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Sayd RANDLE
Singapore Management University, sprandle@smu.edu.sg

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UNDERSTANDING THE HUMAN DIMENSIONS OF CLIMATE CHANGE

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Desert Arcologies and Path Dependencies

by Sayd Randle, Ciriacy-Wantrup Postdoctoral Fellow, University of California, Berkeley

In Phoenix, Arizona last year, the local high temperature topped 100 degrees Fahrenheit on 145 days, a new record. Of those 145, 53 days saw top temperatures above 110 and 14 days exceeded 115 – also new peaks. Taken together, these numbers strongly suggest that to live out 2020 in Phoenix was to inhabit an environment sliding towards a painful, and perhaps even hellish, new baseline.

Of course, numbers are known to occlude at least as much as they reveal. But in the case of Arizona's largest metropolitan area, they're useful for framing a certain conventional wisdom about the place: greater Phoenix, that monstrosity of a suburban city, land of putting greens and cul-de-sacs and backyard swimming pools in the desert, is well on its way to being uninhabitably hot and dry. Though climate change is appropriately fingered as a driver, the very shape and extent of the built environment – they built enough generic strip malls for four and half million people *here*? – is also widely cited as its own kind of evidence and argument for the city's inevitable downward trajectory. Developed with so much piped-in water and so many subprime mortgages, this is a place with decline baked into its low-density subdivisions long ago, plodding along its path towards dystopia. They built it like *this*, the thinking goes, so eventually it must decay into *that*.

Phoenicians bored by such accounts of their city likely loathed Paolo Bacigalupi's *The Water Knife*, published in mid-2015. Set in an amorphous near-future, the novel depicts Phoenix as a hellscape of waterless sprawl, acres upon acres of developments stripped for parts after the city's main aqueduct ran dry. Migrants from even-less-climate-fortunate cities (sorry, Houston) camp in shantytowns near metered Red Cross water pumps. Violence is ubiquitous, blinding dust storms are quotidian, and Californians come as tourists to gawk at the spectacle of decline. As one character observes when returning to Phoenix after time away:

> "Everything looked worse ... More dilapidated, dust-covered businesses. More broken glass. More abandoned shopping plazas and strip malls: PetSmart, Parties-to-Go, Walmart, Ford dealerships, all standing empty, glass-shattered, and gutted. Women on the corners. Boys in tight pants waving down cars at intersections, leaning in, doing whatever they needed to get a little money, to buy a little water, to keep going for another day." (101)

Here, and throughout, the reader is shown the tatters of the prosperous Sunbelt metropolis of air-conditioned single-family homes that has drawn millions to the Sonoran Desert since World War II.

Within Bacigalupi's version of the doomed city, there is one space where the climate-controlled desert dream persists. Rising above the wreckage of downtown Phoenix, the Taiyang arcology presents a graceful, eco-modernist fantasy of an alternative mode of living in the desert. Though under-construction and only partially inhabited throughout the book, the completed arcology will be self-sustaining, running almost entirely on building-produced solar power and recycled water. Modeled after similar (and also fictional) arcologies in other desert cities, inside the Taiyang is all water features, greenery, expensive cafes, and high-end apartments, guarded by an extensive fleet of security workers who escort unshowered arrivals back out to the dusty streets. The echoes of *City of Quartz*-era Mike Davis's accounts of high-end Los Angeles malls resonate here. Like those archetypal spaces of 20th century consumption, this arcology is a protected fortress, brilliantly designed to sustain itself and the select few able to afford access to its interior.

Labeling the Taiyang an arcology and placing it in the Arizona desert, Bacigalupi is winking to a reader with a very particular knowledge base. The late architect Paolo Soleri is generally credited with developing first the word arcology and then the first-ever prototype of such a self-contained sort of human settlement, just a few dozen miles from Phoenix. "Engines for consumption," Soleri's disdainful term for cities in the United States, hints at his disgust for the form of the 20th century American metropolis and the sort of homogenous capitalist mindset he believed that form of urbanism to nurture. In response, Soleri and his followers took to the desert to develop a better, denser, more adaptive sort of urban form and community.

That arcology, named Arcosanti, still exists, in the precise sort of ambitious-but-aging back-to-the-land experiment way that you might expect. I spent a night there during the waning days of 2015, paying for a room at a discount-motel price and taking a tour of the grounds before departing the next day. The guide spoke of Soleri in rapturous terms, as a genius, a prophet, a Cassandra, the rare visionary capable of offering a meaningful alternative to dominant material forms and social norms. (The public revelation of Soleri's sexual abuse of his daughter Daniela has given my recollections of this hero-worship a sinister edge. The monstrosity mixed into the man bears noting in any consideration of his work.) Though never developed to the scale imagined by Soleri, Arcosanti's graceful archways and ingeniously arranged rooms do seem to suggest a better-adapted mode of designing for life in the desert. It's not difficult to understand why his utopian vision of a possible urbanism has resonated with so many over the years. There's a grandiosity to it, with elements of postwar cybernetics-thinking swagger. But there's also a certain humility woven in, with the fixation on density and right-sizing and striving to design with the local environment. Driving south from Arcosanti into the sprawl of Phoenix suburbs, it's easy to slide into resentment at the contrast. *Wouldn't it all be better if we'd grown in that direction, not this one?*

Arcosanti in December 2015 (photos by author)

For this kind of wistfulness, Bacigalupi has only a smirk. And honestly, it's a helpful one, a perspective that refuses to map utopia neatly onto design. The Taiyang arcology, we're told and shown throughout *The Water Knife*, is a masterwork of building and a pleasure to inhabit. It's a shard of comfort and beauty rising amid the blood-spattered rubble of the Phoenix familiar to contemporary residents. And yet: within the novel it's the site of not just exclusion but also brutality, in the form of two quick, grisly murders. Like most castles for the powerful, the Taiyang relies on the cheap labor of both nature (in the form of its snail beds and carp farms) and desperate, poorly paid workers. When, late in the book, characters muse that in the future, all human life may be limited to the space within arcologies, there is no sense that this version of a world-to-come is the shining sort of idealized urbanity Soleri dreamt. The reader is left uneasy, well aware of how such an outcome reproduces many of the worst elements of sprawling, easy-to-disdain American cities. Sure, the arcologies will look better and emit less carbon than the subdivisions. But there's no reason to believe that anyone other than the elite will have a taste of the good life within them.

Contemporary Phoenix on an August afternoon is, in its way, already verging on the apocalyptic, particularly for those trapped beyond the reach of air conditioning. But thinking with Soleri and Bacigalupi together is useful for clarifying the nature of this particular flavor of dystopia. Rather than being grounded in urban form – whether sprawl or dense eco-modern high rise – it is rooted in something bigger and deeper, the sort of violence and arrogance inherent in the conquest and development of these lands over the past century and a half. Beautiful as they may be, the best-designed buildings will do little to reroute that trajectory. And also, the sprawlingest, too-greenest desert metropolis is not on some inevitable path due to its bad design. Phoenix, like many cities, may have a moment of utter ruin in its future. But this possibility doesn't preclude a different sort of place entirely from emerging from the monotonous landscape of 4 Bed/3 Bath detached homes. The crucial break from the grim path will involve unsettling entrenched forms of power and politics that have undergirded Phoenix's becoming. And sure, the buildings and streetscapes may change, but that will be a matter of addressing a symptom, not the illness itself. Urban forms may reflect a dominant culture's or a designer's desires, but – love or loathe them – they are not a place's destiny.

References

Bacigalupi, Paolo. 2015. *The Water Knife*. Knopf: New York City.