As of April 2018, the concentration of carbon dioxide in the earth’s atmosphere stood at 410 parts per million (ppm), 46 percent above preindustrial levels. That figure is nearly halfway to 560 ppm, or the doubled level of preindustrial atmosphere. As of April 2018, the concentration of carbon dioxide in the earth’s atmosphere stood at 410 parts per million (ppm), 46 percent above preindustrial levels. That figure is nearly halfway to 560 ppm, or the doubled level of preindustrial atmosphere.

In an earlier paper I argued that “global warming is going to devalue our current built environment,” and that the question was “not whether widespread devaluation will occur, but how: by the effects of climate change, or by intentional, deliberate policies.” If devaluation by rising temperatures and sea levels, increasing extreme floods, droughts and heat waves, widespread crop failure, wildfires, and so on was otherwise inevitable, then there was no reason not to enact policies that would prospectively dismantle and replace fossil fuel-dependent infrastructures and practices. This, I argued, was “a logic that everyone should be able to understand, regardless of political or ideological leanings.”

Although growing numbers of activists and social movements have embraced the premise that “we must leave as much fossil fuel in the ground as possible, for as long as possible,” it is nonetheless clear, eight years later, that my logic was either flawed, unpersuasive, or both. The biophysical effects of global warming have indeed grown more conspicuous, and more quickly than projected, and the threats posed to cities, agriculture, and infrastructures of all kinds are well documented. But the capitalized value of the built environment in the US remains robust, having “recovered” from the Great Recession along the stock market and gross domestic product. Similarly, the rate of global greenhouse gas emissions has not slowed, and it is still driven far more by capital accumulation (i.e., economic growth) than by diplomatic accords or regulations.

The findings of my earlier research continue to be replicated and amplified. As of April 2018, the concentration of carbon dioxide in the earth’s atmosphere stood at 410 parts per million (ppm), 46 percent above preindustrial levels. That figure is nearly halfway to 560 ppm, or the doubled level of preindustrial atmosphere. As of April 2018, the concentration of carbon dioxide in the earth’s atmosphere stood at 410 parts per million (ppm), 46 percent above preindustrial levels. That figure is nearly halfway to 560 ppm, or the doubled level of preindustrial atmosphere.
degradation produce "a concomitant devaluation" because of the "environment's" steady decrease in value. My earlier paper made the same assumption. But what if how value is lost—abruptly or incrementally—determines whether it negates value, at least in the case of the built environment?

Specifying (and perhaps modifying) Harvey's terms, I propose that destruction results from what could be seen as a decay due to the "environment's" (or non-point impacts): discrete events that are abrupt, devastating, and conspicuous. 13 Hurricane Sandy inflicted an estimated $65 billion in damages in New York City alone, for example. 14 The cost of wildfire suppression in the U.S. increased to $541 billion since the mid-1980s, from an average of $376 million to $2.032 billion per year. 15 Impacts of this type occur at definable points in time, although they are also determined (both physically and probabilistically) by ongoing "background" conditions that change only slowly, such as the relations mediating drivers and processes that affect the hydrologic cycle and can therefore be attributed to climate change as distinct from normal variability. Similarly, non-point impacts are unlikely to devalue components of the built environment that are not subject to insurance is also an accident of history, for example, the replacement capital has to come from the vast capital stocks of global banks, hedge funds, and institutional investors, who in turn can tap into the nearly $2 trillion in annual revenue flows generated by non-life-insurance premiums. 18 Rather than making actuarially simple climate change, capital is imperiled by climate change, and into others so as to "manage" risk— if 'managed' properly—could repeatedly reset conditions for profitable accumulation. 19

In a series of remarkable articles, geographer Leigh Johnson has described how the reinsurance industry responds to climate change. What she has found effectively turns the logic of my earlier argument inside out. Rather than steering capital away from built environments imperiled by climate change, and into others so as to "manage" risk— if 'managed' properly—could repeatedly reset conditions for profitable accumulation. 20

The example of drought articulates a dynamic zone where changes that are the relations mediating the value of the environment are subject to ongoing change and struggle. Because these relations are historically and geographically conditioned, they are at least potentially contingent and path-dependent. For example, that the impacts of drought on agricultural producers in the U.S. are subject to government disaster relief programs. Flood insurance is also available to scientists for the federal government, whereas private insurance policies protect homeowners and businesses against losses resulting from other "natural" disasters. 21 These "acts of God." The fact that non-point climate impacts are not subject to insurance is also an accident of history, albeit a readily understandable one. The profitability of reinsurance is crucially dependent on these post-disaster increases. Thus, there is a structural "contradiction between the valuing of catastrophes and the subsidizing of the built environment as the devaluation of real property necessary to sustain accumulation within the industry." 22 The potential of climate change to intensify catastrophes and to unleash devastating "acts of God," then, is both cloud and silver lining: for reinsurers, "external, ecological sources of devaluation..." 23

14 Jerry Hatfield, Gene Tate, Richard Gerland, Patricia Droppo, Kevin Mader, and Elizabeth Marshall et al., Agricultural in Climate Change Impacts, 150-74.
19 Climate Change Bonds are not so much costless cyclical "acts of God," in industry lingo, they have "zero beta" due to their "ontological disconnection" from the behavior of financial markets.
24 Climate Change Impacts, 210, 2127.
25 Model projections of climate change impacts are subject to the same sorts of problems as any scientific model. There is little evidence from the climatic evidence of an abrupt atmospheric shift....
The distinction between point and non-point climate impacts acquires significance in light of Johnson’s findings. The most profound threats that climate change poses to humanity—those scientists associate with the doubling of atmospheric carbon dioxide—are non-point impacts whose consequences assume apocalyptic proportions only in the longer run: rising sea levels, ocean acidification, and temperature increases that disrupt agricultural production, for example. But such slow, prolonged degradation is effectively indistinguishable, from capital’s point of view, from the expected amortization of any fixed investment, regardless of the climate. As Johnson points out, if a firm’s insurance policy permits it to rebuild in a different location, then having an existing factory or similar fixed investment (one that has already been amortized in whole or in part) destroyed by a point impact is actually desirable, especially if non-point impacts are gradually undermining the plant’s viability. In this view, catastrophic destruction liberates capital from its “fallow” condition, letting it loose in money form to seek out new opportunities for accumulation.

Conclusion: Recurrent Destruction and Uneven Geographical Devaluation

The most profound threats that climate change poses to humanity—those scientists associate with the doubling of atmospheric carbon dioxide—are non-point impacts whose consequences assume apocalyptic proportions only in the longer run: rising sea levels, ocean acidification, and temperature increases that disrupt agricultural production, for example. But such slow, prolonged degradation is effectively indistinguishable, from capital’s point of view, from the expected amortization of any fixed investment, regardless of the climate. As Johnson points out, if a firm’s insurance policy permits it to rebuild in a different location, then having an existing factory or similar fixed investment (one that has already been amortized in whole or in part) destroyed by a point impact is actually desirable, especially if non-point impacts are gradually undermining the plant’s viability. In this view, catastrophic destruction liberates capital from its “fallow” condition, letting it loose in money form to seek out new opportunities for accumulation.

The resulting geographies are likely to cleave along lines of wealth and ownership, with private capital relatively insulated and the public sector disproportionately burdened. The fact that point impacts can be insured—buffering the primary insured’s capital while creating profit reserves that have not yet been extracted, values capitalized but not yet realized and thus purely notional assets. But for capital, such devaluation without destruction or degradation would be an outcome far worse than countless real catastrophes.

Since 1945, humankind has entered the era of “Great Acceleration”: a time of unprecedented growth in human activity on a global scale, reflected in metrics like material consumption, global trade, transportation, telecommunications, natural resource extraction, and energy use. The increased scope and intensity of this activity is such that it has begun to alter the earth system, producing phenomena like the atmospheric concentration of greenhouse gases responsible for global warming. Observing such changes led Nobel Laureate Paul Crutzen to coin the now widely used term “Anthropocene” in the early 2000s.

The Great Acceleration is at the root of the major ecological, urban, and cultural challenges of our time, in which ecosystems, food chains, and the climate are severely out of balance. Several indicators point towards a critical system overload. And the “imperial lifestyle” developed in this period transfers the negative externalities of material processes associated with human activity onto other regions, countries, and continents. As more and more countries adopt the same lifestyle, its unsustainable character becomes apparent. This means that the end of the Great Acceleration may be drawing near, raising the question of how to secure the best possible future for humankind in whatever period follows. Here we argue that an enlightened spatial view of the impact of human action on the one hand, connected to an urbanistic agency aimed at introducing resilience into urban systems on the other, are paramount.

Fallow lands are central to this discussion, as we contend that the anthropogenic activity of the Great Acceleration is the systemic source of the phenomena discussed above. Ever shorter economic cycles trigger the need for an ever-expanding terrain to support the control-and-command centers of the global economy. This terrain often has widespread fallow sectors.