/02/28/how-to-get-heat-pump-home/; Kevin Purdy, *How Much Does a Heat Pump Cost?*, Carbon Switch, https://carbonswitch.com/heat-pump-costs/ (last visited Aug. 13, 2024).
86. *See* Coren, *supra* note 85.
87. *See* Lucas Davis & Catherine Hausman, Energy Institute at Haas, Who Will Pay for Legacy Utility Costs? 2-3 (2022), https://haas.berkeley.edu/wp-content/uploads/WP317.pdf.
88. *See id*. at 25-26. According to some analyses, natural gas utilities could enter a death spiral if they are unable to recover their sunk fixed costs due to declining sales and a shrinking customer base. As regulated utilities, gas companies have a duty to serve all customers within their service territories. To fulfill this duty to serve, gas companies have invested in large amounts of gas infrastructure, such as gas distribution pipelines and related equipment, to meet forecasted energy demand. Gas companies typically recover the costs of these investments, as well as profits, through amortized rates charged to their customer base.

    As the movement toward electrification has grown, wealthier users of gas have begun to replace gas appliances and furnaces with electric ones and have thus begun to exit the gas system. When these customers depart, gas companies will seek to raise rates for the customers who continue to use the gas system. As gas rates increase, more gas customers may opt for electric appliances, leaving fewer customers to pay for the gas system. Eventually, a death spiral could form in which each rate increase results in more customer departures, ultimately leaving the utility with unrecoverable sunk costs and lower-income customers who can neither afford to exit nor to pay increased rates for gas. *See also* Emily Pontecorvo, *The Real Reason You'll Eventually Ditch Your Gas Stove*, Heatmap (Mar. 29, 2023), https://heatmap.news/economy/gas-prices-stove-debate.
89. Amy Westervelt, *The "Electrify Everything" Movement's Consumption Problem*, Intercept (May 8, 2023), https://theintercept.com/2023/05/08/energy-transition-electrification-consumption/.
90. *See* Griffith et al., *supra* note 67.
91. *See* Coren, *supra* note 85.

levels of equipment consumption as today, despite the environmental and social costs. This is especially true for vehicle ownership and use. Although electric vehicles are environmentally superior to gasoline-fueled ones, and will be more so as the electric system decarbonizes, they are not environmentally or socially benign.[92] Yet, the electrifying-everything approach assumes American households will own an average of two vehicles, each with batteries designed to travel hundreds of miles, when most Americans travel, on average, only 40 miles per day.[93] By aiming to fulfill existing consumer expectations, rather than to challenge them, the electrifying-everything movement could perpetuate unsustainable levels of consumption.

In an ideal world, advocates for electrifying everything would harmonize their consumer-driven approach with efforts to redefine the "good life" to be less consumerist. This might involve advocating for electric vehicles while also supporting efforts to reduce car ownership and increase the efficacy and desirability of public transit, walking, and biking.[94] Similarly, as advocates for electrifying everything promote replacement of individually owned fossil-fueled heating equipment and other appliances, they should also support efforts to ramp up community-owned and community-delivered clean energy services. Rather than automatically endorsing the deployment of "one billion" new machines in the United States, electrifying-everything advocates should also work to reduce the amount of clean energy technology that will need to be manufactured, distributed, operated, and, ultimately, replaced.

The exigency of climate change means that the pursuit of these more holistic strategies to mitigate climate change, protect natural resources, and develop livable communities should not serve as excuses to delay the transition to clean energy. But nor should electrifying everything justify inequitable or profligate consumption. We will have to work to strike the right balance as we consume our way to clean energy.

## VII. Reallocating Environmental Risk

*This section was authored by Karrigan Börk, Professor of Law and Interim Director of the Center for Watershed Sciences at UC Davis, and Keith Hirokawa, Distinguished Professor of Law, Albany Law School.*

Living the good life has often meant finding ways to allow for growth and construction while ostensibly protecting the natural environment on which we depend through mitigation or protective regulations. Mitigation makes up for projected impacts: want to build a housing development, but there's a wetland in the way? Mitigate the loss of the wetland by building a new one somewhere else.[95] Want to dam a river, but there's a salmon run in the way? Build fish passage around the dam.[96] If that's not feasible,[97] build a hatchery instead.[98]

Protective requirements are essentially guardrails to ensure that impacts don't reach unacceptable levels. Want to log a forest, but worried about loss of downstream ecosystem services? Allow the harvest, with buffers and a few trees left behind to maintain essential services.[99] Need water? Use habitat manipulation and minimum instream flow requirements to soften the blow.[100] As a society, we struggle to choose between environmental protection and other goals,[101] and techno-optimism and overconfidence makes it easy to say "yes" and assume we can mitigate or control the impacts—saying "yes" is much easier than saying "no."[102]

Unfortunately, mitigation and other protective measures often fail. Constructed wetlands fail to reproduce the essential hydrologic or biodiversity or other functions of natural wetlands.[103] Fish passage fails to get enough fish upstream and downstream to keep populations viable.[104] Hatcheries can't sustain fisheries over the long term in the same way that habitat can.[105] Even carefully regulated logging can degrade downstream ecosystem services.[106] Minimum flows may be insufficient, and habitat work may not be adequate. As a result of failed mitigation and insufficient

92. *See* David Zipper, *Carry That Weight*, Slate (June 28, 2023), https://slate.com/business/2023/06/electric-vehicles-auto-haulers-weight-capacity-roads.html; Chris McCahill, *How Cities Can Reclaim Their Downtowns From Traffic*, World Econ. F. (Aug. 8, 2023), https://www.weforum.org/agenda/2023/08/how-cities-reclaim-downtowns-from-traffic/.
93. *See* Edward Niedermeyer, *Tesla Sold a Myth About Batteries That Everyone Wanted to Be True*, Slate (July 28, 2023), https://slate.com/technology/2023/07/tesla-range-complaints-deception-electric-vehicles-battery-size.html.
94. *See* Skylar Woodhouse & Saleha Mohsin, *EV Hype Overshadows Public Transit as a Climate Fix*, Bloomberg (Jan. 25, 2023), https://www.bloomberg.com/news/articles/2023-01-25/public-transit-gets-left-behind-in-us-climate-change-conversation.
95. Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines (Feb. 6, 1990), https://www.epa.gov/sites/default/files/2019-05/documents/1990_army-epa_mitigation_moa.pdf.
96. *See generally* John Hart, *Fish, Dams, and James Madison: Eighteenth-Century Species Protection and the Original Understanding of the Takings Clause*, 63 Md. L. Rev. 287 (2004).
97. *See generally* Robert A. Lusardi & Peter B. Moyle, *Two-Way Trap and Haul as a Conservation Strategy for Anadromous Salmonids*, 42 Fisheries 478 (2017).
98. *See generally* Paul Stanton Kibel, *Of Hatcheries and Habitat: Old and New Conservation Assumptions in the Pacific Salmon Treaty*, 10 Wash. J. Env't L. & Pol'y 90 (2020).
99. *See generally* David P. Edwards et al., *Maintaining Ecosystem Function and Services in Logged Tropical Forests*, 29 Trends in Ecology & Evolution 511 (2014).
100. *See generally* Brian Gray et al., *Implementing Ecosystem-Based Management*, 31 Duke Env't L. & Pol'y F. 215 (2021).
101. Robert Adler, *Restoring the Environment and Restoring Democracy: Lessons From the Colorado River*, 25 Va. Env't L.J. 55, 104 (2007).
102. J.B. Ruhl & James Salzman, *Currencies and the Commodification of Environmental Law*, 53 Stan. L. Rev. 607 (2000).
103. Chengxiang Zhang et al., *Can Constructed Wetlands Be Wildlife Refuges? A Review of Their Potential Biodiversity Conservation Value*, 12 Sustainability 1442 (2020).
104. Tobias J. Kock et al., *Review of Trap-and-Haul for Managing Pacific Salmonids (*Oncorhynchus *spp.) in Impounded River Systems*, 31 Revs. Fish Biology & Fisheries 53 (2021).
105. *See generally* Kibel, *supra* note 98.
106. Alexandro B. Leverkus et al., *Salvage Logging Effects on Regulating Ecosystem Services and Fuel Loads*, 18 Frontiers Ecology & Env't 391 (2020).

protections, our good environmental intentions have paved a path to widespread degradation.

Sometimes, these failures result from a lack of effort or an unwillingness to spend necessary funds or time, but failures often occur despite the best intentions. It is difficult to predict how natural systems will respond to perturbation, and recreating systems is even harder.[107] For example, a new wetland may not provide the ecosystem benefits to the same degree as the lost wetland it is supposed to mitigate, or the minimum flows mandated by a water right permit may be too little to support salmon populations.

The uncertainty of allow-but-mitigate or allow-with-limits decisions like these is critical: we depend on functional natural systems, and these failures risk our future. But our current approach allocates the risk of bad decisions to the environment. That is, when mitigation fails, or when we choose guardrails that provide insufficient protection, the environment and the public, not project proponents, pay the price. There are very few consequences to the parties responsible for mitigation or for complying with other protections if we get it wrong.

Successful mitigation requires that mitigation and protections associated with a regulatory approval be designed to effectively neutralize the damage, rather than simply to ensure that permits are issued and construction commences. Embracing some form of the precautionary principle might help, but we seem unwilling to put off decisions or simply deny projects with uncertain impacts. Iterative adaptive management with long-term monitoring might help, but this approach often stumbles due to the difficulty in refashioning policies.[108] If we're going to keep relying on engineering or policy fixes to soften the blow (and all evidence suggests that we will), we need a better way to allocate environmental risk.

Fortunately, we have faced this problem in other contexts, and policymakers have developed productive ways to manage uncertainty. Applying these approaches more broadly might reallocate environmental risk away from the environment and the public and place it on project proponents. Such a reallocation internalizes the risk for project proponents, leads to better environmental outcomes, and should lead to better environmental decisionmaking.

For example, local governments often require developers who seek approval for new developments to provide needed public infrastructure improvements (e.g., roads, traffic control devices, sidewalks, water and sewer pipes, etc.) to reduce new congestion and defray the public costs of the new development. Because new development brings in higher use of public infrastructure, these improvements allow cities to ensure that developers pay more of the public costs of their developments. But if these improvements are poorly constructed or otherwise prone to failure, they can make the community worse off than before—more people, more expenses, and failed mitigation. This parallels the problems with failed environmental mitigation projects.

Local governments sometimes address this risk by requiring developers to post performance bonds. The developer purchases a performance bond from a third party, called the surety, a company that is "ensuring" the developer's infrastructure work will meet relevant requirements. If the developer's work fails to meet the requirements, the government recovers funds from the surety that (ideally) are sufficient to bring the work up to par. Thus, performance bonds allow developers to proceed with building their projects by guarding against the uncertainty of whether the required improvements will perform. The local government approving the project no longer bears the risk of the developer's failure.

Financial assurances, in the form of bonds, insurance,[109] or other mechanisms, could similarly play a more significant role in other areas of environmental law. New fish passage projects required for dams could carry insurance that would fund additional construction or even dam removal if functional fish passage proved impossible. Logging projects could require bonds that would pay for downstream remediation if efforts to mitigate impacts to the forest's ecosystem services proved inadequate. Even air quality permits could require insurance to provide additional controls and medical care, should the impacts from emissions outpace predictions.

The idea of environmental performance bonds or other financial mechanisms to ensure performance and protection is not new, but it has been vastly underutilized. For example, an assurance approach is also used in wetland mitigation and stream mitigation for §404 permitting under the Clean Water Act (CWA).[110] Under regulations issued in 2008, 404 permits issued by the U.S. Army Corps of Engineers require financial assurance based on performance standards for newly constructed wetlands and wetland banks, which should ensure that the new wetlands adequately mitigate the wetlands lost through the permitted dredge and fill.[111]

However, the financial assurances, which may take the form of bonds, insurance, or other mechanisms, are generally only required for five to 10 years, a time frame too short to determine whether the new wetlands will actually achieve their mitigation requirements.[112] Bonding for mine reclamation and financial assurances for hazardous waste treatment facility closure provide other examples, although

107. John Copeland Nagle, *Humility and Environmental Law*, 10 Liberty U. L. Rev. 335 (2016).

108. Johan Månsson et al., *Understanding and Overcoming Obstacles in Adaptive Management*, 38 Trends Ecology & Evolution 55 (2023).

109. Hannah Kett, *Ensuring Mitigation by Insuring Banks*, Ecosystem Marketplace, https://www.ecosystemmarketplace.com/articles/ensuring-mitigation-by-insuring-banks/ (last visited Aug. 13, 2024).

110. Environmental Law Institute, *The State of Stream Compensatory Mitigation: Science, Policy, and Practice*, https://www.eli.org/compensatory-mitigation/state-stream-compensatory-mitigation-science-policy-and-practice (last visited Aug. 13, 2024); 33 U.S.C. §§1251-1387, ELR Stat. FWPCA §§101-607.

111. 33 C.F.R. pt. 332.

112. Paul Scodari et al., U.S. Army Corps of Engineers, Implementing Financial Assurance for Mitigation Project Success (2016), https://www.epa.gov/sites/default/files/2017-01/documents/financial_assurance_guide_update_march_2016.pdf.

such assurances are often insufficient to cover actual reclamation costs (sometimes by an order of magnitude).[113]

These examples show that the risk of mistaken environmental decisions can be reallocated, but this approach should be deployed broadly, across a wider spectrum of environmental challenges. Such an approach should reduce the pressure to get decisions exactly right, and it could ease the common paralysis-by-analysis problem that stops environmental restoration and other environmentally protective actions in their tracks.[114] Moreover, the cost of insurance or performance bonds relates to the risk of a failure and a subsequent payout, which creates economic incentives for safer environmental choices.

We tend to assume success and proceed in the face of uncertainty when other parties bear the risk of failure. We will also continue to get many mitigation and regulatory decisions wrong. Thus, we need to reallocate the environmental risk away from the public and the environment. In this context, performance bonds, insurance, and other financial assurances can reallocate the risk and increase the likelihood that mitigation will succeed, but this approach has been vastly underutilized to curb the current risk of loss in environmental permitting.

## VIII. What the Many Meanings of "Shelter" Share

*This section was authored by Shannon Roesler, Charlotte and Frederick Hubbell Professor of Environmental and Natural Resources Law, University of Iowa College of Law.*

What is shelter? Elementary school children learn in social studies class that shelter is what people and animals build to protect themselves from predators and weather conditions.[115] They also learn that climatic, geographical, and cultural conditions have historically shaped the different kinds of shelters people build. Shelter, in these social studies lessons, is clearly a basic need, something that human and nonhuman animals must have to survive. But it is also much more. It reflects shared cultural traditions and human ingenuity to adapt to climatic surroundings.

When ELC participants reflected on what "shelter" means, many individuals noted its safety and security connotations. Indeed, the word "shelter" is often used to refer to the emergency or transitional housing provided to individuals facing housing instability or to "animal" shelters that provide temporary protections for nonhuman animals. Others immediately thought of the word "home" and its association with family, tradition, and privacy—associations that may or may not carry with them feelings of safety or security.

Given these seemingly divergent threads, how should we think about shelter in the context of a larger conversation about human consumption and planetary boundaries? Should we be asking whether individual preferences for certain kinds of shelter are realistic in a resource-constrained world? Or is this a conversation about emergency shelter in the wake of extreme events such as wildfires and hurricanes or in response to mass migrations caused by natural disasters, drought, heat, and political violence?

Conversations regarding shelter clearly involve both sets of questions. But whether we approach shelter as temporary security or the more permanent housing we think of as a "home," a common thread emerges: the distribution of shelter in our society reflects underlying structural inequalities, leaving the most vulnerable insecure in both the short and long terms.

For example, many people lack access to affordable housing. A recent poll indicates that nearly half of the U.S. population identifies affordable housing as a problem in their communities.[116] Indeed, in 2020, 46% of renters were cost-burdened, meaning that they spent more than 30% of their monthly income on housing, with 23% spending at least 50% of their income on rent. Rents have risen 18% over the past five years and do not show signs of slowing. Even before these trends, we faced an affordability crisis with an average of only 33 affordable rental units available per 100 households with extremely low incomes, resulting in a shortfall of 7.3 million homes.[117] The funds needed to address the affordable housing crisis are daunting, and the political will to do so seems unlikely.

Discussions about the affordability crisis focus on affordable rents because pathways to homeownership today are scarce. After World War II, homeownership was the primary means for white middle-class families to accumulate wealth. As the U.S. government helped white families underwrite mortgages, it long denied the same opportunities to nonwhite families through practices such as redlining. Local governments also passed laws to ensure residential segregation.

The result of racial discrimination in housing is the structural racism we see embedded in our communities, including the considerable wealth gap between white and Black households today.[118] This wealth disparity perpetuates the barriers to homeownership for nonwhite families today and further entrenches structural inequalities. A combination of high interest rates and high prices means buying a home is either impossible or financially unsound for many people today.[119]

113. *See, e.g.*, Sarah Zuzulock, Fort Knox Mine Financial Assurance Review (2023), https://bc-mlard.ca/files/supporting-documents/2006NS-13-SD-b.pdf.
114. Brian D. Richter et al., *A Presumptive Standard for Environmental Flow Protection*, 28 River Rsch. & Applications 1312, 1318 (2012).
115. Britannica Kids, *Shelter*, https://kids.britannica.com/kids/article/shelter/623565 (last visited Aug. 13, 2024).
116. Katherine Schaeffer, *Key Facts About Housing Affordability in the U.S.*, Pew Rsch. Ctr. (Mar. 23, 2022), https://www.pewresearch.org/short-reads/2022/03/23/key-facts-about-housing-affordability-in-the-u-s/.
117. National Low Income Housing Coalition, The GAP: A Shortage of Affordable Homes (2023), https://nlihc.org/gap.
118. Kriston McIntosh et al., *Examining the Black-White Wealth Gap*, Brookings (Feb. 27, 2020), https://www.brookings.edu/articles/examining-the-black-white-wealth-gap/.
119. Meghan McCarty Carino, *High Mortgage Rates Recall an Era of . . . High Mortgage Rates*, Marketplace (Aug. 18, 2023), https://www.marketplace.org/2023/08/18/high-mortgage-rates-recall-an-era-of-high-mortgage-rates/.

The housing affordability crisis is on a collision course with provision of emergency shelter in the wake of natural disasters and human migration. California has had a shortage of affordable housing for some time. Now the state must confront the gentrification of communities destroyed by wildfires; when a community's housing stock is decimated by fire, only the wealthy and highly insured can afford to rebuild.[120]

In addition, local governments face difficulties implementing state mandates for affordable housing without allowing for further development in high-risk areas. Flooding is driving a similar dynamic; by 2050, the amount of affordable housing vulnerable to damage from coastal flooding could triple.[121] Many of these homes are in communities that were subjected to historical redlining and are disproportionately burdened by pollution and climate impacts such as heat.

Emergency shelter is a temporary solution to the human displacement that follows these wildfires, floods, and other climate impacts—as well as the human migration associated with conflict and economic hardship. But given the scale of displacement and migration, provision of short-term shelter is increasingly difficult as well.

For example, New York City, the only major city with a "right to shelter" law, is struggling to house the 100,000 migrants and asylum seekers who have arrived since the spring of 2022.[122] With emergency shelters at capacity, the city has housed people in hotels, tents, school gyms, and office buildings. Faced with few options, the mayor declared a state of emergency and pursued legal means to lessen the stringency of the city's right-to-shelter law. Moreover, without work authorizations, those migrating to U.S. cities must wait (in some cases, 180 days after filing an asylum application) to lawfully earn the income necessary to secure their basic right to shelter.[123]

These work restrictions reveal the limits of our hospitality and the "right to shelter." But even if New York City continues to find temporary shelter, the affordability crisis will complicate efforts to secure long-term shelter. Similarly, without more affordable housing, many people have no real choice but to fear that the climate impacts of flooding and wildfire will destroy their homes. No matter what meaning the word "shelter" evokes—whether it is about security or home—it shines a critical light on structural inequities and our political commitments in responding to them.

120. Scott Wilson, *Gentrification by Fire*, Wash. Post (Feb. 10, 2023, 6:00 AM), https://www.washingtonpost.com/nation/interactive/2023/california-fires-home-prices/.

121. Patrick Sisson, *In Many Cities, Climate Change Will Flood Affordable Housing*, Bloomberg (Dec. 1, 2020, 1:48 PM), https://www.bloomberg.com/news/articles/2020-12-01/how-climate-change-is-targeting-affordable-housing.

122. Hurubie Meko, *What to Know About the Migrant Crisis in New York City*, N.Y. Times (Sept. 28, 2023), https://www.nytimes.com/article/nyc-migrant-crisis-explained.html.

123. U.S. Citizenship and Immigration Services, *Asylum*, https://www.uscis.gov/humanitarian/refugees-and-asylum/asylum (last updated Aug. 13, 2024).

## IX. Imagining Climate Havens in a Boiling World

*This section was authored by Cinnamon P. Carlarne, President and Dean, Albany Law School, and Keith H. Hirokawa, Distinguished Professor of Law, Albany Law School.*

This series of essays seeks to conceptualize what the "good life" means in a consumption-obsessed, planetary-boundary constrained era. Here we suggest that cities and towns are our epicenters for imagining what a good life means in an era where climate change increasingly determines what is available to be consumed and by whom. More to the point, we suggest that the whole notion of a good life should be collectively discovered in the process of reimagining what it means to create just and climate-resilient communities—that is, to create climate havens.[124]

Cities and towns are facing major challenges to their abilities to maintain livable communities. Our cities are unprepared to face inevitable pandemics, drought, and homelessness. Massive storms, excessive heat, devastating wildfires, and even simple failures in our gray infrastructure are making some places unlivable. In the meantime, states that were previously considered destinations for retirees and voluntary migration, such as Florida, are so embroiled in cultural engineering (and not climate preparedness) that few—except straight, white, affluent folks—feel welcomed or safe in these places.[125]

Our communities are suffocating under the threat of cultural and climatic change. The challenge is real, and the reality is existential. Indeed, it almost seems unlikely that we could have a productive dialogue on *future* human and community needs in the era of climate "boiling"[126] when there is so much evidence that we are unable to keep people safe *today*.

This, however, is the work that we must do. People are already on the move.[127] We are seeing significant human displacement resulting from wildfires, sea-level rise, flooding, and drought—all of which are exacerbated by poor disaster planning, economic inequality, and ideological combat. Yet, better planning is possible. A growing number of communities are intentionally engaging the climate

124. Anna Marandi & Kelly Leilani Main, *Vulnerable City, Recipient City, or Climate Destination? Towards a Typology of Domestic Climate Migration Impacts in US Cities*, 11 J. Env't Stud. & Scis. 465, 472 (2021):

> The term "climate haven" first made headlines in a New York Times article that featured Professor Jesse Keenan, entitled "Want to Escape Global Warming? These Cities Promise Cool Relief." Since then, a significant amount of media attention has been given to the potential of legacy cities like Duluth, MN; Buffalo, NY; and Cincinnati, OH, to absorb climate migrants from less hospitable places of the country in the coming decades.

125. *See* Caitlin Millat, *The Education-Democracy Nexus and Educational Subordination*, 111 Geo. L.J. 529, 536 (2023).

126. Ajit Niranjan, *"Era of Global Boiling Has Arrived," Says UN Chief as July Set to Be Hottest Month on Record*, Guardian (July 27, 2023), https://www.theguardian.com/science/2023/jul/27/scientists-july-world-hottest-month-record-climate-temperatures ("'Climate change is here. It is terrifying. And it is just the beginning,' Guterres said. 'It is still possible to limit global temperature rise to 1.5C [above pre-industrial levels], and avoid the very worst of climate change. But only with dramatic, immediate climate action.'").

127. Parag Khanna, Move: The Forces Uprooting Us 97 (2021).

emergency by preparing for decades of disruption,[128] and it is in this context that we need a blueprint for a model city that is prepared for the onslaught of climatic changes and able to provide an equitable and inclusive quality of life.

We need a blueprint for the *climate haven*—a place where residents feel belonging and engagement, while simultaneously experiencing opportunity and security in a climate-resilient community. The climate haven is a community that centers the inevitability of change, the irrefutability of existing patterns of inequality, and the possibility of planning for more just and sustainable communities at the intersection of the two. This should be the goal of every city and town in the climate era.

Literature on climate havens is developing as "scholars, think tanks, news outlets, and local elected officials"[129] engage the idea in critical discussions about the direction of climate preparedness. Climate havens must respond to both internal and external pressures of governance: how to pay (and who will pay) for adaptive improvements, which needs (past and future) should be addressed, whose perspective defines acceptable standards of living and need, whose cultural preferences and values should define community character, and which climate (and socioeconomic) threats should be prioritized. Such a climate destination must also engage the question of what the basic, critical characteristics are that will allow communities to thrive in a climate-challenged circumstance. Such characteristics might include:

(1) Be situated to avoid or mitigate extreme climate impacts, especially in communities that are vulnerable to sea-level rise, wildfires, and prolonged drought or heat waves.

(2) Have equitable access to freshwater supply.

(3) Have available affordable housing.

(4) Enjoy infrastructural capacity that exceeds (or can be upgraded to accommodate) the need among both current and future residents.

(5) Demonstrate a character of growth, cultural inclusivity, and welcoming.

(6) Be interested, versed in, and experienced with improving adaptive capacity through sustainability or resilience efforts throughout governmental operations.

(7) Embrace inclusive community-planning processes.[130]

These are the minimal requirements for beginning the process of creating climate havens. How communities meet these needs will vary, in large part due to variations in topography, culture and history, climate, economy, and other geographical and socioeconomic factors.[131] However, in our view, the model climate haven is inclusionary and is prepared to welcome those people who are fleeing climate-related disasters and "may have limited resources to relocate or rebuild."[132]

The model climate haven addresses past injustices and inequities in ways that provide a clear path toward equity. The climate haven is a place where officials examine and understand existing community vulnerabilities and value the need both to mitigate such inequities and to avoid reproducing them in the climate haven planning process. At the heart of the climate haven model is an appreciation of the ways that power is exercised through governance, how existing structures of power influence the appreciation (and distribution) of risk, and how equity demands that climate change responses address the needs of different communities. In short, the climate haven represents good governance: a climate haven is a *just city* that is also prepared for climate change.[133]

To even envision the climate haven, we can at once recognize that the perspective of a community insider is relevant to understanding local needs,[134] without allowing the insider's value to dominate climate priorities. Indeed, the cities and towns of tomorrow will be more dynamic and diverse as migrating folks encounter unfamiliar places and bring with them the stories, mythologies, and values that should not be the casualties of climate migration. The climate haven will collapse the distinction between old and new residents to create places "where migration and immigration are seen as being strength and vitality and growth" for everyone.[135]

Cities and towns are our epicenters of climate planning. The climate haven model creates opportunities for reimagining what it means to create just and climate-resilient communities. It is a model for imagining a "good life" where all members—present and future—of communities are acknowledged and accounted for as we adapt to the era of climate boiling.

## X. Eating Cheetos in the Anthropocene

*This section was authored by J.B. Ruhl, David Daniels Allen Distinguished Chair in Law, Director of the Program on Law and Innovation, and Co-Director of the Energy, Environment and Land Use Program, Vanderbilt Law School.*

Cheetos are undeniably yummy—so much so that I walk quickly past their section in the grocery snacks aisle, eyes locked on the cart. It's not a pretty picture once I succumb and rip open a bag, the Puffs being my variety of choice.

128. Keith H. Hirokawa & Cinnamon P. Carlarne, *The Climate Moratorium*, 11 Tex. A&M L. Rev. 365 (2024).
129. Marandi & Main, *supra* note 124.
130. *Id.*
131. *See* Cinnamon P. Carlarne & Keith H. Hirokawa, *Climate Dominance*, 35 Geo. Env't L. Rev. 485 (2023).
132. Dan Kraker, *Climate-Proof Duluth? Why the City Is Attracting "Climate Migrants,"* MPR News (Oct. 4, 2021), https://www.mprnews.org/story/2021/10/04/climateproof-duluth-why-the-city-is-attracting-climate-migrants.
133. Keith H. Hirokawa & Cinnamon P. Carlarne, *Disrupting Dominance*, 56 Conn. L. Rev. 133 (2023).
134. Keith H. Hirokawa, *Environmental Law From the Inside: Local Perspective, Local Potential*, 47 ELR 11048 (Dec. 2017).
135. Kendra Pierre-Louis, *Want to Escape Global Warming? These Cities Promise Cool Relief*, N.Y. Times (Apr. 15, 2019), https://www.nytimes.com/2019/04/15/climate/climate-migration-duluth.html [https://perma.cc/576R-ZSMP].

Why do I deny myself Cheetos? Calories. Fat. Salt. Sugar. Let's face it, Cheetos are not a healthy snack! But they are soooo tasty. A lot of Americans agree with me. Cheetos are the second most popular salty snack in the nation, behind Lays and ahead of Pringles. Cheetos may not be good for you, but they are for millions of Americans part of the good life. An indulgence. A taste sensation.

You may ask, how is this discussion going to get from Cheetos to the Anthropocene? The connection is what goes into defining the "good life." We can mean "good" in a material way—as in living large, having fun, owning nice cars, feeling good—or in an ethical way—as in being and doing good. Having established that Cheetos are a bullseye on feeling good, let's think about the ethics of Cheetos. The next time you try a Puff or Flamin' Hot, take a good, hard look at it before you pop it into your mouth. Where did that tasty morsel come from? How did it make its way to you? In short, what is the supply chain of a Cheeto? What is its impact on the world?

In the case of Cheetos, this question came up in a big way in 2014 when environmental and social justice organizations challenged PepsiCo's use of palm oil from unsustainable sources and called for consumer bans, leading Cheetos to commit to sourcing palm oil from managed plantations. Of course, there's nothing new in suggesting that we should interrogate product supply chains for their environmental and social impacts. Cheetos are not alone in that respect.

As consumers, though, we are at the end of hundreds if not thousands of supply chains daily. My grocery cart may not have bags of Cheetos in it, but every other item in the cart also has a supply chain about which I know very little. It's easy as a consumer to think of your personal supply chain as starting at the grocery store (or, increasingly, Amazon), then you walk the cart to your vehicle, then you drive home, then you unpack the bags. But isn't our true supply chain the supply chains of all the items in the cart? Your Cheetos supply chain begins with palm oil trees, not the grocery store.

Cheetos and palm oil are not the only instance of people discovering a bad link in a supply chain and going after it. We can blame corporate supply chains for bad practices, and we can shame consumers for choosing products from those supply chains. But the concept of the Anthropocene—a new geologic epoch defined by the aggregate of human impact on the planet[136]—brings into focus that consumption is the root of the problem. Consumption is why supply chains exist.

Thinking this way can be overwhelming. What am I supposed to do? How much and what should I consume? Questions like these bring us back to the good life. If all consumption leads to the Anthropocene, how does one live a good material life that is also a good ethical life? Less impact is better, but zero impact isn't possible. We're stretching the planetary boundaries,[137] and the planet doesn't distinguish between good Cheetos and bad Cheetos. I'll leave the ethical dimensions of that hard question to ethicists. My more practical interest is in putting consumers and consumption into the center of the conversation about the law and policy of the Anthropocene.

We need to take the relationship between consumption and the Anthropocene seriously. We tend not to, though. We govern consumption indirectly by regulating industries and products, or through taxes and other price controls. A concern with putting the spotlight on consumers may be that doing so obscures the responsibility of corporate actors. It also requires us to look at ourselves in the mirror. With the Anthropocene staring back at us, however, it is time to take a "whole of consumption" approach that demands consumer agency across the board.

Yet, it is not at all clear how to get a governance handle on consumption at that scale, particularly in affluent nations with high expectations of what a good material life involves. Even during the palm oil controversy, most Americans did not give up their Cheetos. Maybe PepsiCo has improved its sourcing, but even if so, going after and improving supply chain defects doesn't put consumption at the center of responsibility. Even if all past consumption and the supply chains making it possible had been "good," however we define that, we'd still find ourselves in the Anthropocene.

Boosting the law and policy focus on consumers raises many hard issues with no easy solutions. With few exceptions—Jim Salzman[138] and Mike Vandenbergh[139] being early and notable examples—legal scholars have not ventured far into the consumer side of the Anthropocene problem. Even when sustainable consumption has been the target, the focus usually has been on supply chains and product regulation, such as "take back," "right to repair," and other "circular economy" initiatives.

These may be all well and good, but they continue to deflect attention away from the contribution of consumption to the Anthropocene. Picking up where authors like Salzman and Vandenbergh started, this is a call for legal scholars to weigh in by exploring how institutions and instruments can be designed to more robustly govern the whole of consumption, ideally without taking all the fun (like Cheetos) out of the good life in the Anthropocene.

136. *See* Colin N. Waters & Simon D. Turner, *Defining the Onset of the Anthropocene*, 378 Science 706 (2022).

137. *See* Rockström et al., *supra* note 5.

138. *See* James Salzman, *Sustainable Consumption and the Law*, 27 Env't L. 1243 (1997).

139. *See* Michael P. Vandenbergh & Anne C. Steinemann, *The Carbon-Neutral Individual*, 82 N.Y.U. L. Rev. 1673 (2007); Micheal P. Vandenbergh, *From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law*, 57 Vand. L. Rev. 515 (2004).

## XI. Rationalizing Water Consumption in the United States: Human Needs, Local Limits, and the Constitutional Right to Travel

*This section was authored by Robin Kundis Craig, Robert A. Schroeder Distinguished Professor and Professor of Law, University of Kansas School of Law.*

Human consumption of water imposes externalities on planetary systems, and at all scales. Globally, for example, human impoundments of surface water in reservoirs account for a significant fraction of observed polar drift[140] and have shrunk day length by a few microseconds,[141] while pumping of groundwater has tilted the earth's axis.[142] Regionally, consumption of water means that major rivers around the world—including the United States' Colorado River and Rio Grande River, the Yellow River in China, the Amu Darya (Afghanistan, Tajikistan, Uzbekistan, and Turkmenistan) and Syr Darya (Uzbekistan, Tajikistan, and Kazakhstan) in Central Asia, and the Tigris and Euphrates Rivers in the Middle East (Turkey, Syria, and Iraq)—no longer reach the ocean,[143] with others like the Murray River in Australia and the Indus River in India at risk of the same.[144]

Local impacts of water overconsumption are even more common. In just the United States, for example, consumption of groundwater in California's Central Valley has caused land subsidence of about 30 feet[145] and collapsed some aquifers.[146] Diversion of freshwater from the tributaries to the Great Salt Lake in Utah is the most significant cause of the lake's shrinkage, exposing about 80% of Utah's residents to toxic dust.[147] Overpumping of groundwater in Florida leads to saltwater intrusion.[148]

Thus, overconsumption of freshwater is a problem in many different kinds of climates. Nevertheless, these issues tend to be most acute in dry climates, particularly as climate change makes regions hotter and drier.

Simultaneously, both the world as a whole and some states in the United States are increasingly incorporating a human right to water into law. As the United Nations Department of Economic and Social Affairs reports, for example:

> On 28 July 2010, through Resolution 64/292, the United Nations General Assembly explicitly recognized the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realisation of all human rights. The Resolution calls upon States and international organisations to provide financial resources, help capacity-building and technology transfer to help countries, in particular developing countries, to provide safe, clean, accessible and affordable drinking water and sanitation for all.[149]

Moreover, according to the United Nations, this new human right is defined by five components: *sufficient* water for basic human needs, requiring 50 to 100 liters per day; *safe* water that is free of health-threatening pollutants and microorganisms; *acceptable* water in terms of color, odor, taste, and cultural requirements, and that is sensitive to gender, lifestyle, and privacy requirements; *physically accessible* water, within 1,000 meters of each person's home and collectable within 30 minutes; and *affordable* water, where basic water needs can be met for 3% or less of household income.[150]

The United Nations' vision thus explicitly incorporates cultural and individual differences and norms, allowing for social and cultural differences in determining whether the human right to water is being met for particular people and communities. Nevertheless, the United Nations has so far done little to connect this laudable human rights goal to the wildly varying hydrogeological realities that characterize aquatic systems throughout the United States and around the globe. The only hints that physical realities *might* differentiate the substantive scope of the human right to water in different locations is the range of what qualifies as a sufficient amount—from 50 to 100 liters (13.2 to 26.4 gallons)—in combination with physical accessibility and price, both of which suggest that technologies for moving water (as well as for treating it) may be unavoidable investments necessary to fulfill the human right to water.

Nevertheless, common experience indicates that native hydrogeological realities are critical to, even if not entirely determinative of, water security. In the eastern United States, for example, residents are still more likely to worry about flood than drought,[151] and even severe drought years

140. Benjamin Fong Chao, *Anthropogenic Impact of Global Geodynamics Due to Reservoir Water Impoundment*, 22 Geophysical Rsch. Letters 3529, 3529, 3532 (1995).
141. Malcolm W. Browne, *Dams for Water Supply Are Altering Earth's Orbit, Expert Says*, N.Y. Times (Mar. 3, 1996), https://www.nytimes.com/1996/03/03/news/dams-for-water-supply-are-altering-earth-s-orbit-expert-says.html.
142. Will Sullivan, *Humans Have Shifted Earth's Axis by Pumping Lots of Groundwater*, Smithsonian Mag. (June 22, 2023), https://www.smithsonianmag.com/smart-news/humans-have-shifted-earths-axis-by-pumping-lots-of-groundwater-180982403.
143. Brahma Chellaney, *We Have Truly Lost Our Way When Our Rivers Can No Longer Find the Oceans*, Nat'l News Op. (May 20, 2019), https://www.thenationalnews.com/opinion/comment/we-have-truly-lost-our-way-when-our-rivers-can-no-longer-find-the-oceans-1.863843.
144. *Id.*
145. Water Education Foundation, *Aquapedia: Land Subsidence*, https://www.watereducation.org/aquapedia/land-subsidence (last visited Aug. 13, 2024).
146. Nathan Halverson, *9 Sobering Facts About California's Groundwater Problem*, Reveal News (June 25, 2015), https://revealnews.org/article/9-sobering-facts-about-californias-groundwater-problem/.
147. Oliver Milman, *Great Salt Lake's Retreat Poses a Major Fear: Poisonous Dust Clouds*, Guardian (Feb. 16, 2023), https://www.theguardian.com/us-news/2023/feb/16/great-salt-lake-disappear-utah-poison-climate-crisis.
148. Water Resources Mission Area, *Saltwater Intrusion*, U.S. Geological Surv. (Mar. 2, 2019), https://www.usgs.gov/mission-areas/water-resources/science/saltwater-intrusion.
149. United Nations Department of Economic and Social Affairs, *International Decade for Action "Water for Life" 2005-2015: The Human Right to Water and Sanitation*, https://www.un.org/waterforlifedecade/human_right_to_water.shtml (last visited Aug. 13, 2024).
150. *Id.*
151. *E.g.*, Center for Disaster Philanthropy, *2023 Northeast US Floods*, https://disasterphilanthropy.org/disasters/2023-northeast-us-floods/ (last updated Sept. 25, 2023).

rarely threaten water supply in the same existential way as can occur in the West[152] and other severely water-limited places, such as Cape Town, South Africa.[153]

Perhaps, it is time to ask: Does a human right to water come with concomitant responsibilities to take account of the native water supply and the externalities imposed by human use? In other words, can the number of humans who can claim a right to take water from a particular source be limited by the native supply?

This is, of course, a complicated question, nor will all of its facets be addressed here. For example, water treatment certainly makes more water consumption possible. Nevertheless, the public health benefits of water treatment are so significant that it is difficult to contest that water treatment is desirable.[154] Moreover, there are often considerable social benefits, such as girls' education, in making local water easier to access, either through groundwater pumps or pipes and canals.[155] However, concluding that all water that is consumed should be treated and relatively easy to access resolves different issues from figuring out how much native water should be consumed in the first place.

Given the growing populations of many water-scarce locations in the United States,[156] this is not a hypothetical question. Moreover, multiple approaches to answering the question are necessary. For example, even if a population isn't growing, the substantive scope of an enforceable human right to water should probably vary depending on native supply—for example, it could be closer to the 50-liter end of the sufficiency scale in Phoenix, Arizona, and maybe 200 or more liters per day in wetter parts of the country. That seems a reasonable way to start matching human rights to geographic realities.

Far more complex are the ethics that should attach to communities that outgrow their native water supplies. The populations of most major cities in the U.S. West—Los Angeles, Las Vegas, San Diego, Phoenix, Tucson, Salt Lake City, Denver—have long outstripped native water supplies and survive only by moving water from distant locations, often to the detriment of other local communities and ecosystems, from the Owens Valley[157] to the Sacramento Bay Delta[158] to Great Salt Lake[159] to Tribes like the Navajo Nation.[160] While the notion is entirely contrary to western water law and the rule of prior appropriation, viewed from the perspective of a geographically sensitive human right to water, the lengthy canals and vast water projects of the West look more and more like thefts (to the extent they didn't look like that already[161]).

In between falls a more practical and ongoing community planning dilemma: the issue of whether limitations on native water supply can limit population growth. For example, what happens when native supply drops below the capacity to supply each resident with even 50 liters per day, the minimum amount to fulfill the human right to water?

As noted, California, which does have a state-level human right to water,[162] has so far avoided this dilemma by moving water from wetter but less populous parts of the state and from the Colorado River to cities and farms.[163] But even that infrastructure is starting to be insufficient.[164] So, even leaving to the side the even stickier issue of whether water scarcity could limit *internal* population growth, it seems fair to ask whether the realities of a fully consumed water supply could ever allow municipalities and states to limit the number of people moving in.

Nor is this a hypothetical question, either. Municipalities and states have already exercised—or attempted to exercise—their legal authorities over water supply in attempts to limit growth viewed as damaging in some way. For example, cities and other municipalities already limit new water hookups for residential development.[165] In Washington State, as a result of water scarcity, the state can impose minimum instream flow requirements that then limit new appropriations of water.[166]

152. *E.g.*, Priya Arora, *Where's the Water? Drought Threatens California's Lifeline*, N.Y. Times (Oct. 21, 2021), https://www.nytimes.com/2021/05/20/us/drought-california.html.
153. Charlotte Edmond, *Cape Town Almost Ran Out of Water. Here's How It Averted the Crisis*, World Econ. F. on Afr. (Aug. 23, 2019), https://www.weforum.org/agenda/2019/08/cape-town-was-90-days-away-from-running-out-of-water-heres-how-it-averted-the-crisis/.
154. *E.g.*, Guy Hutton & Claire Chase, *Water Supply, Sanitation, and Hygiene*, *in* Injury Prevention and Environmental Health 171, 189 tbl.9.6 (Charles N. Mock et al. eds., International Bank for Reconstruction and Development/World Bank 3d ed. 2017), *available at* https://www.ncbi.nlm.nih.gov/books/NBK525218/pdf/Bookshelf_NBK525218.pdf.
155. *Access to Water Sends Girls Back to School*, CARE (Nov. 16, 2022), https://www.care-international.org/stories/access-water-sends-girls-back-school.
156. Olivia Nater, *What Population Growth and the "Megadrought" Mean for U.S. Water Supplies*, Population Connection (June 17, 2022), https://populationconnection.org/blog/population-growth-megadrought-united-states/.
157. Kirk Siegler, *Owens Valley Salty as Los Angeles Water Battle Flows Into Court*, NPR (Mar. 11, 2013), https://www.npr.org/2013/03/11/173463688/owens-valley-salty-as-los-angeles-water-battle-flows-into-court.
158. David Owen, *The Biggest Potential Water Disaster in the United States*, New Yorker (May 11, 2022), https://www.newyorker.com/news/dispatch/the-biggest-potential-water-disaster-in-the-united-states.
159. Sarah Derouin, *Utah's Great Salt Lake Has Lost Half Its Water, Thanks to Thirsty Humans*, Science (Nov. 3, 2017), https://www.science.org/content/article/utah-s-great-salt-lake-has-lost-half-its-water-thanks-thirsty-humans.
160. Becky Sullivan, *The Supreme Court Wrestles With Questions Over the Navajo Nation's Water Rights*, NPR (Mar. 20, 2023), https://www.npr.org/2023/03/20/1164852475/supreme-court-navajo-nation-water-rights.
161. *E.g.*, Kirstin Butler, *When California's Water Wars Turned Violent*, PBS (Mar. 24, 2022), https://www.pbs.org/wgbh/americanexperience/features/flood-desert-california-water-wars-violent; Pauly Denetclaw, *Colorado River, Stolen by Law*, High Country News (Mar. 1, 2022), https://www.hcn.org/issues/54.3/indigenous-affairs-colorado-river-stolen-by-law.
162. California State Water Resources Control Board, *Human Right to Water Portal*, https://www.waterboards.ca.gov/water_issues/programs/hr2w/ (last updated July 16, 2024).
163. Alvar Escriva-Bou et al., Public Policy Institute of California, California's Water Grid (2019), https://www.ppic.org/wp-content/uploads/californias-water-grid.pdf /.
164. Lauren Sommer, *3 Reasons Why California's Drought Isn't Really Over, Despite All the Rain*, NPR (Mar. 23, 2023), https://www.npr.org/2023/03/23/1165378214/3-reasons-why-californias-drought-isnt-really-over-despite-all-the-rain.
165. *See, e.g.*, Ball v. Town of Ballston, 173 A.D.3d 1304, 1309 (N.Y. App. Div. 2019) (upholding town board in denying water hookup in order to protect agriculture); Murray v. Dowd, 946 N.E.2d 716, 716 (Mass. App. Ct. 2011) (noting town moratorium on water connections in the context of a real estate contract dispute).
166. Bassett v. State of Wash. Dep't of Ecology, 438 P.3d 563, 577-78 (Wash. Ct. App. 2019).

To date, most of these limitations on access to water have been evaluated through the lens of constitutional takings.[167] However, a second, if somewhat more obscure, constitutional challenge awaits any serious attempt by local governments to limit overall growth to an acceptable consumption of local water supply ("acceptable" allowing for protection of the environment, as well): the U.S. Supreme Court has long recognized a constitutional right to interstate travel, and *that* right doesn't seem limited by consumption realities.

While the Court articulated facets of the right to travel at least as early as 1867,[168] its earliest, most complete declaration of the right came in 1958:

> The right to travel is a part of the "liberty" of which the citizen cannot be deprived without the due process of law under the Fifth Amendment. So much is conceded by the Solicitor General. In Anglo-Saxon law that right was emerging at least as early as the Magna Carta. Chafee, *Three Human Rights in the Constitution of 1787* (1956), 171-181, 187 et seq., shows how deeply engrained in our history this freedom of movement is. Freedom of movement across frontiers in either direction, and inside frontiers as well, was a part of our heritage. Travel abroad, like travel within the country, may be necessary for a livelihood. It may be as close to the heart of the individual as the choice of what he eats, or wears, or reads. Freedom of movement is basic in our scheme of values.[169]

The right is protected as a fundamental right through strict scrutiny.[170] Historically, the right has served primarily as a constitutional check on discrimination on those moving from out of state,[171] although it also played a recurring role in the Civil Rights Movement.[172]

So far untested is the strength of the right to move in the face of the destination's water scarcity. The strict scrutiny standard of review requires that any municipality's or state's reason for limiting the right to move must be compelling and the restrictions narrowly tailored to that compelling interest.[173] Notably, moreover, according to the Supreme Court:

> There may be a substantial reason for requiring the nonresident to pay more than the resident for a hunting license, or to enroll in the state university, *but our cases have not identified any acceptable reason for qualifying the protection afforded by the Clause for "the 'citizen of State A who ventures into State B' to settle there and establish a home."* Permissible justifications for discrimination between residents and nonresidents are simply inapplicable to a nonresident's exercise of the right to move into another State and become a resident of that State.[174]

Prior jurisprudence thus leaves considerable doubt regarding the legal authorities of states and municipalities to turn away migrants in order to respect the limits of native water supply. Will courts allow water-scarce communities to preserve native aquatic ecosystems as they limit growth? Will communities be forced to secure nonlocal water supplies rather than limit growth—at least so long as municipalities actually have affordable other options for water?

In *The Water Knife*,[175] Paolo Bacigalupi imagined a western United States of the not-too-distant future where every state had the option to impose its own immigration system, driven ultimately by water scarcity. The novel offers a profoundly dystopian view of the so-called *United* States, one that underscores our unthinking reliance on a right to move.

At the same time, however, we are facing a legal reality as we enter the Anthropocene that people in the United States have a protected right to move wherever they want, with no concomitant duty to take into account the impacts of their water consumption on the places where they seek to move. While, as noted, local governments can impose some restrictions on water hookups and, in many western states, require proof of water rights before allowing new construction, their ability to simply state, "We're tapped out. Don't move here," appears to be constitutionally severely circumscribed, if not outright prohibited.

The results are Los Angeles, Phoenix, and Tucson. The right to travel, carried into the Anthropocene, means that Nashville and Buffalo—or any other city that currently doesn't worry too much about the sufficiency of its water supply—could be next. Does overconsumption of local water supply have to become a national security issue—one of the few exceptions to the constitutional right to travel—before state and local planners can think about limiting growth?

## XII. Consumption All the Way Down

*This section was authored by Sarah Fox, Associate Professor of Law, Marquette University Law School.*

Anthropogenic change on earth is occurring on a scale never seen before. Mounting evidence shows that humans

167. *E.g.*, Chelsea Inv. Grp. LLC v. City of Chelsea, 792 N.W.2d 781, 796-97 (Mich. Ct. App. 2010); Jacobs Ranch, LLC v. Smith, 148 P.3d 842, 855-56 (Okla. 2006).
168. *See* Crandall v. Nevada, 75 U.S. 35, 44 (1867).
169. Kent v. Dulles, 357 U.S. 116, 125-26 (1958).
170. Shapiro v. Thompson, 394 U.S. 618, 634 (1969).
171. According to the Supreme Court, the right to move is protected through the Privileges and Immunities Clause, and
> [i]t provides important protections for nonresidents who enter a State whether to obtain employment, to procure medical services, or even to engage in commercial shrimp fishing. Those protections are not "absolute," but the Clause "does bar discrimination against citizens of other States where there is no substantial reason for the discrimination beyond the mere fact that they are citizens of other States."

Saenz v. Roe, 526 U.S. 489, 502 (1999) (citing Hicklin v. Orbeck, 437 U.S. 518 (1978); Doe v. Bolton, 410 U.S. 179, 200 (1973); Toomer v. Witsell, 334 U.S. 385, 396 (1948)).
172. *E.g.*, United States v. Guest, 383 U.S. 745, 757-58 (1966).
173. *Saenz*, 526 U.S. at 499; *Shapiro*, 394 U.S. at 634.
174. *Saenz*, 526 U.S. at 502 (emphasis added) (citing Baldwin v. Fish & Game Comm'n of Mont., 436 U.S. 371, 390-91, 8 ELR 20425 (1978); Vlandis v. Kline, 412 U.S. 441, 445 (1973); quoting Zobel, 457 U.S. 55, 74 (1982) (O'Connor, J., concurring)).
175. Paolo Bacigalupi, The Water Knife (2015).

are pushing the planet beyond its systems' capacities due to growth of production, consumption, and population.[176] To understand earth's systems, and to develop a framework for how we might better live within their limits, scientists have engaged in ongoing research on earth system boundaries.[177] That work attempts to "quantify safe and just Earth system boundaries (ESBs) for climate, the biosphere, water and nutrient cycles, and aerosols at global and subglobal scales."[178] To live more comfortably within these boundaries, and to therefore maintain the security of earth's functional systems, consumption must be both improved and decreased.

The question of what constitutes the "good life" in the Anthropocene is likely to generate highly personalized responses. At the same time, the ways that question is answered, and the behaviors it drives, have global implications.[179] While enormous market forces and global actors spur consumption of all kinds, many breaches of planetary boundaries are attributable to individual choices regarding resource consumption. Matching the global nature of the ESB problem with the unique consumption practices of billions of individuals means there will be many disagreements over how to restrict and control boundary breaches.

The mismatch in scale makes tackling consumption and its impacts on the planet particularly daunting. That is especially true when considering the myriad collective action problems that arise when thinking about what level of government could and should tackle consumption in its various forms. What follows here is perhaps best considered a thought experiment into dividing responsibility for bringing consumption within ESBs. It is intended to acknowledge the complexity of the question and the need for multiscalar action while also preserving some amount of choice in how needed limits are met.

And it is, of course, just one of many necessary pieces in a complex puzzle. Most crucially, perhaps, it acknowledges but does not otherwise engage with the issue that economic health in the United States and many other countries relies on consumer spending and consumption.[180] But it makes the case that planetary system limits should drive decisions about how and what consumption occurs.

Allocating individual responsibility for part of a collective harm is not new to environmental law. For the past 50 years in the United States, some of the major environmental statutes, including the Clean Air Act (CAA)[181] and the CWA,[182] have attempted to allocate individualized responsibility for environmental harm to varying degrees. For instance, the CAA establishes national limits on certain air pollutants and devolves responsibility to the states to come within those limits. That can be done within the state as a whole, or by separating the state into multiple air quality control regions that must individually come into alignment.[183] Using a different mechanism, the CWA uses the total maximum daily load[184] process to negotiate and allocate individual limits on pollutants entering contaminated water bodies.

What if we used similar mechanisms to match consumption to earth's system capacities? Starting with an international maximum level of consumption driven by system boundaries, that number could be translated into jurisdiction-specific limits for individual countries, states, local governments, and even individuals depending on their contribution to the problem—crucially, calculated not only by what activities are occurring within that country but also by its share of responsibility for the demand for products, manufacturing, and waste disposal need.

Using the United States as an example, the federal government could develop a cooperative federalism model akin to the environmental statutes mentioned above by translating national limits into consumption quotas for states. While consumption may not share the same geographic and atmospheric patterns as air or water pollution patterns, states could also be broken into Earth System Boundary Control Areas (ESBCAs) that allow for more fine-tuning when it comes to setting limits. In that scenario, states would be responsible for ensuring that the ESBCAs come into alignment with the national standard. That kind of substate organization could operate as a form of regional planning that does not exist in most parts of the United States.[185]

Similarly, state and substate actors in the United States could take the initiative on consumption within this framework. States that choose to tackle the problem could use their allocated share of consumption as a jumping off point for their own controls, even without a national scheme in place. If market leader states like California were to take on such a project, they could compel corporate actors to rework the way they manufacture or package goods, or alter other kinds of consumptive practices.[186] Those kinds

176. United Nations Sustainable Development Goals, *Goal 12: Ensure Sustainable Consumption and Production Patterns*, https://www.un.org/sustainabledevelopment/sustainable-consumption-production/ (last visited Aug. 13, 2024).

177. *See generally*, *e.g.*, Rockström et al., *supra* note 5.

178. *Id.* at 102.

179. *See, e.g.*, One Planet Network, *Sustainable Consumption and Production*, https://www.oneplanetnetwork.org/SDG-12/sustainable-consumption-and-production (last visited Aug. 13, 2024) ("Achieving sustainable patterns of consumption and production is critical if we are to overcome the triple planetary crises of climate change, biodiversity loss and pollution and waste.").

180. *See, e.g.*, TheGlobalEconomy.com, *Consumption as Percent of GDP by Country: The Latest Data*, https://www.theglobaleconomy.com/rankings/consumption_GDP/ (last visited Aug. 13, 2024) (noting that "[h]ousehold consumption is about 60 percent of [gross domestic product (GDP)] making it the largest component of GDP besides investment, government spending and net exports").

181. 42 U.S.C. §§7401-7671q, ELR Stat. CAA §§101-618.

182. 33 U.S.C. §§1251 et seq. (1972).

183. 42 U.S.C. §7407.

184. *See* U.S. EPA, *Overview of Total Maximum Daily Loads (TMDLs)*, https://www.epa.gov/tmdl/overview-total-maximum-daily-loads-tmdls (last updated Nov. 14, 2023).

185. Scott D. Campbell & Moira Zellner, *Wicked Problems, Foolish Decisions: Promoting Sustainability Through Urban Governance in a Complex World*, 73 Vand. L. Rev. 1643, 1671 (2020) (noting the "lack of regional planning traditions and authorities in the United States").

186. *See, e.g.*, Christopher Oster, *Fuel Efficiency Standards—California vs. the Feds (How We Got Here, and What Comes Next)*, Eno Ctr. for Transp. (Aug. 2, 2019), https://enotrans.org/article/fuel-efficiency-standards-california-vs-the-feds-how-we-got-here-and-what-comes-next/.

of manufacturing and product requirements imposed in one state could impact national markets, and therefore potentially reduce consumptive uses in other states as well.

For the many states in the United States that are unlikely to take on questions of consumption, local governments may also be able to play a role. Data that generate useful consumption limits for substate entities would give local governments a goal to work toward in places where they may be the only level of government willing to take on such questions. These local governments can be expected to be vulnerable to state preemption, depending on what kinds of initiatives they pursue.[187] They may also, however, present an interesting test case for the federal government supporting environmental initiatives through data, financial incentives, and direct funding. Finally, individuals could use consumption limits to guide their own behaviors, in the absence of government action.

Using a quota-based approach to bringing consumption within planetary boundaries raises as many questions as it answers. There are questions about what it would mean to translate system boundaries into actionable numbers, how to calculate shares of the problem, who gets to decide how compliance will be attained, what consumption-related measures would be appropriate, and countless others. But the proposal could be useful in offering a way through current inaction on consumption. By incorporating limits as well as flexibility in attaining them, it may offer a toehold on a daunting problem.

And in the United States, as in other places, political realities suggest that we need to be offering as many toeholds to as many actors as possible. If "the American lifestyle is not up for negotiation"[188] at a high level, what the American lifestyle means, requires, and allows must be interrogated by those living it. Bringing in solutions that force that interrogation about living within planetary system limits while helping to preserve individual choice can perhaps drive forward conversation about consumption.

## XIII. "Green Colonialism"

*This section was authored by Ruhan S. Nagra, Associate Professor of Law and Director of the Environmental Justice Clinic, University of Utah S.J. Quinney College of Law.*

In 1972, a group of Massachusetts Institute of Technology economists published *The Limits to Growth*, a study that used computer models to analyze the future of our planet under 12 possible scenarios.[189] In the 50 years since the book's publication, the authors' "business-as-usual" scenario has unfolded with alarming accuracy: population and economic growth have continued at about the same pace as in prior decades, and human activity has exceeded the planet's carrying capacity.[190] The authors cautioned, moreover, that we cannot innovate our way out of the climate catastrophe—technology alone would delay ecological collapse by only a few years.[191]

We have barreled past the earth's breaking point but somehow still failed to heed these warnings. Today, advocates of degrowth—like the economists whose computer models proved so prescient—contend that green technology cannot save us.[192] Instead, global North countries must curtail consumption. By shrinking our ecologically and socially destructive industries (like weapons, meat, and private transportation) and expanding the social foundation for a good life (high-quality and universal health care, education, and jobs), we can build new economies that do not depend on growth.

But degrowth has remained a largely fringe movement. In policy circles, the mainstream paradigm for responding to climate change is "green growth"—that is, consuming "better" rather than consuming less. Green growth advocates claim that technological innovation—which seeks to harness solar, wind, and other large-scale renewable energy—will reduce greenhouse gas emissions without necessarily requiring a reduction in consumption. But even proponents of green growth acknowledge that greenhouse gas emissions will not drop quickly enough with this approach. Questions remain, moreover, about whether infinite growth is possible on a planet with finite resources.

Environmental justice advocates should challenge green growth orthodoxy for additional reasons. A boom in the production of electric vehicles, heat pumps, solar panels, wind turbines, and other green technologies will require a massive intensification of mining for rare earth minerals. As Thea Riofrancos writes, toxic and socially controversial sectors like mining have historically been offshored by global North countries to the global South, where mining operations are rife with human rights and environmental abuses.[193]

But the United States and European Union are now seeking to onshore the extraction of lithium and other critical minerals, believing that this shift in production "will enable end-to-end dominance of the [renewable technology] supply chain" and give them the upper hand in

187. *See, e.g.*, Ballotpedia, *Preemption Conflicts Between State and Local Governments*, https://ballotpedia.org/Preemption_conflicts_between_state_and_local_governments (last visited Aug. 13, 2024) (tracking state preemption of local authority).

188. *See* Thalif Deen, *U.S. Lifestyle Is Not Up for Negotiation*, Inter Press Serv. News Agency (May 1, 2012), https://www.ipsnews.net/2012/05/us-lifestyle-is-not-up-for-negotiation/.

189. Donella H. Meadows et al., The Limits to Growth (1972); Club of Rome, Understanding "The Limits to Growth": A Clear Warning and a Message of Hope (2022), https://www.clubofrome.org/wp-content/uploads/2022/02/CoR-TheMessageOfLtG.pdf.

190. Club of Rome, *supra* note 189 (citing Graham Turner, *Is Global Collapse Imminent? An Updated Comparison of* The Limits to Growth *With Historical Data* (Melbourne Sustainable Society Institute, Research Paper No. 4, 2014); Gaya Herrington, *Update to Limits to Growth: Comparing the World3 Model With Empirical Data*, 25 J. Indus. Ecology 614 (2021)).

191. Club of Rome, *supra* note 189.

192. Spencer Bokat-Lindell, *Do We Need to Shrink the Economy to Stop Climate Change?*, N.Y. Times (Sept. 16, 2021), https://www.nytimes.com/2021/09/16/opinion/degrowth-cllimate-change.html.

193. Thea Riofrancos, *Shifting Mining From the Global South Misses the Point of Climate Justice*, Foreign Pol'y (Feb. 7, 2022), https://foreignpolicy.com/2022/02/07/renewable-energy-transition-critical-minerals-mining-onshoring-lithium-evs-climate-justice/.

struggles for geopolitical leverage.[194] At first blush, explains Riofrancos, this feels like justice—finally, after decades of "unequal ecological exchange" in which global North countries exploited and extracted the labor and natural resources of the global South, the United States and European Union will not wreak social and environmental devastation on global South countries to mine the critical minerals needed for green growth.[195]

But in the United States—just as in many global South countries—Indigenous communities will bear the brunt of critical minerals mining. Earlier this year, Indigenous land and water protectors built a protest camp and used their bodies to block construction of the Thacker Pass Lithium Mine in Nevada.[196] "Lithium mines and this whole push for renewable energy—the agenda of the Green New Deal—is what I like to call green colonialism," said one member of the tribe.[197] Last year, after the Joseph Biden Administration used the Defense Production Act to subsidize the extraction of critical minerals,[198] advocacy organizations expressed their opposition to the move and urged the implementation of requirements to obtain the free, prior, and informed consent of Indigenous communities.[199]

As Andrew Nikiforuk writes, we must grapple with what it means to continue down the path of endless growth—"replacing one unsustainable fossil fuel system with another intensive mining system powered by even more extreme energies."[200] The production of "clean" technology is not clean, and we know who will shoulder the burdens.

Yet, too many climate advocates seem willing to sacrifice Indigenous communities in the pursuit of green growth. Even Bill McKibben suggests he is at peace with this trade off because the harm of green technology production is "localized"—limited to specific communities—while "the damage that comes from fossil fuels is global and existential."[201] What are the ethical and moral implications of this micro-harm versus macro-harm logic? Have we decided that marginalized communities are expendable in the name of green growth, just as they were expendable in the name of fossil fuel growth?

194. *Id.*
195. *Id.*
196. Jarrette Werk, *At Thacker Pass, Extraction and Resistance Come to a Head*, Underscore Native News (June 9, 2023), https://www.underscore.news/reporting/at-thacker-pass-extraction-and-resistance-come-to-a-head.
197. Mark Trahant, *This Time It's Different? The Rush to Mine Indigenous Lands*, Nev. Current (July 14, 2023), https://www.nevadacurrent.com/2023/07/14/this-time-its-different-the-rush-to-mine-indigenous-lands/.
198. Memorandum on Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as Amended (Mar. 31, 2022) (Presidential Determination No. 2022-11), https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/31/memorandum-on-presidential-determination-pursuant-to-section-303-of-the-defense-production-act-of-1950-as-amended/.
199. Letter From Undersigned Organizations to President Biden (May 16, 2022), https://earthjustice.org/wp-content/uploads/no_dpa_for_mining_sign_on_letter.pdf.
200. Andrew Nikiforuk, *The Rising Chorus of Renewable Energy Skeptics*, Tyee (Apr. 7, 2023), https://thetyee.ca/Analysis/2023/04/07/Rising-Chorus-Renewable-Energy-Skeptics/.
201. Bill McKibben, *To Save the Planet, Should We Really Be Moving Slower?*, New Yorker (July 5, 2023), https://www.newyorker.com/news/daily-comment/to-save-the-planet-should-we-really-be-moving-slower.

## XIV. Breaking Our Consumption Addictions

*This section was authored by Kevin Lynch, Professor of Law and Executive Associate Dean for Academic Affairs at the University of Denver Sturm College of Law.*

Americans are addicted. We see this all around us. Our addictions range from the pleasurable but mostly innocuous (coffee and caffeine[202]) to more concerning on a society-wide scale (think overeating and obesity) to the pathological and clearly harmful (such as the fentanyl overdose crisis). These addictions benefit some in our society, such as food conglomerates selling junk food or drug dealers, both illicit and legally sanctioned.[203] They also have serious harms to both the addict and to society more broadly. Breaking our addictions could go a long way toward reducing some of the excesses of our consumer culture and its devastating environmental impacts. But how can we, collectively, go about breaking the cycle of addiction?

It is tempting to blame the addict. But although consumers bear some individual responsibility, there are also bigger forces at play. It would be much easier for individuals to reduce their overconsumption if our society facilitated and encouraged such changes. Merely calling for individual responsibility is not enough and can be counterproductive. We might also envision regulatory interventions that would curb the addictive nature of consumer products or restrict marketing those products to consumers who would become addicts in the future.

Of course, I am not the first to view overconsumption and consumerism through the lens of addiction.[204] So, while not claiming to have had some novel insight, I hope to refocus some attention on this topic in the context of reducing the environmental impacts of consumption, especially overconsumption.

### A. Analogizing Our Consumption Patterns to Addiction

Our gathering of environmental law professors focused on four main areas of consumption, but I will only focus on two of those that best fit the addiction framework.

*Food consumption*: Medical views of obesity have recently recognized overconsumption as a result of biochemical pathways that have been driven out of whack by unhealthy food systems, lack of available and affordable

202. Nilss Olekalns & Peter Bardsley, *Rational Addiction to Caffeine: An Analysis of Coffee Consumption*, 104 J. Pol. Econ. 1100 (1996).
203. Samantha Delouya, *Court Grants Sackler Family Immunity in Exchange for $6 Billion Opioid Settlement*, CNN (May 30, 2023), https://www.cnn.com/2023/05/30/business/sackler-purdue-opioid-liability.
204. *See, e.g.*, Elizabeth C. Hirshman, *The Consciousness of Addiction: Toward a General Theory of Compulsive Consumption*, 19 J. Consumer Rsch. 155 (1992) (integrating theories of addiction from multiple disciplines); Gerda Reith, *Consumption and Its Discontents: Addiction, Identity, and the Problems of Freedom*, 55 BJS 283, 285-86 (2004) (describing the paradox of the concept of freedom in liberal societies with subjugation to cultural norms of consumerism); Karl A. Boedecker et al., *Excessive Consumption: Marketing and Legal Perspectives*, 36 Am. Bus. L.J. 301, 303-05 (2008) (noting how marketing practices feed addictive behaviors).

healthier options, and marketing and product development by food conglomerates to cultivate addictions in consumers.[205] And while there is certainly debate about whether obesity by itself is truly a health epidemic or not,[206] overeating and food waste definitely have significant environmental impacts related to the overconsumption of food.

*Water consumption*: It is hard to separate consumption of water from consumption of food, as water is used primarily for crop irrigation in the United States, particularly in the arid western states.[207] The domestic use of water accounts for a much smaller portion of water use, even in the arid West,[208] but lawns have spread across suburban areas despite water scarcity in western spaces. Many have noted Americans' addiction to lawns with their associated wasteful water use.[209]

### B. Breaking the Cycle of Addiction

The diagnosis of addiction under the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) was updated in 2013 to include substance-related and addictive disorders.[210] Substance use disorder combined prior understandings of substance abuse and substance dependence, and there is a separate disorder for each substance, for example alcohol.[211] Behavioral addictions were also included in the DSM-5, although gambling disorder was the only addictive disorder explicitly included.[212]

The concept of food addiction has also received attention in the literature, with a focus on overeating as primarily a substance use disorder but also perhaps a behavioral addiction.[213] The concept of food addiction should not be overinterpreted,[214] but may help in understanding some forms of overeating.

Water use addiction is more of an analogy and is certainly not a psychological diagnosis. But there are many references to lawn addiction (which uses large amounts of water) in the popular media. A quick Google search will yield many results about the water use resulting from lawn addiction especially in suburban areas.[215] But I do not want to be mistaken as suggesting that these have risen to the level of psychological disorders recognized by medical professionals and the DSM.

Diagnosing addiction is one thing, but treatment is yet another challenge. Organizations such as the Partnership to End Addiction are working to gather, organize, and spread the word on the latest evidence-based treatments for addiction.[216] Treatment programs include inpatient or outpatient rehab programs, medication, individual and group counseling, integrated care including mental health treatment, and follow-up treatment including recovery support groups (think of 12-step programs like Alcoholics Anonymous, although there are also non-12-step groups).[217] Harm reduction also features prominently in this area, which is the idea that any steps toward reducing substance use or lowering the risks when using is a step in the right direction.[218]

How can this view of overconsumption as akin to addiction inform our policy and legal approaches to reducing the impacts of consumption? For food addiction, the latest buzz has been focused on the development of medications to reduce appetite.[219] This is an evolving area and while long-term effects are not yet clearly known, many short-term side effects can be quite severe. But the pill[220] has appeal because it is a relatively easy fix compared to behavioral interventions and other non-medication treatment models. However, the costs for these drugs might be prohibitive if used on a broader scale,[221] unless something

205. Claire E. Wilcox, Food Addiction, Obesity, and Disorders of Overeating: An Evidence-Based Assessment and Clinical Guide (2021), https://link.springer.com/book/10.1007/978-3-030-83078-6 (discussing growing recognition of food addiction); Adrian Carter et al., *The Neurobiology of "Food Addiction" and Its Implications for Obesity Treatment and Policy*, 36 Ann. Rev. Nutrition 105 (2016) (comparing patterns of eating in obese and overweight people to the ways in which addicted individuals consume drugs).

206. *See, e.g.*, Megan McArdle, *America's Moral Panic Over Obesity*, Atlantic (July 29, 2009), https://www.theatlantic.com/business/archive/2009/07/americas-moral-panic-over-obesity/22397/.

207. Brian D. Richter et al., *Water Scarcity and Fish Imperilment Driven by Beef Production*, 3 Nature Sustainability 319, 319 (2020) (estimating 75% of total U.S. consumption going toward crop irrigation, and even higher at 86% in the 17 western states).

208. *Id.* (around 7-8% of total water consumption).

209. Paul Robbins, Lawn People: How Grasses, Weeds, and Chemicals Make Us Who We Are (2007) (lawn expert who "wrote the book" on the topic).

210. American Psychiatric Association, Substance-Related and Addictive Disorders (2013), https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM-5-Substance-Use-Disorder.pdf.

211. *Id.* (stimulant use disorder is another, although caffeine is not).

212. *See* American Psychiatric Association, Substance-Related and Addictive Disorders (2013), https://www.psychiatry.org/file%20library/psychiatrists/practice/dsm/apa_dsm-5-substance-use-disorder.pdf.

213. Adrian Meule & Ashley N. Gearhardt, *Food Addiction in the Light of DSM-5*, 2014 Nutrients 3653 (2014) (discussing the Yale Food Addiction Scale and other developing means of measuring overeating as an addictive behavior).

214. Wilcox, *supra* note 205, at vi (noting how the food addiction model has become more accepted to explain some forms of overeating, but that food addiction per se was not included in the DSM-5 along with recognized disorders like binge eating disorder and bulimia).

215. *See, e.g.*, Tik Root, *Ditching Grass Could Help Your Backyard Thrive*, Wash. Post (June 30, 2021), https://www.washingtonpost.com/climate-solutions/2021/06/30/climate-friendly-backyard/ (lawns consume three trillion gallons of water per year, according to EPA); Heather Souvaine Horn, *The Real Reason Americans Are Addicted to Lawns*, New Republic (May 19, 2023), https://newrepublic.com/post/172842/real-reason-americans-addicted-lawns (pointing out structural reasons for the prevalence of lawns); Rander Fenner, *Addicted to Grass*, KQED (May 30, 2011), https://www.kqed.org/perspectives/201105300735/addicted-to-grass (perspective of person who replaced lawn but still identifies as addicted to grass).

216. Partnership to End Addiction, *Home Page*, https://drugfree.org/ (last visited Aug. 13, 2024).

217. Partnership to End Addiction, *What Types of Addiction Treatment Are Available?*, https://drugfree.org/article/types-of-addiction-treatment/ (last visited Aug. 13, 2024).

218. Partnership to End Addiction, *Harm Reduction: Reducing the Risks of Substance Use*, https://drugfree.org/article/harm-reduction/ (last visited Aug. 13, 2024).

219. Yasmin Tayag, *Ozempic Is About to Be Old News*, Atlantic (Apr. 4, 2023), https://www.theatlantic.com/health/archive/2023/04/ozempic-wegovy-mounjaro-weight-loss-drug-development-access/673627/.

220. Dani Blum, *A Pill Form of Ozempic Is on the Horizon*, N.Y. Times (June 25, 2023), https://www.nytimes.com/2023/06/25/well/ozempic-pill-weight-loss.html.

221. Daniel Gilbert, *Insurers Clamping Down on Doctors Who Prescribe Ozempic for Weight Loss*, Wash. Post (June 12, 2023), https://www.washingtonpost.com/business/2023/06/11/weight-loss-ozempic-wegovy-insurance/ (treat-

is done to lessen the monopoly power of Big Pharma's drug patents.

Turning to water use and lawns, experts have long suggested that the prevalence of lawns is due to structural issues such as the decisions made by developers and the lawn care industry, suggesting that people don't actually want lawns, they are just stuck with them and change is hard.[222] Laws and policies can help break this cycle such as limits on turf lawns in new development or incentives to replace existing lawns.

Finally, across all of our consumption addictions, we should not overlook the impact that marketing has on us, and recognize that regulation of marketing might facilitate better choices regarding consumption.[223] Tobacco regulation has lessons on effective interventions to curb addictive consumption.[224] But also, we should not lose sight of the importance of us addicts recognizing the harm caused by our addictions and wanting to change, as well as the value of support systems and social reinforcement for long-term recovery.

## XV. What Is the Good Life in the Anthropocene?

*This section was authored by Jessica Owley, Professor and Environmental Law and Program Director, University of Miami School of Law; Professor, Rosenstiel School of Marine, Atmospheric, and Earth Sciences; Affiliated Faculty, Abess Center for Ecosystem Science and Policy.*

### A. The End of the Good Life

In July 2023, 20 environmental law professors gathered beside the Hood River in Oregon to discuss patterns of consumption and how humanity can move forward in this time of polycrisis to have the benefits of "living the good life."[225] Among friends and enjoying beautiful views and delicious food, there was no question that those of us gathered were enjoying the good life. As the world boils and environmental and social problems proliferate, can we envision a healthy future where such enjoyment continues? Is it a life that will be accessible in times to come? And to whom will it be accessible?

In our discussions, we quickly realized that we all have different ideas of what the good life is. We all agreed that everyone should have access to basic needs: food, water, and shelter. But when most of us hear about the "good life," we envision something beyond basic needs. We envision comfort, indulgences, and autonomy. The last on that list in fact might be the most important to some. Once again, when we dug into that idea, we saw different envisionings of freedom and autonomy.

In the context of environmental and natural resources law, there seems to be a lot of pushback on laws that people perceive to restrict their freedom of choice.[226] We may applaud people who bring their reusable bags to the supermarket, but do we feel the same way about a law that requires us to use them?

Agriculturalists bristle at being required to adopt particular techniques or approaches, but want to emphasize (and receive praise for) the environmental improvements they make without being required to.[227] Studies show that farmers see themselves as more concerned with environmental issues than urban activists.[228] Farmers and pastoralists have long viewed themselves as stewards of the land and more attuned to environmental concerns than others are.[229]

The good life, then, is about autonomy and control. Even when policymakers and scientists know what actions we should take to prevent environmental collapse, there is a worry that we can't tell people what to do. People want to feel powerful. We want to feel in charge of our decisions, but we shouldn't forget that our choices are being constantly manipulated by commercial and regulatory forces. People (perhaps particularly on the right but not exclusively so) seek freedom from government regulation—we don't want them to tell us what to eat, what to buy, how to farm, and so on—but we let big corporations do exactly that.

We want freedom to make choices, but the choices before us are limited and the options are constrained. Fighting for freedom of choice to make environmentally bad/good decisions only makes sense if we aren't fighting a constant battle against Big Oil, Big Pharma, and Big Ag on our TVs and social media feeds, and in our grocery stores. Without government intervention, our choices would likely be even more limited.

And there is a tension between basic needs and desired states. Is it morally or ecologically appropriate for anyone to live a life of comfort and ease when others don't have enough? Studies of planetary boundaries provide answers of what levels of consumption are sustainable,

ing just 10% of obese Medicare beneficiaries in the United States could cost $26.8 billion each year).

222. Horn, *supra* note 215 (interview with Paul Robbins, expert on lawn culture, who cites the housing and lawn industries as structural forces pushing lawns on homeowners who don't actually want them).

223. Ingrid M. Martin et al., *On the Road to Addiction: The Facilitative and Preventative Roles of Marketing Cues*, 66 J. Bus. Rsch. 1219 (2013) (suggesting that marketing cues can push consumers both toward and away from addiction in the pre-addiction phase).

224. Theodore E. Keeler et al., *Taxation, Regulation, and Addiction: A Demand Function for Cigarettes Based on Time-Series Evidence*, 12 J. Health Econ. 1 (1993) (anti-smoking regulations reduce cigarette consumption).

225. Kate Whiting & HyoJin Park, *This Is Why "Polycrisis" Is a Useful Way of Looking at the World Right Now*, World Econ. F. (Mar. 7, 2023), https://www.weforum.org/agenda/2023/03/polycrisis-adam-tooze-historian-explains/.

226. *See* Christos Kavvouris et al., *"Be Careful What You Say": The Role of Psychological Reactance on the Impact of Pro-Environmental Normative Appeals,* 111 J. Bus. Rsch. 257 (2023). *See also* Robert E. Litan & Martin Lowy, *Freedom and Privacy in the Time of the Coronavirus*, Brookings (Apr. 23, 2020), https://www.brookings.edu/articles/freedom-and-privacy-in-the-time-of-coronavirus/ (discussing resistance to laws that restrict personal freedom in the COVID context).

227. *See* Robert Bonnie et al., Nicholas Institute for Environmental Policy Solutions, Understanding Rural Attitudes Toward the Environment and Conservation in America (2020).

228. *Id. See, e.g.*, Michael Paolisso & R. Shawn Maloney, *Recognizing Farmer Environmentalism: Nutrient Runoff and Toxic Dinoflagellate Blooms in the Chesapeake Bay Region*, 5 Hum. Org. 209 (2000).

229. *See* Meg Sherval et al., *Farmers as Modern-Day Stewards and the Rise of New Rural Citizenship in the Battle Over Land Use*, 23 Int'l J. Just. & Sustainability 100 (2017) (discussing these attitudes in the Australian context).

yet we don't turn to those studies for policymaking. The COVID crisis alongside worsening environmental disasters suggests that in hard times we don't even demand as much from our governments—which seem complacent if not content in continuing our current power structures and patterns of development.

For example, the Heritage Foundation agrees that Americans should aim for "a cleaner, healthier, and safer environment" while "protecting people and their liberty."[230] But in their view, our environmental laws fail not because of their goals but because of their methods, which "empower and enlarge ineffective bureaucracies, infringe on private property rights, and confound the dynamics of the free market," and in so doing "stifl[e] individual freedoms."[231] Putting aside claims about government inefficiencies (if indeed that is really the Heritage Foundation's point), notice the prominent goals of protecting private-property rights and the "free" market.

### B. *Is the Market a Source for Human Flourishing?*

The Heritage Foundation would easily define the "good life" as "essential to a flourishing society."[232] Is the market more value-neutral than government? Somehow, we feel differently about market mechanisms that lead to change than about government restrictions that do so. If the cost of producing renewable energy goes down and the coal industry becomes less viable, this generation shift seems more palatable than one where the government requires a phaseout of coal. But is the market any more of an external dictating force than the government is? Why do market-based changes feel less obtrusive than regulatory ones? As Camille Pannu pointed out in our Hood River conversation, "Capitalism is not a belief system, it is a description of an economic system."

### C. *Are Private-Property Rights Essential for the Good Life? Do Private-Property Rights Equal Freedom?*

Private-property rights have become a core part of the conservative agenda. Those benefiting from the legal outcomes dictated by such an approach are rarely individuals and more likely to be corporations. Reduced regulation benefits corporate bottom lines and desires for development. These interests have successfully convinced voters that our personal desires for freedom and property ownership align with this agenda.

In doing so, we fight for the corporations. We push back on the rules about draining the muddy part of our backyard, and they get the benefit of fear of regulations and permission to convert millions of acres of areas providing key ecosystem services. We can't all be millionaires, but we are so enticed by that possibility that we vote against our interests. We endorse rules that benefit the billionaires in the hopes that we will become them and also receive those benefits.

## XVI. Inequity, Excess Commercialization, and Overconsumption in the Anthropocene: Two Very Modest Regulatory Proposals

*This section was authored by Anastasia Telesetsky, Professor of Law, Department of Natural Resources and Environmental Sciences, California State Polytechnic University, San Luis Obispo.*

Scottish author Alastair McIntosh, reflecting on the climate challenge that our communities collectively face, sagely wrote in "Where Now 'Hell and High Water'?" that "consumerism is a false satisfier—just another form of addiction that masks the emptiness."[233] He called upon society to return "from excess to sufficiency, challenging profligate consumerism."[234]

We need a deeply rooted social movement for systemic change. A push for society-wide change was at least the original intent and purpose of the U.S. environmental laws adopted in the 1970s and 1980s to reverse attitudes of chronic economic extractivism. Laws such as the CAA and the CWA were intended to seek long-term and progressive strategies to restore ecological integrity.

These laws as administered and interpreted, however, have perpetuated extractionist attitudes as the permits mandated under these statutes became simply the cost of doing business. Several major industries, including our industrial agricultural complexes, have continued to be largely exempted from core regulatory programs, including even reporting their air emissions from animal waste under the Emergency Planning and Community Right-to-Know Act (EPCRA)[235] and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).[236]

Since the passage of these laws, moreover, there has been no systemic challenge by major government institutions to consumption-oriented growth. In fact, there are even perverse incentives to promote continued growth; for example, the U.S. Securities and Exchange Commission

230. Jack Spencer et al., Heritage Foundation, Environmental Conservation Based on Individual Liberty and Economic Freedom (2023), https://www.heritage.org/environment/report/environmental-conservation-based-individual-liberty-and-economic-freedom.
231. *Id.* at 1.
232. *See id.* at 2 (asserting that property rights are essential to a flourishing society).
233. Alastair McIntosh, *Where Now "Hell and High Water"?*, ECOS: A Review of Conservation, Winter 2009, at 66, 68, https://www.ecos.org.uk/wp-content/uploads/2017/02/ECOS-30-3-4-Full-issue.pdf.
234. *Id.* at 73.
235. 42 U.S.C. §§11001-11050, ELR Stat. EPCRA §§301-330.
236. Vacatur Response—CERCLA/EPCRA Administrative Reporting Exemption for Air Releases of Hazardous Substances From Animal Waste at Farms; FARM Act Amendments to CERCLA Release Notification Requirements, 83 Fed. Reg. 37444 (Aug. 1, 2018), https://www.govinfo.gov/content/pkg/FR-2018-08-01/pdf/2018-16379.pdf; 42 U.S.C. §§9601-9675, ELR Stat. CERCLA §§101-405.

mandates companies to report their earnings quarterly and publicly,[237] thereby pressuring companies to continue pushing for growth in hopes of protecting perceived corporate reputation.

What fuels this crisis of overconsumption is not simply capitalism as a system, but many intersecting factors that have built the "matrix" that has been sold to us as the "good life." Two factors in particular bear attention because they have an important relationship with laws as negotiated rules to govern community and individual behavior that present opportunities for change.

One factor is the replication and dysfunction of profound gaps in financial wealth. The statistic that the wealthiest 1% has secured two-thirds of all new financial wealth since 2020 ($42 trillion) has been often quoted, but it remains unsettling.[238] In 2022, 95 food and energy corporations doubled their profits even as many individuals struggled to access food and energy resources.[239] At least some of these 1% elites have American nationality or some form of private or commercial assets within the United States.

One of the main purposes of the U.S. Constitution, as stated in its Preamble, is to "promote the general Welfare."[240] However, several government representatives elected and appointed under the framework of the Constitution consistently promote private welfare over general welfare in their policymaking, at the behest of lobbyists and special interest groups. This practice of giving preference to the private over the general is at the heart of both broader inequity and resource degradation.

A second factor directly related to overconsumption is overcommercialization and excess marketing in the public sphere. Advertising for goods and services has been part of communities for centuries and a constant part of modern communication from radio, television, and the Internet designed to fuel consumption. While there is no easy way to calculate how much the average American might be exposed to advertising or marketing, one media industry report suggests that the average American in 2014 spent at least a few seconds on 153 ads a day.[241]

A movie is no longer simply an hour or so of entertainment but a place to view product placements and be barraged by product-pushing. Perhaps no movie's product-pushing could be more demoralizing than the 45-second spot of the "I speak for the trees" Lorax marketing an internal combustion engine sport utility vehicle, that will not be named here to avoid unwarranted advertising, but that outlandishly claimed to be "certified Truffula Tree friendly."[242] It seems that no cultural symbol is beyond commercialization.

There are no quick legal fixes until there is a monumental attitude shift beyond our current rampant overconsumption. Nevertheless, there *are* small-scale legal reforms with potentially large social payoffs that are possible and will alleviate excess consumption. First, at a minimum, nations need to end some of the reckless consumption patterns that impact general welfare. While the hopeful messaging of many environmental groups has been that personal choices from diet (less meat) to clothing (no fast fashion) can collectively make a positive difference, individual choices also undermine collective efforts.

No place does this fact become more apparent than in sumptuary consumption. The top 20 billionaires in the world in 2018 emitted an annual average of 8,000 metric tons of carbon dioxide, with two-thirds of that coming from the operation of luxury yachts.[243] The average person in a high-emission country such as the United States emits 14.5 metric tons per year and the average person in a lower-emission country such as India emits two metric tons per year. Thus, the top 20 billionaires emit as much as 11,000 Americans or 80,000 Indians. Programs such as Jet Carbon Offset and Yacht Carbon Offset fail to address the conspicuous consumption that continues to fuel financial inequality.[244]

What is urgently needed are luxury taxes that change how resources are consumed. The Internal Revenue Service, in its public lesson on how taxes influence behavior, notes that "when a luxury tax becomes too steep, people may choose to stop purchasing a particular product."[245] If manufacturers are unwilling to charge for environmental externalities, it is time to change luxury tax codes to reflect the true costs of goods and services and to require individuals to be accountable for their material decisions.

Luxury tax measures are nonexistent in the United States and insubstantial in other countries such as Canada, which has a 10% tax on select cars and planes.[246] Nevertheless, a substantial tax to reflect environmental costs might change consumption patterns. It may even be time to imagine a World Tax Organization designed to ensure that the wealthiest do not evade fiscal responsibilities across political borders by seeking tax refuges.

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237. U.S. Securities and Exchange Commission, *Exchange Act Reporting and Registration: Annual and Quarterly Reports*, https://www.sec.gov/resources-small-businesses/going-public/exchange-act-reporting-registration (last updated June 24, 2024).
238. Martin-Brehm Christensen et al., Oxfam, Survival of the Richest: How We Must Tax the Super-Rich Now to Fight Inequality 8 (2023), https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621477/bp-survival-of-the-richest-160123-en.pdf.
239. *Id.*
240. U.S. Const. pmbl.
241. Press Release, Media Dynamics Incorporated, Adults Spend Almost 10 Hours Per Day With the Media, but Note Only 150 Ads (Sept. 22, 2014), https://www.mediadynamicsinc.com/uploads/files/PR092214-Note-only-150-Ads-2mk.pdf.
242. Sebastian Blanco, *Mazda Under Fire for "Crass Commercialization" of Dr. Seuss' Lorax*, Autoblog (Feb. 29, 2012), https://www.autoblog.com/2012/02/29/mazda-under-fire-for-crass-commercialization-of-dr-seuss-lor/.
243. Stuart Braun, *Superyachts Symbolize Climate Breakdown*, Deutsche Welle (Mar. 24, 2022), https://www.dw.com/en/superyachts-symbolize-climate-breakdown/a-61245302.
244. *See* Alice Robinson, *Jet Carbon Offset*, Yacht Carbon Offset, https://yachtcarbonoffset.com/jet-carbon-offset/ and https://yachtcarbonoffset.com/our-service/ (last visited Aug. 13, 2024).
245. Internal Revenue Service, Info Sheet 1: Three Taxes That Influence Behavior, https://apps.irs.gov/app/understandingTaxes/whys/thm05/les01/media/is1_thm05_les01.pdf.
246. Canada Revenue Agency, *Subject Vehicles Under the Select Luxury Items Tax Act, Luxury Tax Notice LTN2*, https://www.canada.ca/en/revenue-agency/services/forms-publications/publications/ltn2/subject-vehicles-under-select-luxury-items-tax-act.html (last modified Sept. 8, 2022).

Second, while we have laws to regulate pollution from toxins, we need to use law to remove visual pollution from our public spaces urging us to buy more "lifestyle." There is a truth that "where our attention goes, our energy flows," so that we need to recover our attention and shift from being pliant consumers to humble citizens aware of the challenges of being human, but also willing to work toward "general welfare." This shift requires legally regulating what kinds of messages the public is exposed to in public spaces.

This will require decisions about what constitutes a public space and what sorts of noncommercial messages might be distributed in these spaces instead. Some cities such as São Paulo, Brazil, removed outdoor advertising and public transit advertisements as part of its "Clean City Law" to alleviate the commercialization of urban space,[247] and other cities have followed its example, including Grenoble, France.[248] The city of London, England, banned unhealthy food advertising across its public transit.[249] Communities can and should regulate their viewsheds.

Certain arenas of cyberspace should also be considered "public space" and free from unwanted commercial exposure; in the United States, this change may require the federal government to take a more active role in creating its own public access search engines and data structures. A proposal like this is likely to generate questions about the interpretation of the First Amendment. Where do rights to express commercial interests end? Are there competing rights such as privacy rights that protect an individual's right to be free of intentional, unreasonable commercial intrusions into civic spaces such as public schools?

In the end, these proposals are indeed minor legal reforms, but they have the potential to create the social momentum that allows for attitude shifts by sending two important messages: those with economic privilege have environmental responsibilities to stop reckless consuming; and our lived spaces where we will dream of new ways of being in this world belong to all of us and not just those who pay. For generations, we have taken from the planet; our next collective challenge is to figure out how to give back.

## XVII. Accessioning Joy

*This section was authored by Bruce Carpenter, Josh Galperin, Assistant Professor of Law, Elisabeth Haub School of Law at Pace University, and Francis Hicks.*[250]

We need your help, and it should be fun. But first, some scene-setting.

It is summer 2023, but it could be last summer, or the next, or the one after that. People are dying in droves from unprecedented heat,[251] flooding,[252] violence,[253] drought, and food shortages,[254] among other climate-change-induced disasters. And yet, they keep telling us there is no need to lose hope.[255]

And they're probably right. But they're right for the wrong reasons. We *will* all die in the Anthropocene. But we needn't die submissively and without joy.

Many great minds are working on climate mitigation and adaptation science,[256] policy, and implementation.[257] We hope they succeed. Whether or not they do, we have a parallel approach to climate change: a climate haven. No, this isn't about relocating people to different regions that are more suitable for a warmer world (about which one of us has written).[258] That would be a physical haven where people could go for shelter, sustenance, and bodily perseverance. We're creating an emotional haven. A place where people can go to escape the psychological toll that our inevitable extinction brings.

When it comes to climate change and the future of life on earth, there is a lot to worry about. The first worry is the unknown. Are we looking *merely* at economic turmoil and unprecedented death in far-off countries or a worldwide post-apocalyptic hellscape? The second worry is a lack of control. When it comes to climate change, no individual has control. These are the roots of climate anxiety.[259]

We believe we can create a climate haven that will do absolutely nothing to "solve" climate change but will do a lot to relieve climate anxiety. Our goal is to create more certainty and to empower people to take control. Psychologist Dr. Stephanie Collier wrote, "As uncertainty and a loss of control characterize climate anxiety, the best treatment is to take action."[260] We have a plan of action, for ourselves and for you.

247. Lei No. 14.223 de 26 de Setembro de 2006, Dispõe sobre a ordenação dos elementos que compõem a paisagem urbana do Município de São Paulo, http://legislacao.prefeitura.sp.gov.br/leis/lei-14223-de-26-de-setembro-de-2006.
248. *Grenoble: Europe's First Ad-Free City*, Euronews (Nov. 26, 2014), https://www.euronews.com/2014/11/26/grenoble-europe-s-first-ad-free-city.
249. Greater London Authority, *TfL [Transport for London] Junk Food Ads Ban Will Tackle Child Obesity*, https://www.london.gov.uk/programmes-strategies/communities-and-social-justice/food/tfl-junk-food-ads-ban-will-tackle-child-obesity (last visited Aug. 13, 2024).
250. This is a work of fiction. Bruce Carpenter and Francis Hicks are fictional characters and nothing in this piece should be attributed to any real people by the same name. Josh Galperin, however, is mostly real.
251. Ajit Niranjan, *Heatwave Last Summer Killed 61,000 People in Europe, Research Finds*, Guardian (July 10, 2023), https://www.theguardian.com/environment/2023/jul/10/heatwave-last-summer-killed-61000-people-in-europe-research-finds.
252. National Weather Service, *NWS Preliminary US Flood Fatality Statistics*, https://www.weather.gov/arx/usflood (last updated Aug. 12, 2024).
253. Guy Faulconbridge, *Ukraine War, Already With Up to 354,000 Casualties, Likely to Last Past 2023—U.S. Documents*, Reuters (Apr. 12, 2023), https://www.reuters.com/world/europe/ukraine-war-already-with-up-354000-casualties-likely-drag-us-documents-2023-04-12/.
254. Press Release, UNICEF, New Study Finds That 43,000 "Excess Deaths" May Have Occurred in 2022 From the Drought in Somalia (Mar. 20, 2023), https://www.unicef.org/press-releases/new-study-finds-43000-excess-deaths-may-have-occurred-2022-drought-somalia.
255. Jonathan Overpeck, *Climate Crisis: 4 Reasons for Hope in 2023*, Hill (Jan. 4, 2023), https://thehill.com/opinion/energy-environment/3799154-climate-crisis-4-reasons-for-hope-in-2023/.
256. Maurice Tamman, *The Reuters Hot List*, Reuters (Apr. 20, 2021), https://www.reuters.com/investigates/special-report/climate-change-scientists-list/.
257. *Meet 15 Women Leading the Fight Against Climate Change*, Time (Sept. 12, 2019), https://time.com/5669038/women-climate-change-leaders/.
258. Josh Galperin, *Compensation at 4° Celsius*, Env't L. Prof Blog (Oct. 5, 2021), https://lawprofessors.typepad.com/environmental_law/2021/10/compensation-at-4-celsius.html.
259. *Yale Experts Explain Climate Anxiety*, Yale Sustainability (Mar. 13, 2023),https://sustainability.yale.edu/explainers/yale-experts-explain-climate-anxiety.
260. Stephanie Collier, *If Climate Change Keeps You Up at Night, Here's How to Cope*, Harv. Health Publ'g (June 13, 2022), https://www.health.harvard.edu/blog/is-climate-change-keeping-you-up-at-night-you-may-have-climate-anxiety-202206132761.

We want to empower people to have more control over their state of mind as they die in the Anthropocene, by creating a haven. A sort of museum of joy. Our goal is to design an infrastructure and process for building this haven. We want this to be a place where people can go, both electronically—so long as we still have the Internet and electricity—and physically. It is to be a place of refuge when hope for survival is lost. Our team includes a museum curator and archivist. We are developing an accessioning and collections inventory process, securing space, and, starting with this post, conceptualizing the collection.

This is where we need your help. Our vision will not be entirely our own. Sure, we have ideas for what can bring each of *us* joy in the Anthropocene. One of us wants a rollercoaster. One an analog collection of sitcoms that we can watch even if our digital infrastructure fails. Another wants a diverse collection of outdoor showers. Imagine a museum with rollercoasters, sitcoms, and showers, carefully cataloged, maintained, and freely accessible to bring you joy. What would you want to add to this collection? Think creatively but also think within the bounds of the slow but steady climate apocalypse.

Think about the sunshine on your face. It is a little too warm, almost hot. You squint slightly and reduce the glare as the breeze blows across your face. The air was humid but now you are cool, and slightly distracted from what's about to come. The breeze stops. You're still for just a moment. You open your eyes and are looking down at the tops of the trees, red and yellow tracks gliding across your view. A moment of excitement, and now the breeze picks up again, quickly turning into a gust, blowing away the humid air as you tumble forward, floating toward the ground. The adrenaline carries the excitement forward as you pull to a clanking stop. Time to rinse off.

When you leave the coaster, you walk a few steps. Directly in front of you is a deep and wide wooden stall. The broad slats are weathered blue, and a chrome showerhead faces down from the ceiling. To the right is a stone wall, whites and browns and grays with little flecks of gold and silver. Two curved stone walls on either side and another chrome showerhead, this one handheld with a long modernist handle. To the left of the stone shower sit three more options.

You choose the stone. The cool water washes over you and splashes down to the floor. It rolls over the stones and jangles like a small brook to the grass beyond. You twist the handle to the right and the water slows to a drip, then stops. You let the air wash over you for a moment while looking up at the sun coming through the tree canopy. The leaves overlap and the rippling, crisscrossing shade might remind you of lying on your back in childhood in the woods or in the park. Few concerns beyond the afternoon.

As a kid, on a summer afternoon, you might wander home from your adventure bug-bitten and sweaty but nevertheless joyful. You open your front door, have a drink of juice or water, a snack, and turn on the TV. The thought brings you back to the present. You towel off, put on clean clothes, and off you go to check out the selection of classic sitcoms.

If this isn't your joy, what is? We need to know if we are to create our museum of joy. Please e-mail Josh Galperin (jgalperin@law.pace.edu) to share your ideas.