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Aftershocks: Interpreting an Age of Collapse

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For all my educators and mentors, you've planted the seed of thought.

Rainfall

By Andrew Motion

With acknowledgments to "Rain" by Cynthia Barnett

Whether the rain on Mars was delicate or brutal
whether it was blue or gray
whether it fell on bare rocks
that remained bare
or on fertile ground
that raised large forests of leafing trees
it could not last.
Mars froze eventually
in the same duration
that Venus by contrast
bowed her burning head
in noxious vapors and gas clouds.
•
On planet Earth meanwhile
after half a billion years
of
continuous volcano-havoc
meteor storms
earthquakes and lightning strikes
vapor stored in the atmosphere
eventually began falling.
It soothed the fires.
When the fires died
it fell silently on the first outcrops of moss.
On the tender grass with a sizzle.
With more strenuous drumming
on the resilient fronds of ferns.
It became an orchestra of millions
across the luxurious expanse of the tree canopy.
•
Then the sun wiped its forehead
with long filmy fingers
and beamed afresh.
It worked through to creatures
flourishing beneath the canopy
and persuaded them to
interrupt their work
of scouring on all fours
for delectable roots and berries.
In the clarified light
they stared at their hands.
They saw the wrinkled fingertips
that gave them a firm grip
on slippery branches and vines
gradually smooth and soften.

They rose in amazement
onto their hind legs
and crept from shelter
across the dazzling savannah.
•
After a summer of twelve thousand years
after the interruptions of ice
after one particular inundation
and the shadow of an ark
darkening fish-shoals
as they scooted over hills and valleys
after the blaze of one civilization
then another
after the destruction of several experiments
with law and order
after the extinction
of many beautiful languages
rain by and large
found its place in the scheme of things.
It began to defeat its purpose
on the private sky of umbrellas.
It babbled through long green fields
and melted into the seams of poetry.
It larked in the puddle of its many names.
Cobblers and chair legs and pipe stems.
Frogs and jugs and beards.
Cats and dogs.
Men.
•
Although they are shaped like a parachute
thanks to the air pressure beneath them
raindrops explode on landing.
Then the sun bears down again
fitting his monocle into his eye.
The glass flashes and burns.
The rain sweats
and evaporates into the ocean of its air.
The ocean continues on its way
continually overflowing here and there
in quick little splashes
or reckless floods and drenching.
It is delicate or brutal.
It is blue sometimes and sometimes gray.
Sometimes it falls on bare rocks
at others it raises
large forests of leafing trees.

(Source: poetryfoundation.org)

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Preface

"What career will not only give me fulfillment, but allow me to profit from it?" This existential question sums up the malaise of my nineteen-year-old self as I prepared myself to go to college. The safety of an imposed curriculum and structure given to me by my parents and military school was loosening its grasp. I'd be lying if I said it wasn't overwhelming. Back then, I intended to major in economics so that I could go into "business." Four years later, I'm surprised by the foresight of my freshman self as I will be going into "business"; a result brought about by coincidence and luck rather than through meticulous planning.

The twenty-three-year-long investment into developing me into a contributing member of society has been a trajectory in which I've been given exponentially greater autonomy, resulting in greater decision-making, which renders my life more complex. My journey into becoming an adult has culminated with me signing a piece of paper that ties my labor to a business entity. In the meantime, I'm in limbo, completing work that appears to me more or less superfluous, while I await to take my next step and embrace modern life as a (privileged) rank-and-file member of the global working force. It's easy to look back on life and see a cause-and-effect relationship, ordering a series of unrelated events into a logical narrative; an action I will soon indulge you with as I'm about to speak about my personal "(chrono)logical narrative."

College has taught me that life is a summation of disparate, random and coincidental events that one has to balance with their ever-changing aspirations, while increasingly investing energy into the rising complexity that is fulfilling my responsibilities in the myriad of social roles I play in my personal and professional life. A narrative is a great way to give a semblance of order to this chaos—and so are hobbies! My advisor has for long wondered what I'm running from. Well, Glen, I'm finally able to give you an answer: I'm running away from the chaos of

my life and of my responsibilities by putting in anywhere from seven to fifteen miles a day and countless hours of time to achieve my peak performance against a racing clock.

Over the course of four years, my studies at DePauw have slowly strayed further and further away from my intent in being an economist. I've ascertained myself into the role of a French urbanist that, like my predecessors, tries to produce insightful and complex writing to answer ever-more complex problems and conundrums of the modern age.[1] Attending a liberal arts school has given me the privilege to study, analyze and ponder about my positionality within our society and the world; it has allowed me to attempt to extricate and contextualize my identity and positionality as a white, hispanic, latino, mexican, american, French cisgender male within the different social settings I engage in on a day-to-day basis. In summary, my academic career has focused on studying the underlying problems that will test and strain the human species in the 21st century. Studying these issues has allowed me to cultivate an invaluable skill set: writing.

My intellectual investment into the complexity of the 21st century millennia began with a Great Lakes College Association (GLCA) faculty-led research project titled, "Mapping the Megalopolis" (now a published work of literature). During the summer of 2015, as a research assistant, I explored the relationships between architectural iconicity and neoliberalism, focusing on the work of the architecture firm FR-EE (Fernando Romero Enterprise), its head architect, Fernando Romero, and the firm's relationship with their largest patron/client, the Mexican billionaire, Carlos Slim, who also happens to be Romero's son-in-law. In retrospect, this project

[1] Polo is an Urban Studies and French double major and by "predecessors" he's speaking about Henri Lefebvre and Michel Foucault, two notable French philosophers, who have a taste for making their writing rich and difficult to digest.

contributed to my understanding of how we conceive and consign a purpose to spaces within cities and for whom.

Following my experience working for the GLCA faculty, I pursued my interest in urban studies by enrolling in City Lab courses. City lab is a "classroom without walls" whose pedagogical objective is to maintain the liberal arts education relevant in the 21st century by preparing students to approach the most pressing issues of our time through an interdisciplinary approach. Students achieve this goal by completing semester-long research projects, working with their peers to provide each other feedback and to think through challenges. For a semester, I focused my research in the changing nature of nation-state borders in preparation for my enrollment in the semester-long Border Studies Program (BSP).

On the day of my twenty-second birthday, I began my semester-long study of the Borderlands, based out of Tucson, Arizona. My interest in being a member of the BSP was two-fold: I was born in El Paso, Texas and visit both El Paso and Ciudad Juarez—the Mexican city bordering El Paso in the state of Chihuhua—more than twice a year and had never seriously considered the exclusionary role of borders in our world—a reality that had always been invisible to me as a U.S. citizen. It also happened that when I was looking for study abroad programs, the United States presidential election was occurring in the background, bringing into the mainstream the increasing relevance of borders and border security to the American political imaginary. My dual citizenship and personal background thus spurred me to learn more about the issues surrounding the borderlands.

In retrospective, my experience in the BSP instilled in me a sense of urgency, as I came to understand migration as a symptom of broader structural issues—which I will explore in this

thesis—that are curbing the possibility of a world where all individuals can lead dignified lives and don't have to flee from violence nor from economic or environmental crises.

Following the BSP, I returned to DePauw and participated in City Lab once again in an "Introduction to Urban Studies" course and a topics course focused on "Planetary Urbanization." Both courses gave me the opportunity to consider the increasing preponderance of violence as part of the social fabric across the world, particularly surrounding the drug trade in Central America and Mexico, and placing these issues into conversation with the ideas of the French urbanist, Henri Lefebrve in his book *The Urban Revolution*. These courses also introduce me to a lot of the concepts, ideas and topics that will be relevant to this thesis.

I have decided to embark upon the scholastic and intellectual journey, which is writing an honors scholar thesis, because I want to put my experiences and education at DePauw to the test. Completing this task will entail hours of reading, thinking and writing to produce a coherent agglomeration of essays that are meant to portray, combine and recast other scholar's work through a new perspective. In this case, I have chosen to study and understand the phenomenon of "collapse." Approaching this thesis through a variety of essays is in part the convenience of slicing a challenging project into manageable workloads and conversely, vanity. *Essayer* means to try, in French and it's where the word "essay" comes from. I much rather prefer the label 'essayist,' over 'writer' or 'author'; the lable has a deep appeal to me because it connotes the effort of an essayist to pursue lucidity and simplicity in their writing for the purpose of asserting truths and meanings from a wide body of knowledge, with the overarching goal of reveal insights that may pose solutions or fresh perspective through ulterior ways of thinking. Also, I think essays are the best way to speak about collapse given the constraints I have as a full-time college

student, which inhibit me from doing field work and lead me to rely on primary and secondary sources.

Hence, essays provide me with a way to compile, digest and analyze this information to then convert it into digestible and interesting pieces of writing that are also informative. From the onset of producing my thesis I determined that the success of this endeavor would be measured by how appealing and approachable my work would be to anyone, regardless of their academic background.

Aftershocks is an intellectual and personal Bildungsroman—a capstone project where I can compile the skills and expertise that I have acquired in my collegiate academic career. You, the reader, might be wondering *why* I would choose to undertake a task that leads me to explore something that might seem unlikely to occur anytime soon. Viewing the world through a framework of collapse may appear highly cynical and it is. But I'm Mexican and we're particularly cynical people, so it's not surprising I have chosen to write about collapse. Still, I had trouble answering this question myself until I realized that within the cynical shadows casting darkness over my psyche, there is a light—a drive to make things better; an ennui with the state of affairs. How will I, a (soon-to-be) twenty-three-year-old college graduate change the world? That is the million-dollar question and one that I will intend to answer and mostly likely never will. And this doesn't dismay be because, as a runner, I've learnt to chase after goals that will be met with countless failures and may never materialize. But I still tie my running shoes every day to try to find a better version of myself. Likewise, any possibility of achieving noble and wishful goal will only occur through a succession of years filled with conversations, reading, thinking, writing and first-hand experiences. Whatsoever, education is the first step.

We live in a world filled with predicaments. And while I'm not advocating to look at every global issue as a symptom of collapse[2], *Aftershocks* raises some of the broad structural and systemic issues that we are facing, which may curse millions if not billions of people to befall untold amount of suffering. The title for this project was influenced by the powerful earthquake that struck Mexico City on September 19th, 2017, 32 years to the day when another earthquake devastated the Mexican capital. These two ground-shacking events will be my point of departure to explore the meaning of collapse in the 21st century.

[2] I find that professing that all global issues are symptomatic of a broader narrative of collapse to be controversial because it simplifies and labels these issues into a category. In doing so, it hides nuance and clarity and can force a single or a set of solutions for all these problems and could lead to even more problems. In other words, the label 'collapse' provides us with a quick diagnostic and may blind us from seeing all the moving parts of an issue.

I. A reading of the rubble from *Chilangolandia*

Lack of planning would define the great metropolis that has spawned from lake Texcoco. Now, there is nothing you can really do about the whole damn mess. The city has become the political, economic and cultural capital of Mexico, where the pre-colonial past and the present brush shoulders in the *metro*, at the *Zócalo*—the heart of the nation—and during earthquakes.

A vast metropolitan area that's growing out into the neighboring cities of Toluca, Puebla and Cuernavaca, *la gran urbe de la Ciudad de México* is forcing in new inhabitants every day and is now populated by approximately 21 million *chilangos*[3]. A city of extremes, Mexico is tainted by wealth, poverty and all the ills that stem from man's perpetual envy. The city's many citizens breathe one and the same breath day to day in their small, daily routines, which are minute contributions that add up to an incomprehensible orderly chaos. A chaos that manages to work in some way, every day and probably has Huitzilopchtli (the Aztec god of war and the sun) himself in awe.

From every cardinal direction, every morning, the city comes to life; and every night it replays the same action in reverse. For some, a morning commute can start at 5 am to fulfill a long, strenuous two-hour journey on public transportation.[i] For others, their daily routine is a leisurely one: *la sirvienta* bring up coffee and breakfast at 7 or 8 am and *el chofer* waits outside to take *el patron* to work. The city's congestion doesn't discriminate according to social status. It's the one great equalizer everyone must shoulder on their daily pilgrimage to their place of work—the businessmen, the students, the doctors, the janitors, the waiters, the drivers of the *Metrobús*, they all wait. The crowding is inescapable: it's in the smog that clings on top of the

[3] Chilango is a derogative term used to denote people from Mexico City, but has been co-opted by the residents of Mexico City. I'm a chilango, having been raised in Mexico City and the city continues to be the home of my family and I.

city like fizz on a glass of soda pop; it's in the city's veins made up of multicolor red blood cells of all makes and years, pulsating with the stress of impatient drivers whose entitlement deceives them into believing that their time is more precious than the rest; it's in the free-for-all when commuters press themselves into the suffocating wagons of the subway, where not even a mouse would want to squeeze through.

And it's all like this, again and again and again. Except, time has stood still in this miasma; twice, actually. But, unlike time, the earth did not stand still. Separated by 1 degree and 32 years, on September 19th, 1985 and 2017, Mexico City was shaken by a 8.1- and a 7.1-degree earthquake, respectively, on the Richter scale. Rather than upwards of 10,000 victims (or even 40,000)[ii], in 2017 only 305[iii] people were claimed by the earth—a small sacrifice to Huitzilopochtli.

The souvenirs of the city's history aggravated the impact of the earthquakes. Lake Texcoco has been slowly drained to make space for new land since colonial times. The result has been a waterless lake bed made up of a moist sediment of clay and sand. The sediment is of particular seismologic interest for it absorbs the tremors produced by an earthquake and can magnify its strength by 100 times, rendering earthquakes more violent and extending their longevity.[iv]

The two earthquakes that hit *la ciudad* are worth noting, not only because of their seismic strength, but because from the aftershocks emerged a radiant and empowered civil society that took pride in embracing an economy of hope. Rebecca Solnit, an American writer, wrote a piece in July 2016 for *The Guardian* on the eve of the publication of a new edition of her book *Hope in the Dark* (2004), where she explains the revolutionary power that is embedded within hope. In Solnit's words, "hope is an embrace of the unknown and the unknowable, an

alternative to the certainty of both optimists and pessimist," who, because of their viewpoints, choose not to act: the optimists won't budge because they believe things will eventually get better; the pessimists, because they're nihilists, are reduced to impotence by their negativity.

For Solnit, hope is a collective political action that should be distinguished from the blind hope that reassures us that things might look up because then, hope can quickly devolve to optimism and inaction. Solnit envisions hope to be seized so that it becomes purposeful and is channeled conscientiously to achieve a political vision. The outcome Solnit strives for is one of a more inclusive and equitable society, where hope is the catalyst for change. Hope is an interesting phenomenon because, according to Solnit, it's elusive for it arises from "the shadows and the margins" of society: intellectuals, political activists, a death, disasters…Hope originates from mundanity and transform itself into empowerment. However, it can be difficult to foresee or determine what events will inspire a hope to change things since it arises from unforeseen events in unpredictably ways, which is why hope can be frustrating because sometimes it's lacking. Yet, hope is politically powerful because it can help to redefine how we think and perceive the world.

Solnit's faith in hope and its revolutionary potential is heavily influence by the research she undertook to write *A Paradise Built In Hell* (2009), where she found that, despite popular belief, "in most disasters the majority of people are calm, resourceful, altruistic and creative," after withstanding significant and violent departures from normalcy. Solnit equates disaster to a revolution for disasters teach people that there are new possibilities of meaningful engagement between each other, which serve as a point of reference for alternatives to our status quo.

Hope is in a sense a moral fuel that entices us to act in the limbo that's attempting to form resilient political and social movements that structurally redefine our societies. I purposely

introduced Solnit's concept of hope with the term "economy of hope," for as Solnit notes herself, hope is extinguishable and can easily dissipate if people become disengaged. And when I use the word "economy," I use it as a synonym for the word "wealth" because hope is created by individuals sharing a mutual belief in a better world just like how industry and business in a country mutually produce economic wealth, which is a quantifiable and extinguishable resource. It's this fleeting and extinguishable nature of hope that I would like to highlight because this concept of hope that emerges and nurtures change within individuals, communities, nations and across the globe can power change but it can also lose momentum, be consumed and disappear. As a result, too much hope can be place on hope itself. (Worth noting is that Solnit is careful to point out that most political change occurs over a span on generations and what matters is clinging to hope and committing yourself wholesale to fighting for change, hence the title of her book *Hope in the Dark*—one must press forward without seeing what's ahead.)

The earthquake of '85 was a momentous event in Mexican history. Politically, it gave birth to Mexican civil society as groups of people coalesced autonomously into brigades to support each other and to rescue people from over 400 buildings that had collapsed, including hospitals, schools and hotels.[v] The coming together of people occurred in the absence of state support. The Institutional Revolutionary Party (PRI), which had successfully institutionalized a one-party rule and led a democracy that existed only in name, proved incompetent to respond to the earthquake and even aggravated the number of casualties by not immediately springing into action, wasting valuable time to save people trapped in collapsed building; President Miguel de la Madrid initially—in the aftermath of the earthquake—turned down international aid.[vi] Many argue that the earthquake of '85 began the process that eventually removed the PRI from power in the year 2000. (A momentous event, of which the only memory I possess is when my dad cast

his ballot in front of the Canadian embassy in Polanco.) The earthquake of '85 is one of a handful of events that have sparked an acknowledgement in the political imaginary of Mexican civil society that their government can be a complete failure at fulfilling its most instrumental feature: governing.[vii]

The earthquake of '17 in Mexico City incited a fast response by both the government and civil society; volunteers and the military worked closely together to coordinate the rescue of people.[viii] Maria Burguete, a volunteer at the brigades in *La Condesa*—an older, hip neighborhood in the city–describes the scene as a war zone: multiple building had collapsed, rubble fell from the roofs of buildings and everything smelled of sulfur since gas pipes had been ruptured by the earthquake. In *La Condes*a, like many other neighborhoods in the city, the *chilangos* were out in force. It was difficult to move around because the streets where packed with volunteers and there was a strong collective desire to rescue victims from collapsed buildings alive. Maria was struck by how entire blocks of people would shoot their fists up into the air and silence would rule when the *topos*[4] motioned for people to be quiet to listen for people in the piles of rubble and, also, by all the work and effort people would selflessly place to bring just one life back to the light from the darkness of the rubble.

Despite the quick response and the solidarity of civil society, the '17 earthquake didn't coalesce into a moment of collective awareness, when it very much could have. Mexico, the country, is in a period of acute stress. Violence, corruption and impunity have soiled the *sexenio*[5] of President Enrique Peña Nieto and his party's (PRI) reputation. The current government was elected after the disillusionment of two *sexenios* of rule under the National Action Party (PAN),

[4] *Topos* is the term used to denote specialized volunteers who search for survivors inside the detritus of fallen buildings.
[5] Presidents in Mexico serve a six-year term, called a "sexenio," and are barred from reelection.

which also happens to be the party that ended the PRI's 71-year-long one-party rule and brought democracy, or the semblance of it, to Mexico. The 2012 election, which voted Peña Nieto into power, was partly seen as a plebiscite on the performance of the PAN and the decision of President Felipe Calderon Hinojosa to open the gates of hell after proclaiming a war against drugs and *narcotraficantes* in Mexico when he took office in 2006.

It's not to say that the reminder of the power of civil society in the aftermath of the earthquake of '17 could serve as a point of reference in the future, like '85, to lead to a collective realization and a change of attitude among Mexicans in the expectation they hold of their government. Even the fervor of the response of civil society in '85 died out. What is problematic of the earthquake of '17 is how quickly this social fervor died out. Manuel Gil Antón, a professor at *El Colegio de México*, noted that the quick response by civil society in Mexico is part of a trend in Mexican society where people can quickly rise to action—possibly from the experience of '85—but there is a real struggle in maintaining a prolonged collective moment due to the lack of organizations to channel these responses into cohesive social movements. Antón notes that younger Mexicans "vovlerán a sus normalidad pasados unos días porque no hay estructuras organizativa (will return to their routines after a few days because they lack the organizational structures)" to implement change (qtd. in, "Como el temblor del 85…"). The silver lining is that both earthquakes showcased that "el ser humano…encuentra significado—una felicidad más verdadera— en tomar responsabilidades en servir y saberse útil (a human being…finds meaning—a truer happiness—in taking on responsibilities, in serving and in being useful" ("Como el temblor del 85…"). Across time, it's proven that human beings find satisfaction by helping their fellow man.

The earthquakes of ’85 and ’17 teach us that routine is shredded by trauma. Twice in 32 years, *chilangos* were shook into a fragile state of transcendental awareness that led them to realize that this incomprehensible monster of a megacity is populated and brought to life by flesh and bones. Twice, the earthquakes led to the development of a new identity around the city and a sense of pride over the capacity of *chilangos* to stand shoulder to shoulder despite of class, gender or sexuality to help one another in an exceptionally socially stratified society.

Mexico City’s earthquakes are not exceptional in their ability to bring people together. Disasters give rise to an urban tribalism, through which city residents find a common identity to provide an outpour of support and help. However, while disasters serve to break our routine for a short time, things go back to normal because, well, they must. We can’t stop living our lives, things must carry on. At the same time, a degree of disingenuousness is not lost on me. Conversely, I might be too judgmental. The lack of any political change in the aftermath of the earthquake of ‘17 may actually be representative of a lack of leadership, the inability to coalesce a meaningful against entrenched structures of power or many other possible alternatives. And, worth noting, is that I wasn’t in Mexico City when the earthquake happened, nor did I volunteer to help.

The biggest takeaway from the rubble of Mexico City is: how rich can this economy of hope be? If disasters and crisis become the norm in the coming century, will this innate ability of benevolence and care that exists in humans stand to the test of continuous stress?

In *la Ciudad de México*, the remnants of the earthquake six months ago are damaged, vacant, cordoned-off buildings waiting for inspection. They will either be fixed or be torn down to make room for new ones. Life begins anew. And unconsciously, the *chilangos* wait for the next time when “the city could fall apart all over again” (Luiselli, 65).

II. Collapse

Over a decade ago, in close succession, two notable university professors released a book about collapse. In 2005, Jared Diamond, a geography professor at UCLA, released *Collapse: How Societies Chose to Fail or Succeed*. A year later, Thomas Homer-Dixon, then a political science professor at the University of Toronto, published *The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization*. What could have spurred the interest on the subject? A coincidence? Possibly. It could have also been in response to a collective trauma, after the successful terrorist attack of 9/11 that exhibited the vulnerability of the most powerful society on earth; or, more largely, the increasing threat posed by climate change to all nations. Regardless, both authors choose to respond to the evolving and complex challenges that increasingly threaten human civilization globally to fall into collapse.

Collapse has long been an area of interest and study for laymen and scholars alike, spanning as far back as the 18th century with the emergence of the German world *ruinenlust.*[ix] In 1988, Joseph Tainter published *The Collapse of Complex Societies*, one of the most influential books on collapse, spurred, in part, by the very lack of scholarship and research on the topic.[x] Some time has passed since Tainter, Diamond and Homer-Dixon cried "wolf" and we have yet to experience a global collapse. Or, at least, we don't believe to in a state of collapse. However, this could be far from the truth.

In the United States, there is finally an agreement across party lines: both republicans and democrats believe that the country is in collapse because we live in a morally decadent society. A diagnostic which has arisen in response to a school shooting in Parkland, Florida, where a former student fired on his classmates and teachers, killing seventeen people. In an op-ed article, titled "Why We're Underestimating American Collapse", Umai Haque—analyzing the massacre

from the left-wing of the political spectrum—concludes that the shooting is a "social pathology of collapse"—one social pathology of many that also includes rising economic inequality and substance abuse, especially of opioids. In Haque's view, America's collapse adds up to "a catastrophe of human possibility without modern parallel"; a result of "extreme capitalism, no public investment" and the lack of care and empathy between Americans for other Americans. Conversely, conservative media debunks the shooting's relationship to gun ownership and argues that "the real crisis involves a breakdown in the fabric of American society, disintegrating families, and a lack of Christian values."[xi] Conservatives even offer a palliative solution: more guns in schools and classrooms. The important point to take away is that both the left- and right-wing of American politics share the perspective that America is in a state of collapse due to moral decadence.

If even a superpower believes itself to be in a state of collapse, then this phenomenon needs to be explored in depth. No one can deny that collapse is an intriguing topic; it reaches across various disciplines and can offer us invaluable insights on the political, economic and social structures, the ideas that these structures are built upon, and how we utilize these structures to sustain and grow our societies. As Tainter states, "…[collapse] is not only a scholarly attempt to understand the past and a practical attempt to ascertain the future, but also, in many minds, a statement of current political philosophy" (39).

By itself, collapse is an ambiguous term that automatically provokes discomfort by inciting negative emotions like fear and panic. I picture the four horsemen of the apocalypse—war, famine, death and conquest— trotting the globe. Collapse implies an unknown—a reality where chaos or unfamiliarity is injected into the status quo, lapsing our control over that which

we took for granted. It also implies an existential threat to our individual wellbeing and mortality.

The experience of collapse will differ based on the sort of collapse we experience: collapse could occur (or be occurring) slowly over the course of many decades; it could occur in a matter of weeks, days, hours or in a moment due to a significant crisis; or, it could be a mixture of both. Tainter demarcates collapse as a dramatic process that occurs within a specific time frame or else it doesn't signify an actual collapse: "…[collapse] must be rapid—taking no more than a few decades—and must entail a substantial loss of sociopolitical structure. Losses that are less severe, or take longer to occur, are to be considered cases of weakness and decline" (Tainter, 4).

Let's not forget, collapse is the status quo, "a long view of human history reveals...catastrophic disruption followed by long periods of reinvention and development" (qtd. in Homer-Dixon, 289). Throughout the course of human existence societies have been like waves on the ocean, ebbing up and down, back and forth with the tide of time.

An example in the history of Western civilization is the Roman Empire's descent into calamity and disorder from the highly bureaucratic and urbanized Roman society beginning in 476 C.E. The Dark Ages that followed the Roman Empire in the European continent were finally rendered into the light by the renewal of society (and people's standard of living) through the Renaissance. Another striking example of catastrophic disruption is Easter Island, which faced a severe collapse with the decimation of its population following the overexploitation and mismanagement of the island's natural resources. As resources became increasingly scarce, people turned to cannibalism to survive. Cultural evidence of the island's experience of collapse

is encapsulated by the worst possible insult an Easter islander can say to their fellow islanders: "the flesh of your mother sticks between my teeth" (Diamond, 109).

In the title of his book, Diamond explicitly points out that the fate, like that of the Eastern islanders, is a choice. Diamond argues that societies can prime themselves to withstand environmental shocks and crises. Ultimately, according to Diamond, a society's survival or demise is reliant on five factors—a "'five-point' framework": "environmental damage, climate change, hostile neighbors, and friendly trade partners" and "the society's responses to its environmental damage" (Diamond, 11). Diamond constantly reinforces the importance of our relationship with nature and, in his multiple case studies of societal collapse or survival, display how environmental damage or stewardship tends to be the ultimate gravedigger or savior of a society, determining the quality of life its members lead or may not continue to lead—not surprising, since Diamond is, among many things, an ecologist.[xii] Diamond's emphasis on choice and a society's agency in facing collapse could be overstated. Both the Eastern Islanders and the Romans attempted and failed to avoid collapse because the sociopolitical and economic structures they had established could no longer be supported and hence, toppled.

Diamond notes one key distinction between the collapse of past societies and the prospect of a 21st century collapse; after tracing the challenges that led societies to survive or collapse across different time eras and regions of the globe—covering the forests of Japan to the fjords of Greenland—Diamond stresses how, unlike the past, globalization has transformed the world so that it's now, more than ever before, an intertwined, "self-contained and isolated unit" (521). Therefore, the collapse of one society would reverberates across the earth like a pebble sending ripples across a pond. But instead of a ripple, it'd be a tsunami. Diamond outlines the twelve most pressing challenges of our time—all of which need to be addressed— and are all directly

related to the environment and our relationship with it. These challenges can be summed up as problems of resource exploitation, pollution and scarcity.[xiii] Some examples include: global warming, unrestrained population growth, and unsustainable consumption habits.

In comparison, Homer-Dixon also identifies five factors ("tectonic stresses") that overlap with the challenges Diamond outlines and that need to be addressed since they threaten to induce collapse: "population stress" caused by rising socioeconomic inequalities and from the rise of slums in megacities (cities with populations greater than 10 million people) ; "energy stress" in the form of a lack of oil; environmental damage and destruction of the ecosystems and resources that we rely on e.g. "land, water, forests, and fisheries"; climate change; and "economic stress" due to increasing liquidity and instability in our economic system and "ever-widening income gaps" that lead to severe economic inequality (11).

The conception of the earth in the 21st century as a "self-contained and isolated unit" is an underlying point in Homer-Dixon's assessment of the future. Homer-Dixon introduces the term "multipliers**"** to raise a red flag on 1) the spread of globalization and the interconnectivity across the globe, which can exacerbate crises, increasing their impact and, somewhat related, is 2) the rising feasibility for individuals to sow massive chaos or commit acts of violence. These so called "multipliers" are of concern because they exacerbate the five "tectonic stresses" (13). The biggest danger of all, according to Homer-Dixon, is "synchronous failure": the "collapse of the political, social, and economic order in individual countries and globally…this would be destructive—not creative—catastrophe" (16).

A clear majority of the world's inhabitants are ill-prepared to experience "synchronous failure." In August 2003, a blackout spanning most of northeastern North America "from New York to Detroit to Toronto" left many people in disarray (9). Reflecting on his experience that

day in Toronto, Homer-Dixon concludes that "most of us in cities are now so specialized in our skills and so utterly dependent on complex technologies that we're quickly in desperate straits when thing really go wrong" (11). Such a statement incentives me to take a wilderness survival course or to stockpile the necessary supplies for an emergency kit and to prepare for the variety of potential disasters I could face in Greencastle, Indiana. Yet, not all is lost. (However, I should seek to address my human instinct of procrastination to which I often fall prey to.)

According to Homer-Dixon and Diamond there is hope. Both authors utilized the title of their books to press the point forward that we have agency and rather than fearing collapse, we should use it as a catapult to "create a space for creativity that helps us build a better world" (Homer-Dixon, 7). *Collapse* and *The Upside of Down* both outline troubling and overlapping issues that reinforce each other through positive feedback loops, placing our civilization at risk of spiraling into a decline that we may fail to foresee. However, history provides us with countless examples of what a collapse might look like. While Diamond cites environmental reasons as the main causes of distress, Homer-Dixon places a greater emphasis on the rising energy costs required to quell the socio-economic challenges facing nations worldwide. Despite their overlap or differences, the challenges Diamond and Homer-Dixon analyze are only "proximate" causes—they are symptoms of a gangrenous disease. The "ultimate" cause of our collapse is the underlying system through which we have built a global, interconnected and an increasingly fragile system: modernity (Diamond, 266).

Modernity

We have been hypnotized by the narrative of modernity, accurately described by Steven Pinker (a Harvard psychology professor) as "the Enlightenment project of applying knowledge and sympathy to enhance human flourishing" through "*progress,"* the latter being the

implementation of the values of the Enlightenment. According to modernity, the application of Enlightenment ideals will help us achieve an ever-better world with less war, environmental disasters, decrease poverty; all the while, it will lead to a universal increase in wealth, life expectance; and an ushering of liberal policies that will bring more equality and decrease the marginalization and exploitation of people based on gender, sex, race, age and sexual orientation.[xiv]

Our current world system invests human rationality and *progress* into the development of capitalism which promises an ever-higher standard of living and maintains and legitimizes itself through infinite growth in a world with finite resources. Capitalism derives "social legitimacy" through the promise that everyone will eventually get a slice of the pie—wealth will trickle down the social ladder and across borders if people wait long enough (Diamond, 272). By social legitimacy I mean to say that an established structure in society is accepted and bought into, thereby determining the roles and relationships that people have to one another and how resources are allocated. By promising and providing economic growth, capitalism maintains a political and social order.

Among the many problems with capitalism, one of them is that its central promise of bounty for all will go unfilled, namely because we are exploiting the world's resources in unsustainable ways, which is accruing an immense ecological and social cost. As long as we continue to rely on the unsustainable exploitation of natural resources to deliver economic growth, we will eventually run out of resources and the base from which our economy grows, which are the natural resources offered to us by our planet. Capitalism is similar to the conundrum that plagued Easter Island and drove it to collapse: The island operated under a structure where social legitimacy was placed on "Easter's chiefs and priests" who "justified their

elite status by claiming relationship to the gods, and by promising to deliver prosperity and bountiful harvests"; all the while, the elite continued the practice of building larger and larger statues to achieve individual glory in life, while syphoning the island's resources to build these gargantuan works produce through human-intensive labor that little by little mined the island's productive capacity and led to collapse as resources like food and wood became scarce (Diamond, 109).

The epitome of capitalism's destructive capacity is the consumerist society in which we live in to deliver economic growth. As Marcel Crozet notes in his assessment of the "2017 Global Online Consumer Report" for *New Philosopher* magazine, shopping has transformed itself from an activity we engage in leisurely and in spaced out intervals, to an existential reality akin to breathing: "armed with mobile devices, today's shopper is forever browsing, comparing prices, reading review, and buying stuff."[xv] Crozet call this new reality "forever shopping," and it's driven by a highly efficient shipping industry that can transport raw materials and goods all over the world. Due to the demand for their services, the shipping industry could be merited with sixth-place ranking of the most polluting nation on earth if the shipping industry was considered a country. The shipping industry's CO2 emissions equate to 2.4% of total "global greenhouse gas emissions" globally and could sum up to be 17% by 2050.

The rampant potential rise in greenhouse gas emissions by the shipping industry could be linked to the exportation of these consumerist values to other countries, that develop a homogenized global society inclined to find happiness in material objects that then develops a complex logistics network to satisfy these artificial needs; all the time destroying the world.

The consumerist nature of our societies is worth highlighting because consumption is a behavior that we are all complicit in and one that we all can exercise a limited agency over. Our

preference for new, upgraded appliances, clothing and experiences becomes a habit that can even compromise our own agency. As the Frankfurt School's[6] critical theory highlights, capitalism is effective at "buying us off cheaply with consumer good, making us forget that other ways of life are possible"—it distracts us from enacting change through the superficial stimulus that is purchasing new commodities, encapsulated by Crozet's "forever shopping" attitude (Jeffries, 21).

Modernism and capitalism have an Achilles heel; it's what I call "modernism's folly": the belief that we can extricate ourselves from the environment; an unwavering belief that employing rationality to develop new technologies, will help us overcome even the most insurmountable problems. In the report "There's No App for That" published by the Post Carbon Institute (PCI)—a non-profit organization that focuses on studying the transition to a post-hydrocarbon world— Richard Heinberg dispels the religious-like faith we place on technological advances. Heinberg concludes that due to the rate in which the main problems facing humanity—climate change, overpopulation and a loss of biodiversity— compound, they cannot possibly be remedied by the proposed technological breakthroughs for three main reasons: 1) the technology is not available (e.g. carbon capture); 2) a technological solution is difficult or nearly impossible to implement (e.g. renewable energy); 3) the potential impact of a new technology isn't far reaching enough (e.g. self-driving vehicles). More succinctly stated, Heinberg's research highlights how we choose to invest hope in technology so that we don't have to make difficult political, social and economic decisions nor make changes to how we live.

[6] The Frankfurt School is a group of Marxist German Jewish philosophers that sought to theorized how capitalism had led people/laborer to turn towards Nazism and other totalitarian governments in the lead up to World War II, rather than uniting to take over the means of production and as Karl Marx had predicted.

The problem with technology, Heinberg highlights, is "diminishing returns" (a concept I will return to later in this essay) : "The rapid, unprecedented technological transformation that roiled the twentieth century depended upon conditions that cannot be expected to continue. These included the rising availability of cheap energy, plentiful raw materials, fast- growing economies, and the capacity to generate enormous amounts of investment capital" (30). In the case of technology, the concept of diminishing returns implies that after you reach a certain threshold, the benefits from developing new technologies dwindle.

Don't fret, just because technology can't solve our problems, it doesn't mean we can't solve them at all. Keep in mind, the key takeaway from both Diamond and Homer-Dixon's work is that we are at a fork in the road: will we choose to face a societal and global collapse? Or, will we be proactive? As Diamond succinctly points out: "The only question is whether they will become resolved in pleasant ways of our own choice, or in unpleasant ways not of our choice, such as warfare, genocide, starvation, disease epidemics, and collapses of societies" (Diamond, 498). For the time being, it appears that the future is under our control and we still can exercise agency over the trajectory of human civilization. One possibility is to maintain the status quo, hoping that modernism will save us, while perpetuating our daily consumption habits and lifestyles. But this is not a choice we want to make.

If we maintain the status quo, we are bound to live in a dangerous world where the four horsemen of the apocalypse will make more recurrent appearances in our lives, scabbing the earth with their horse's hoofs and the world is likely to succumb into a modern dark age as people fight to over scarcer and scarcer resources. Peering into a crystal ball, Homer-Dixon agrees with Diamond's assessment of an increasingly unstable future: "…the crumbling of the world order we depend on, if and when it happens, is most likely to begin at its margins" (175).

The alternative to Diamond's and Homer-Dixon's proposal is that we have limited agency, are already in a state of collapse and the previous paragraph is an overarching generalization of a global calamity that is closer to achieving itself with every passing day.

An example of collapse and the crumbling of the world order at its margins is the 1994 genocide in Rwanda—one of many possibilities of what the future might look like. Close to twenty-four years ago, population pressure, as well as soil mismanagement and exploitation, were some of the underlying causes of a vicious ethnic conflict that indiscriminately killed and displaced millions of people. The conflict and the collapse of Rwandan society provided a lucrative opportunity to relocate resources—especially land—which had become scarce due to a rising population that because of environmental pressures, couldn't feed itself due to decreasing agricultural yields.[xvi] It is evident that in our current trajectory we are bound towards collapse and the world will become a grim(mer) place.

Complexity

To understand collapse, one must understand complexity first because the later precedes the former. Much like how the history of the world is a story of recurrent collapses, the overall historical trend of human civilizations has been towards an accumulation of greater and greater complexity through increasing "specialization, and sociopolitical control, processing of greater quantities of energy and information, formation of even larger settlements, and development of more complex and capable technologies"; an evolution from hunger-gatherer societies to an urban, interconnected and globalized society (Tainter, 3).

Complexity, which is a stand-in for "complex system", is in and of itself neither intrinsically good nor bad. Complex systems are those which have the capacity to adapt and change through "emergent properties" (Homer-Dixon, 23). An emergent property is a behavior

or set of behaviors that "emerge" because of the composition and interaction of the different elements within a complex system. DePauw's Roy O. West library is an example of a complex system. The library is a space used communally by the community. Utilizing this space has led to a notable emergent property, a self-imposed and self-regulated set of behaviors followed by all students: the amount of noise that is tolerated is minimized as you move up in the building. Be forewarned, don't you dare whisper in the third floor or you'll quickly hold your tongue after a sharp *Shhh!* or have a couple of dirty looks being thrown your way! Increasing layers of complexity can provide us with more emergent properties. It can be difficult to predict what these emergent properties may be because complex systems are made up of myriads of parts constantly interacting with each other. One day, you might have to dodge an emergent property in Roy O. West: a pencil flying towards your head for insisting on talking in the second floor.

Central to the development of complexity is energy and its availability. Complexity is reliant on the preponderance of a positive energy return on investment (EROI)—that is, the amount of energy expended to extract energy must be less than what is reaped (Homer-Dixon, 79). An EROI ratio of 1:1 constrains us to a hunter-gatherer society or a subsistence agricultural society where individuals expend all their energy into providing food for themselves; there is little complexity because there are limited specialized roles since people must wholly invest themselves into surviving (Homer-Dixon, 52). As societies increase their EROI ratio, the more complex they may become: "…societies with access to lots of energy are generally more adaptive, resilient, and better at solving problems" (Homer-Dixon,37). Through its exploitation of fossil fuels that produce a high EROI, modernity has enabled us to build an extremely complex and interconnected global society.

Complexity can then be defined as the process in which a society accrues social relationships and interactions to solve problems, which then require increasing levels of control that then lead to greater energy needs. Energy is thus a "*master resource"* since it maintains and builds increasing levels of complexity (Homer-Dixon, 12). Tainter sums up the paradox of complexity:

> *"Control and specialization are the very essence of a complex society. The reason why investment in complexity yields a declining marginal return are: (a) increasing size of bureaucracies; (b) increasing specialization of bureaucracies: (c) the cumulative nature of organizational solutions; (d) increasing taxation; (e) increasing costs of legitimizing activities; and (f) increasing costs of internal control and external defense" (Tainter, 115).*

As Tainter notes, rising complexity leads to a rise in 'costs.' Complexity is therefore a positive feedback loop, because more complexity produces more "inequality and heterogeneity" (Tainter, 23). As societies grow and new networks are formed there is a need to impose order on them to resolve problems and challenges. Therefore, a hierarchy begins to emerge that is based on a system which has social legitimacy that then determines and differentiates the role and status of people within a society (i.e. "heterogeneity"), how they are allocated resources and how their labor is used, which leads to inequalities. Because of this "… [a complex society] requires constant legitimization and reinforcement" (Tainter, 38). In our case, capitalism legitimizes itself through the promise of continuous growth and is reinforced and protected by nation-states through a variety of means such as, an international financial and credit-lending system, free trade agreements and armies.

At a certain point, increasing complexity will produce "a declining marginal return." Meaning that after a certain point, added complexity fails to solve any problems and leads to a

waste of energy. Societies can circumvent declining marginal returns by colonizing other territories and gaining access to new energy deposits (Taiter, 124). Since there are very few territories left to colonize on earth, we have come to rely on technology to create more efficient process to extract energy, thus producing a higher EROI. However, as Richard Heinberg indicates in his report "There's No App For That," the edge technology offers us will reach a point of declining marginal returns and we return to the same dead end that required the use of technology in the first place: we live in a planet with finite resources and any society that overexploits and exhausts these resources is doomed to fail.

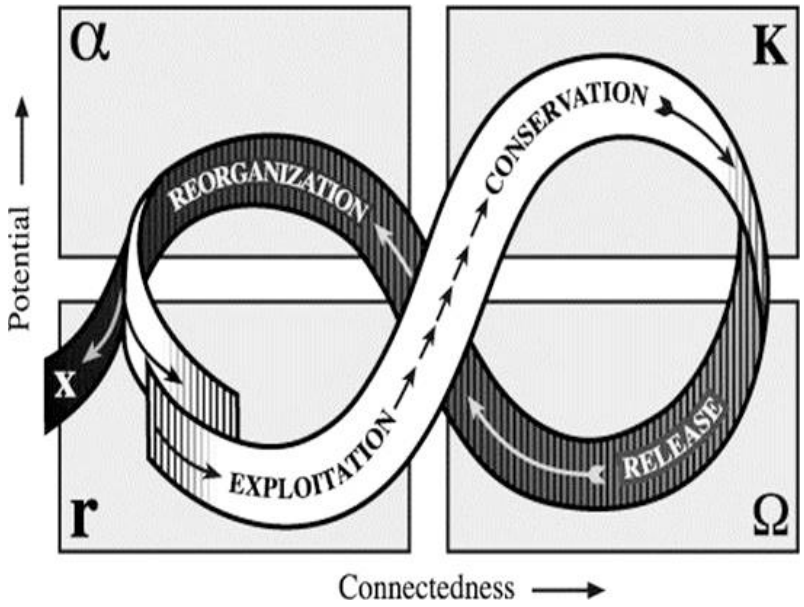
Espousing complexity with an energy system that relies on fossil fuels is a deadly combination because fossil fuels are scarce and will inevitably run out or the price of extracting them will become unaffordable. Unfortunately, this doomed marriage between maintaining and increasing complexity through fossil fuels will not be annulled anytime soon. From 2015 to 2040, our energy demands are forecasted to grow by over a quarter of our current use and we will continue to be reliant on fossil fuels, while the use of renewable energy continue to lag.[xvii] The problem with our use of fossil fuels is not only that it's finite, but it's also polluting and causing climate change. If we had wanted to mitigate the effects of climate change we would have needed to stop emitting carbon dioxide and other greenhouse gases by 2015 to maintain a concentration of 350 part per million (ppm) of carbon dioxide in the atmosphere (Parenti, 227; 350.org/about). There is currently a concentration of 400ppm of CO2 in the atmosphere. For reference, prior to the use of fossil fuels, the concentration of carbon dioxide found in the atmosphere hovered around 280ppm and the sharp increase in CO2 concentrations is mainly derived from the burning of fossil fuels.[xviii]

Besides requiring incrementally polluting energy inputs, our global economy is driving complexity by shaping demographic trends worldwide. A way to quantify how complex a society is by "its level of urbanization" (Homer-Dixon, 53). We currently exist under the most complex and energy-intensive society on the history of the planet—54% of the global population lives in cities.[xix] The more urbanized a society is, the greater the amount of energy inputs are required to maintain a population whose labor is not employed to produce the food and resources required to fulfill the basic existential needs of everyone.

If a society is going to change, it's important to consider what will the benefits be from an "investment in complexity" (Tainter, 92). The law of diminishing returns expands to all sectors of our society, including the technology sector, which further undermines modernism's fettered faith in rationality and technology since the improvements purveyed by them can only help so much until their productivity and contributions begin to dwindle.

Tainter's work explains how a society's complexity has a ceiling predetermined and constrained by the availability of energy flows, as increasing complexity will eventually yield rising diminishing returns once it crosses a threshold. Crawford Holling, an ecologist, is another student of complexity, whose work research of nature's cyclical processes has expanded our understanding of complex systems. Holling's work is important because it enables us to further theorize and explain complexity by viewing societies as systems akin to those found in nature.

Panarchy theory emerged from Holling's research of forests and the spread of pests, which led him to realize that ecosystems operate in a continuous four-stage cycle, known as the "adaptive cycle," that enables ecosystems to grow and adjust to change (Homer-Dixon, 225-26). These four stages are: "1. growth or exploitation, 2. conservation (K), 3. collapse or release (omega) and 4. reorganization (alpha)" ("Adaptive Cycle").



(Source: www.resalliance.org, "Adaptive Cycle")

In the world, there are a variety of overlapping, complex systems nested within each other that operate simultaneously. All of these systems are going through different stages of the four-stage cycle. Keep in mind that no single system can experience an unlimited growth stage. A huge risk we face is a synergy of growth in the four-stage cycle, since it places us at risk of "synchronous failure," as different complex systems reach a peak and a threshold that leads them all to shift from the conservation phase into the collapse phase. Tainter's principle of diminishing returns and complex systems four-stage cycle teaches us that complexity within societies and the global environment may reach a threshold that they can no longer hold. In our case, our threshold is whenever our access to energy sources is insufficient to maintain the existing levels of complexity that have been continually growing. The eventual result is a loss of complexity—collapse.

Defining 'Collapse'

The occurrence of collapse is a two-part question: how complex is our society? how flexible and prepared our societies are to evolve to face and resolve the myriad of environmental,

political, social and economic challenges we face? Tainter defines collapse as a scenario in which, "the overarching structure that provides support services to the population loses capability or disappears entirely" and the "remaining populations must become locally self-sufficient" (Tainter 20).

An example of collapse, as defined by Tainter, is occurring in the Gaza Strip. David Halbfinger, a correspondent for *The New York Times*, describes Gaza City to be "nearing total collapse," over a rift for control between Fatah, the political party that rules over the Palestinian Authority, which has authority over the West Bank and Gaza, and Hamas, a militant Islamist group, which took over Gaza at Fatah's expense in 2007.[xx] The crisis stems from the Palestinian Authority's refusal to pay for maintaining essential public services (like electricity) and by cutting the salaries of government employees or forcing them into early retirement to force Hamas to return sovereignty over the Gaza Strip.

The decrease in government spending has decimated the local economy as the population's purchasing power for consumer goods has dwindled. People are starving, medical services are failing, energy shortages are common and the availability of clean and running water is trickling to a stop. Since the talks between Fatah and Hamas are floundering and there is a lack of international relief, the crisis is only becoming more exacerbated and might result in war, as Hamas may attack Israel to gain money or aid from Arab allies. The political stalemate between Hamas and Fatah exposes the two million people who inhabit the Gaza strip to a wide assortment of risks that may prove fatal.

The situation currently unraveling in Gaza is a small-scale and largely isolated scenario of collapse, the result of a political standoff and not of environmental pressures; it is not uncommon however. Across the world, social, political and economic pressures threatened to

crumble the structures that provide people with essential goods and services and may degrade to such an extent that they become ineffective or disappear. Yet, as Homer-Dixon and Diamond concluded, collapse, or the impacts of a loss of complexity, can be largely a choice. And Tainter echoes a similar argument: "whether collapse is *universally* a catastrophe, though, is an uncertain matter" (Tainter, 21).

A society's flexibility is intertwined with its ability to continuous access to resources, particularly energy, the "master resource." Without high-quality energy that produces a high EROI, we are bound to face collapse eventually, as the energy inputs will not suffice to maintain and grow the complexity of our societies, i.e. the economic growth that capitalism uses to assert social legitimacy worldwide. However, collapse and a loss of complexity cannot be seen exclusively as a lack of access to sources of energy with a high EROI, because the distribution of resources and the environment can drive a loss of complexity through conflict, even if we have energy to spare, as was the case in Rwanda. The meaning of collapse should then be expanded to the reconfiguration and simplification of social, political and economic relationships caused by stress.

Symptoms of cataclysm are spawning across the globe. The question of whether collapse will occur isn't a matter of if but of when it will happen and how drastic it will be. Inevitably, at some point, we will face an energy shortage if we continue to rely on an oil-based economy. Unless we succeed in developing an economy that moves away from hydrocarbons, utilizes renewable energy and sustainably manages the earth's resources, we're bound to be in a rut with our current consumption trajectory and will likely face a decrease in complexity. Transitioning away form a hydrocarbon economy would most likely require us to redefine the purpose of our economy and shift away from a growth prerogative, which might be asking for the moon.

Collapse is also an event that will not occur all at once—despite our globalized society—and will most likely emerge, at first, as isolated events. Increasingly, the epicenter of collapse appears to be cities.

Planetary Urbanization

Demographic trends point out that by 2050 the global population will be 9.8 billion people[xxi], of which 70%[xxii] will live in cities. One must ask then: "what does collapse mean in an urban era?" Homer-Dixon points out that "population stress", in the form of slums in megacities, will pose a significant problem: "by 2030 the number of slum dwellers in poor countries is likely to double to about 2 billion people, or around 50 percent of the total urban population" (Homer-Dixon, 71). Cities are hubs of complexity and thereby require energy inputs to maintain themselves. Homer-Dixon reminds us that cities are not in "thermodynamic equilibrium…every minute of every day these cities suck from their immediate hinterlands and from regions far beyond almost incalculable quantities of high quality energy" (74). Cities are thus huge energy drains that burn through energy quickly and need to be replenished.

Henri Lefebvre (1901-1991), a French philosopher, begins *The Urban Revolution* with a succinct statement that delineates the argument for the rest of his work: "I'll begin with the following hypothesis: Society has been completely urbanized." (Lefebvre, 1). Lefebvre doesn't mean to say that the world has become 100% urbanized. Rather, urbanization has become the defining feature of our reality, extending across time and space and dominating all other That is the revolution:

"…by, 'urban revolution' I refer to the transformations that affect contemporary society, ranging from the period when questions of growth and industrialization predominate (models,

plans, programs) to the period when the urban problematic becomes predominant, when the search for solutions and modalities unique to urban society are foremost" (5).

Lefebvre thus recasts our considerations of complexity and collapse into a new light. Lefebvre places cities at the epicenter of a 21st century collapse and linking the potential demise of human civilization with the demographic trends that inch towards greater urbanization and higher population densities.

Lefebvre makes it clear that the urban problematic is most pressing. Consider a loss of complexity in urban environments: what happens when we begin to face collapse in cities? The United States Army believes that the next major battleground will be in cities. General Raymond Odierno, the former US Army Chief of Staff (the highest-ranking officer of the United States Army), states that a successful army is one that is prepared for the future. And the future conflict zone will be megacities:

"Our Army is focused on becoming globally responsive and regionally engaged…As we look to regions of interest, one key attribute of most of the is that increasing urbanization throughout the world is making the megacity one of the key features of many potential operational theatres. Future Army missions, as they have in the past, will be centered around actions to influence people. And most of the world's populations will be in urban areas. This is a problem that we must begin to understand and for which we must prepare"

General Odierno's statement is part of a preface to a report titled, "Megacities and The United States Army: Preparing for a Complex and Uncertain Future," which Odierno commissioned to enhance the army's understanding of the Urban Revolution—the centrality of cities as the defining feature of life and as a conduit of social, political and economic organization.

The report notes that as cities increase in size, the capabilities of states to "maintain security" decrease due to the rapid growth in population and size. The degree of stability in megacities will be representative of the stability of the international political system. Thus, cities will be like canaries in a coal mine and increasing conflict in urban areas could foretell societal collapse: "monitoring megacities, however, may provide decision makers with effective predictors of looming instability with global impact." As a branch of the executive power of the United States—and as a premier fighting force—the role—and capabilities—of the US Army enable it to assure the interests of the United States and those of the President's foreign policy (or lack of one) across the globe. In other words, the US Army is an enforcer of vested US interests. Its role is reactive, not proactive. And the Army's investment into developing an effective fighting strategy is meant to placate threats, not forbid them from occurring by addressing the structural problems that create them.

The root of the problem megacities pose is one rooted in inequality, as slums grow, so does the absence of the state: "As resources become constrained, illicit networks could potentially fill the gap left by overextended and undercapitalized governments." We live in a society that allocates social legitimacy to a system that accepts that half of the people on the planet are confined to live in informal settlements that lack essential government services and are therefore vulnerable to a changing climate, organized crime and exploitation by living outside of the formal confines of state authority. It doesn't take much imagination to see why or how megacities will fester collapse as people are increasingly deprived of safety, essential human rights or opportunities to climb the social ladder.

In summary: Lefebvre argues that the world is now an urban one and the problems posed by cities will be most pressing issues; Homer-Dixon's point out that cities are never in

thermodynamic equilibrium and consume electricity like no other; and, supporting Lefebvre's argument, the most well-funded army in the world predicts future armed conflicts will be clandestine street fighting—and they've been proven correct by the Battle of Mosul, where a coalition of armies had to arduously wrestle the Iraqi city back from the Islamic State block by block over the course of nine months.[xxiii]

The conjunction of these viewpoints indicates that the post-industrial, urban world is one that's maintained on a fickle growth phase in the panarchy cycle and, like in a game of Jenga, every added layer of complexity needed to maintain the system its growth phase, signifies the removal of a woodblock and a move towards a "conservation" phase. The collapse of the system will occur once the structural integrity has had enough woodblocks removed. If this assessment is correct, this would imply that we might be in the "conservation" phase, have crossed the threshold of marginal returns and receive less returns from added complexity, thus mismanaging the use of energy. The risk of being in this scenario is that, theoretically, it creates a positive feedback loop since it accelerates the process in which we arrive to collapse, as energy inputs increase to maintain an inefficient complex system, rather than simplifying the system to use less resources. Focalizing our use of energy to maintain an inefficient complex system rapidly could then exhaust our energy sources and the level of complexity we have developed cannot be maintained, pushing the fragile conservation phase of the adaptive cycle (∞) down into the "release" phase.

A Cultural Transformation

Change is much needed. Palliative responses like relying on renewable energies, the religious fervor we place in progress and technology or military force will not save most of humanity from the disparate and intensifying ecological, social and political crisis that we are

facing and will face worldwide. Homer-Dixon advocates for a "prospective mind"—an attitude that fosters a flexibility within our societies to transform "our conventional ways of thinking and speaking" in response to the changing problems we face by developing self-awareness and a "capacity for self-criticism," to avoid or learn how to cope with collapse (Homer-Dixon, 29). Diamond advocates for a similar attitude that gives us a capacity to detach ourselves from certain forms of "knowledge, cultural values, and preferred lifestyle" (Diamond, 275).

The cultural transformation and attitude shift Diamond and Homer-Dixon propose is nothing new. Its oddly familiar to the message Socrates passed down to his fellow Athenians, over two millennia ago at his trial (and throughout his life), as recorded by Plato in "Apology." Socrates' message was simple, "the unexamined life is not worth living," true wisdom comes from the constant exercise of challenging one's beliefs and changing them if they don't stand up to scrutiny (33).

In fact, our society find itself in a similar position to that which Athenian citizens (free males native to Athens) found themselves in Socrates' life—a position of wealth and security:

"Good Sir, you are an Athenian, a citizen of the greatest city with the greatest reputation for both wisdom and power; are you not ashamed of your eagerness to possess as much wealth, reputation and honors as possible, while you do not care for nor give thought to wisdom or truth, or the best possible state of your soul?" (27).

The world "Athenian" could then easily be replaced with a noun that conveys the citizenship of a majority of people from first-world countries and those who are members of the upper and middle class of some third-world countries: American, German, Mexican, Chinese etc. Socrates' advice and pleas, which he shared at no cost to the people of Athens, didn't seem to stir a

collective interest to examine their societal values by seeking truth and wisdom in the name of the god's nor to spare Socrates' life.

Any reproach to our society will likely fall on deaf ears. Socrates warned his fellow citizens that finding him guilty and convicting him to death would only push back the day of reckoning where they would have to be accountable their lack of self-introspection and action (34). Likewise, to our society, not doing anything now, will come back to haunt us and future generations later with a vengeance.

It is easy for me to pass judgment of how our society will respond and whether we will be prepared to lead an examined life and embrace a prospective mind from my ivory tower and from my place of privilege. To be frank, I'm complicit in the system we live in, for it's in my rational self-interest to do so. Not acknowledging this fact will be hypocritical and a disservice to my reader. And I will not lie to you or lie to myself. I have examined my life and, so far, I've been unwilling to change or enact change.

The conundrum I find myself in reminds me of George Orwell's positionality as a police officer in Burma when he was forced to shoot an elephant that was running amok in the town of Moulmein. The elephant was causing havoc, damage to property and even killrf a man. The whole incident is beautifully depicted with an elegance of prose that I cannot pay justice to in Orwell's essay "Shooting an Elephant." As Orwell did in Burma, my only choice is to shoot the metaphorical elephant that is the earth, since it is in my rational self-interest: I choose "to avoid looking like a fool" by profiting from the system just like everyone else. Of course, collectively acting in our individual self-interest is what inhibits change and eggs the problem on. It's only a question of how much more can we put off a cultural transformation and how many more times

we can shoot the elephant until it finally does it in. Maybe it's too late and we're just listening to the "tortured gasps" of the elephant as it slowly dies. I hope that isn't the case.

Across the world, a collective political will exists for change, comprised of individuals who in some shape or form buy into Socrates' sales pitch of leading an examine life. From environmental to fiscal to political change, people are fighting to create a different society and a culture of care that draws our values towards a more just society that lives in balance with nature. In our own state of Indiana, Hoosier Action—a grassroots organization—seeks to unite people across the intersectionality of the shared "social pathologies of collapse" to fight economic inequality through community organizing and lobbying to pressure politicians into enacting policies that help individuals rather than powerful interest groups like businesses.[xxiv]
Sure, these localized and disparate agendas may not amass to a united social movement, but their aggregate impact and potential collaboration could lead to substantial change. Channeling this political will leads us to the key question that will determine the outcome of our globalized, urban society and one that I don't have the answer to: is shifting away from the superstructure of modernity possible? More significantly, what would such a momentous transformation lead to?

A departure from modernity opens a difficult theoretical discussion, filled with hypotheticals, of what the world would be like after a transition. We lack the lexical knowledge to speak about the epistemic post the modern era since it's impossible to speak of something that hasn't materialized. A hypothetical future epistemic will separates itself and be different from modernity. I believe that a departure from modernity will likely arise out of our responses to collapse. As these events unfold, little by little, we may come to possess new forms of knowledge that could redefine our relationship to nature and to others through the emergence of new political, social and economic systems. It's a given whatsoever, that this new epistemic will

emerge from extreme turbulence and a difficult period of global stress. In the adaptive cycle, such an event would inevitably arrive after the "release" phase, and the new epistemic, if it happens, will occur with the "reorganization" of society and the inception of a new complex system.

III. Shelley and Me: A Tale of Time and Ruins

Ruins. Remains. Reminders. The American mid-west is scattered with them, they help concoct stories in our minds, begat by the question, "What happened?" Most of the time, these ruins stand alone—cement silo's decaying grain by grain. Otherwhise, they extend themselves across the landscape—dilapidated neighborhoods that would appear abandoned if it weren't for the cars parked outside or the people sitting out on the porch. Most often than not, the ruins are a result of an industrial down-sizing and the evolution of the global economy into a predatory enterprise that hops borders with an international passport and silos specialization where labor is cheapest, to reduce costs and to dissipate the liability of a united workforce. (At least the investors are happy.)

Around Anderson, Indiana, there is a vast suburban sprawl, decorated with decaying strip malls that are juxtaposed by the modern and frequented fast-food establishments. The homes around the town are reminders of the consumer and aesthetic tastes of the 50s, 60s, 70s and 80s. Since the penultimate decade of the 20th century, the architectural taste of Anderson's residents appears to have frozen in time. Many homes are shuttered and left to nature's will. The urban decay weighs down on the viewer like an impenetrable fog. "What happened here?" I ask my teammate as we jog around a neighborhood in preparation for our race.

Once the host of twenty General Motors plants and employing over 25,000 people[xxv], Anderson's economic spine was ripped out and splintered into an irreparable mess in what was labeled the "G.M. Hangover."[xxvi] The result: urban flight.[7] An article penned by Nathaniel Sheppard, published in March 2, 1982, titled "Anderson, Ind., Scrambles to keep its people

[7] Anderson, Indiana is probably not at risk of disappearing anytime soon. However, since hitting a record high of a population of 70,787 people in 1970, it has lost nearly a quarter of its population with 55,130 registered inhabitants in 2016 (US Census Bureau).

going," marks the beginning of a slow and drawn out demise.[xxvii] At the time, the city of Anderson was experiencing "the highest level of unemployment in the country, 17.7 percent." It's citizens—proud and humble people used to carrying their own weight—hesitated to reach out for help from the government at the risk of starving. "On any given day we listen to about 15 sad stories from people out of work and about to have their gas cut off or unable to buy food," said Frederick Newby, a municipal administrator, who was responsible for reviewing cases and allocating money to families who needed financial help to cover their essential needs.

Fast forward twenty-seven years to 2009, and Mary Chapman, a *New York Times* correspondent, reports that things appear to be on the upswing: Nestlé opened a manufacturing facility and small businesses have sprung up—some of them now occupy the facilities GM vacated. While Anderson has managed to diversify its economy through a variety of economic initiatives that vary in scale, the nausea of the "GM Hangover" has not completely eased and its population numbers have been on a steady decline. The city's main employer, St. John's Medical Center, still relies heavily on GM—20% of its patients are former GE workers whose health coverage is financed by their retirement plans.[xxviii]

Anderson is a ruin in the making.

…

Our conception of ruins arose as a "modern—that is, post-medieval—invention," that required a conception of time and history as neatly demarcated events, to fit the narrative of a civilization always striving towards and achievieng progress (Dillon, 5): "the ruin lust of the eighteenth century begins in part as a way of thinking about—fearing and hoping for—the future" (48). Ever since "ruins" have evolved across art and culture. In *Ruin Lust*, the Irish writer Brian Dillon

traces this transformation in a collection of essays and a selection of works of art, that pinpoint ruins' instrumental feature: "ruins allow us to set ourselves loose in time" (6); they are "routes out of our own moment—portals into past, present and future" (53). Ruins, according to Dillon, are not just physical, they're also a concept. An abstraction that enable us to imagine and to foretell the future. Ruins are a *lust*—as the title of Dillon's work reminds us; an innate desire to conceive of what the future holds in store by considering the past and the future in the present moment.

As time has passed, our desire to conceptualize and portray ruins has evolved. First, ruins were admired for their standalone nature, as they were being reclaimed by oblivion. Take, for example, the Frenchman's Hubert Roberts "Landscape with Cascade Inspired by Tivoli," completed in 1779:

(Source: *The New York Times*)[xxix]

Through a waterfall, the water runs its course. A mountain peak observes the scene unfold again and again, while visitors pass by for a peek. The ruins of civilization—an aqueduct—are neatly hidden, camouflaged and framed by the nature that has engulfed them. While water may no longer run to a nearby city, the power of nature remains. The laws of gravity will perennially

carry the rain and the melting snow through the route laid before by the labor of the seasonal cycles of nature that carved the river into being.

From nature, the extension of ruins then moved into the city as human civilization attained higher levels of growth and prosperity. In Joseph Michael Gandy's *A Bird's Eye View of the Bank of England* (1830), Gandy was commissioned by the architect of the Bank of England, Sir John Soane, to portray the building "in ruin" (17).

(Source: Sir John Soane's Museum)[xxx]

The implication of Gandy's assignment is daunting—the British Empire's financial backbone and a pillar of society gone and in disrepair? Impossible. At the zenith of the empire's existence this desire implies an innate proclivity for destruction in human beings: Gandy's task meant foretelling the end of the world by picturing the end of its more powerful society by emblazing one of its premier institutions into a pile of dust and a collection of pillars. A morbid thought indeed.

"Ruination"—the process in which ruins become themselves—has moved little by little into the modern city and now requires far less imagination than Gandy's portrayal of the Bank of England (30). Periodic industrial decline and economic recessions have borne their marks on the

landscape like natural disasters intermittently strike human settlements. To record these scars, all you needed is a camera.

Camilo Jose Vergara, a Chilean photographer, has dedicated over forty years of his career photographing disenfranchised communities in American cities; often returning to the same sites in an ongoing project titled "Tracking Time."[xxxi] In an interview for *Citylab*[xxxii], Vergara pinpoints his allure to ruins to the similarity between humans and structures: "we all decay and deteriorate," he observes. Incisively, Vergara points out that ruins' magnetism is their "sense of movement" in marking the passage time and the "many more possibilities" they present than newly built structures.

Intermittently, from 1989 to 2017, Vergara has captured a former train station in Gary, Indiana in a series of nine photographs. Each photograph contains an added wrinkle of time, showing ruination in a different light. In 1996, the inside of the neoclassical structure is hollow, stripped of its original sense and purpose. Outside, a platoon of the train station's executioners—cars, which supplanted the mainstream use of trains in America—are in formation; one of them, in a sign of disrespect, uses its entryway for shelter. The façade silently bears witness to the unpredictable and fluctuating climate of the American Midwest: snow, rain, wind, humidity, etc.

"Former train station, Broadway by I-90, Gary, 1996"[xxxiii]

"Former train station, Broadway by I 90, Gary, 2017"[xxxiv]

Decay, however, can take different meanings and purposes. In 2017, the train station reclaims, once again, its original purpose—a point of departure. Instead of a train, a conversation, a leisurely reading under the light of the sun or a spell of daydreaming will take away from Gary's city limits, as the space around the train station has been reclaimed in what appears to be a public space. In the juxtaposition of his images, Vergara takes ruins and truly shows their meanings and uses across space and time.

Despite showcasing the reinforcing relationship between socioeconomic marginalization and the production of ruins, Vergara's allure to portraying ruin can be optimistic and hopeful, showcasing human resourcefulness. Yet, Dillon argues in *Ruin Lust* that Vergara's true intention is no different than Sir John Soane's morbidity and is "the result of a specific, largely unconscious, desire: a fantasy according to which our modernity and modernism have decayed or been erased, and the city become once more…a terrible warning about human ambition and hubris" (31). Ruins are then a stand-in for pinpointing our historical moment within a slow choreography towards entropy.

Ruins are not a discreet concept, while simple in appearance, they be hard to grasp due to the multiple meanings and interpretations that literature has drawn from a structure's ghosts. On the one hand, there is the degree and the speed of ruination—that is the process in which something becomes a ruin: "picturesque decay is one mode of ruination, sudden collapse or destruction another" (16). On the other hand, there is the ever-changing definition of ruins that has morphed into an all-encompassing shackle. A belief that everything is crumbling and falling apart in a state of constant ruination.

Whereas once we only looked at the remains of past civilizations as ruins, we now see everything in a process of degradation. The all-encompassing view of ruins is best described by the term "the Zone," named after the demilitarized, post-apocalyptic setting of the film *Stalker* (1979), directed by Andrei Tarkovsky. "The Zone" is the convergence of all landscapes, where "nature and culture, landscape and ruin, begin to bleed into once another"; a landscape where nothing can be recognized from the other and everything is destroying itself slowly, bit by bit (41).

Imminent destruction of all and everything is foreboded by Robert Smithson's conception of ruins in his essay "Passaic" (1967) where he introduces the term "ruins in reverse" to speak about "relics that 'don't fall into ruin *after* they are build but rather *rise* into ruin *before* they are built'" (qtd. in Dillon, 48). Smithson's interpretation of ruins complements the perception that everything is a ruin, because everything arises as a ruin; eventually, everything is destined to lose its purpose and its proclivity for existing in the first place. As the train station in Gary, Indiana, we are constantly constructing a society made up of ruins that will eventually fall into ruin.

…

War, natural disasters, economic turbulence, time: the reasons abound and ruins are what remains—the scars that tell the story. Ruins in themselves are unimportant; our fascination with ruins, the stories and meanings they incarnate and what we extract form them aren't. These stories are potentially a byproduct of a human fascination with apocalypse—an existential enthrallment that may have existed for as long as we have managed to walk upright. However, it's most likely a production of modernity. Through its instruments of rationality and technology, modernity has doomed us to the secularization of the world, a removal of religion and the comfort that can be purveyed by a belief in the afterlife.

Ruins are a counter-narrative to modernity, they are a nagging reminder of the fallibility of rationality's ambition to control nature. Ruins highlight the mortality of our existence and showcase the frailty of our worlds and bodies. Inevitably, we will all phase our individual apocalypse—death.

Modernity was founded upon the ideals of the Enlightenment, which held an astringent foundation in rationality. In response, the Enlightenment bred important intellectual movements that weaved counter narratives to the Enlightenment's formulaic worldview. One of which was, the Romantic movement. The Romantic movement championed the individual and their sensory experiences over rationality as an alternative mean to finding the truth and achieving a better society.[xxxv] The interplay between conceiving of the world as a ruin in a constant state of degradation, slowly simmering towards an apocalypse is alive and well with the Romantic poets, except that they were optimists. They believed that a better world existed.

In *Apocalypse and Millennium in English Romantic Poetry*, Morton Paley argues that "a major topos in English Romantic poetry is the imminence of an apocalypse that will be succeeded by a millennium" (Paley, 1). It's important to note that the English romantics' conception of apocalypse is a "revelation of ultimate truths" and not the "modern usage" of a catastrophic event (2). Whereas millennium is "a period of life in a regenerate society" preceded and enabled by the apocalypse (3).

A notable English Romantic poet was Percy Bysshe Shelley (1792-1822). The son of an affluent landowner from Sussex who was a member of Parliament, Shelley spurned his prestigious upbringing and religion, investing himself into enacting political change that went against the very structures of power that granted social and political capital to his grandfather and father. Shelley's purpose was to achieve a more egalitarian society through writing.

In his essay, "A Philosophical View of Reform," Shelley sets forth his worldview and his belief in poetry as a conduit for enacting social change. In this political manifesto, Shelley writes at length of the history of oppression of the common people in Europe and the state of affairs in England in 1820, calling "for universal suffrage and equal representation" in Parliament for both men and women alike (77). Shelley's main grievance is the unsettling inequality and the lack of representation that has permeated society due to the entrenched interested of the wealthy aristocracy and the demographic changes spurred forth by the industrial revolution in the form of rampant urbanization. Shelley accuses the British monarchy of becoming a tool for the rich: "The name and office of the king is merely the mask of this power…monarchy is only the string which ties the robber's bundle" (38). Despite the power of his prose and the integrity of his ides, Shelly's essay wouldn't be published far after his death in 1920.

In tone, "A Philosophical View of Reform" envisions political change as imminent and inevitable due to Shelley's belief on the corruptibility of power when wielded in the hands of the few: "So dear is power that the tyrants themselves neither then, nor now, nor never, left or leave a path to freedom but through their own blood" (4). Ultimately, for Shelley, the legitimacy of any government rests in its ability to purvey for the needs and wants of the people: "A man has no right to be a King…but so long as it is for the benefit of the People and so long as the People judge that it is for their benefit that he should impersonate that character" (6). If a government fails to purvey for its people, it's then in the people's right to depose a government.

Shelley, however, was wary of revolution for he feared that violence could spiral out of control: "A Republic…would through the violence and sudden change which must attend it, incur a great risk of being as rapid in its decline as in its growth" (67). An opinion that Shelley probably drew from the events that were triggered by the Reign of Terror[xxxvi] during the French

Revolution, where individual rights were superseded for the good of the revolutionary cause, leading to thousands of deaths—many of which were performed with the use of the famous guillotine in Paris' Place de la Nation.[xxxvii]

As a writer, Shelley believed it was his role to theorize and chart the path towards a better world and avoid violence from strangling the possibility of a new millennium. He envisioned a world free of oppression through classless political action and struggle. For lack of a better word, Shelley *romanticizes* the role of a writer in society as a religious-like figure: Writers are "the priests of an unapprehended inspiration, the mirrors of gigantic shadows which futurity casts upon the present…the unacknowledged legislators of the world" (30). Moreover, Shelley describes a "true patriot" as one who seeks "to enlighten and to united the nation and animate it with enthusiasm and confidence" (80). The definition of a "patriot" and a "writer" that Shelley gives are easily interchangeable, as both aspire to lead society to a better reality. And Shelley did take on the mantel of a patriot in the aftermath of the Peterloo Massacre, reacting to the chain of events that unfolded in August 16th, 1819 by writing the poem "The Mask of Anarchy."

The Peterloo Massacre took place in Manchester at St. Peter's Field, where approximately 60,000 protesters gathered to demand an extension of the suffrage. The massacre unveiled itself when a cavalry unit of volunteer soldiers charged the crowd, slashing their sabers indiscriminately at the protesters, causing widespread panic that spurred a stampede. It's estimated that 650 people or more were injured and 18 perished. To this day, the Peterloo Massacre continues to be the most violent repression of a protest to ever occur on British soil.[xxxviii]

Indignant upon hearing the news of what had taken place, from Italy, Shelley penned his poem. In the ending lines of "The Mask of Anarchy," Shelley calls for the people of England to

stir into action: “Rise like lions after slumber/ In unvanquishable number—/Shake your chains to earth like dew/Which in sleep had fallen on you—/Ye are many—they are few.” The poem argues that the current government is concealed behind anarchy, for all it does is cause “Destructions” upon the people of England, whereby institutions like the Crown, the Anglican Church and the judicial system are merely masks that justify such abuses.

It was Shelly’s conviction that poetry was a powerful literary tool; one that held “an intense and impassioned power of communicating intense and impassioned impressions respecting man and nature” (“A Philosophical View of Reform”, 29). Poetry is thus and extension of Shelley’s conception of the purpose of a writer and a patriot: a method of grasping the truth as an individual and passing it forward to others to guide them towards implementing change. Sadly, due to the fear of political repression, the poem was published until 1832, far too late for it to have played it’s intended role in rousing the people into action—just like “A Philosophical View of Reform.”[xxxix] The same year “The Mask of Anarchy” was published, Parliament passed a bill that extended the suffrage by redistricting the country to accommodate for the demographic changes spurred by the Industrial Revolution.

I like to see similarities between Shelley and me. Like him, I and am marred by the events that engross the time I live in—events I want to dissect and understand through writing. (I also happen to be somewhat of an amateur poet, having had some of my poems published.) Shelley was even a staunch advocate of vegetarianism, a lifestyle I embrace. (Albeit, the vegetarianism he endorsed is more restricting than the one I practice.) In “A Vindication of Natural Diet,” Shelley interestingly asserts “that the depravity of the physical and moral nature of man originated in his unnatural habits of life” (1). Such habits being the consumption of other

live creatures. In renouncing meat (and liquor), Shelley cites important health, emotional and societal benefits, arguing that meat consumption is the cause of human decadence.

Shelley's argument is supported by two main proofs. First, our anatomy, like other "herbivorous animals," is "fitted to a pure vegetable diet" (14). The verdict comes from the fact that we most clearly don't resemble any "carnivorous animal." Second, we aren't meant to consume and digest meat since it requires "culinary preparation" (13). Shelly concludes his essay with two simple rules for leading a healthy life: 1) "Never take any substance into the stomach that once had life"; 2) "Drink no liquid but water restored to its original purity by distillation" (26).

Shelley's concerns with equality and vegetarianism could be attributed to the political turbulent times he witnessed throughout his short life. Not only was political repression and disenfranchisement widespread across England, but also throughout Europe. Across the pond, the French Revolution was raging for most of Shelley's infancy: a period of political and social turmoil that, ultimately, sought to address the paradox, bred by the Enlightenment, of living in a self-contradicting society. In the case of France, there was an absolute monarchy, chosen by divine right, that upheld the status quo of a feudal system, benefitting the clergy and the nobility. At the same time, the Deist belief that God was a passive witness to the universe he had set in motion and the conception of all people as equal and deserving of the same rights, was taking hold. The French revolution led to serious instability, passing power from one autocratic ruler to the next except, rather than divine right, the self-crowned emperor, Napoleon, championed a meritocracy.

Napoleon's rise to power set in motion the Napoleonic Wars. A turbulent and complicated series of shifting alliances and battles, where France sought to conquer the European

continent and strangle England economically through the strategy of imposing a Continental Blockade that would restrict trade from mainland Europe to the British Isles. The threat of a powerful France that also happened to repudiate a government under a monarch gave common cause for England and reactionary governments in continental Europe to ally and counterbalance Napoleon Bonaparte's ambitions, leading to Napoleon's downfall, as well as liberal ideas like Shelley's.

Shelley's historical moment attests that turbulence is the status quo. Genocide in Myanmar, nuclear tensions in the Korean Peninsula, civil war and insurrection in the Middle East, increasing political tension between the West and Russia, mass migration spurred by violence and climate change: a brief snippet of some of the recurring newspaper headlines this past year. It's surprisingly difficult not to think that the world is falling apart at the seams. Our historical moment is not unlike others, it's only the scale of suffering that has grown. And here we are, perennially in wait for an apocalypse or a writer who will reveal an irrefutable truth, unveiling the millennium of a new human age.

To me, Shelly's poems "Ozymandias" succinctly brings together the ideas of apocalypse and millennium. It's also a poem that recounts the story of a ruin:

I met a traveller from an antique land,
Who said—"Two vast and trunkless legs of stone
Stand in the desert. . . . Near them, on the sand,
Half sunk a shattered visage lies, whose frown,
And wrinkled lip, and sneer of cold command,
Tell that its sculptor well those passions read
Which yet survive, stamped on these lifeless things,
The hand that mocked them, and the heart that fed;
And on the pedestal, these words appear:
My name is Ozymandias, King of Kings;
Look on my Works, ye Mighty, and despair!
Nothing beside remains. Round the decay
Of that colossal Wreck, boundless and bare
The lone and level sands stretch far away."

In “Ozymandias” the past, the present and the future come into life. There is the man from the “antique land,” implying the past for it connects the story to a former realm. The present is incarnate in the continuance of tyrannical governments, denoted by “those passions…/Which yet survive,” that lead the sculptor to highlight the “sneer of cold command” in the ruler’s face. The poem ends with a revelation that predicts the future by presenting the ruin of the sculpture of the ‘king of kings’ in a sea of sand. One could interpret the decrepit king as a premonition of a better world without tyrannically rulers and political repressions, a millennium which Shelley so ardently hoped for or the future of the earth. Thus, the premonition can either be both the apocalypse and millennium, or merely, the apocalypse.

The absurdity of the words on the pedestal (“My name is Ozymandias, King of Kings;/Look on my Works, ye Mighty, and despair!”), which time has rendered irrelevant, highlights the incongruence of despotic governments and the impossibility that anything will ever outlive the passage of time. As the Bible wisely says, “for dust thou art, and unto dust shalt thou return” (King James Bible, Genesis 3:19). If “Ozymandias” is interpreted as exclusively embodying the Romantic conception of apocalypse, the truth that the poem reaveals is that everything is born a ruin—and will return to being a ruin. There is no millennium.

Like Ozymandias’ statue, Shelley’s remains were equally laid to rest in the sand. Shelley drowned shy of the age of 30 off the coast of Lerici, Italy when his sailboat, the Don Juan, was caught in a storm and sank. His body, retrieved 10 days later from the sea, was cremated on a pyre at the beach.[xl] Rather than time, flames engulfed his body, leaving behind his ashes, a couple of bones and, allegedly, his heart.[xli]

("The Funeral of Shelly" by Lois Édouard Fournier" (1889)[xlii]

. . .

In Anderson, Indiana the sun sets as we drive back home after our track meet. And it will surely rise anew tomorrow and the day after that one and so on. Yet, the unpredictability of the future in unsettling. Human beings don't deal well with doubt or the unknown, potentially because we're perennially aware that everything has an end, even life itself—at least, according to the worldview of modernity, where time and space are quantifiable concepts. Ruins remind us that the opposite is true, our modern conception of time and space is flawed. Time will press on for quite some time actually—the stars in the universe will stop emitting light in 1,000 billion years.[xliii] By then, planet Earth will likely be an amorphous ruin and human life an afterthought when the last star in the universe fades out into an eternal silent night.

IV. "The Age of Nature"[8]

Tales of science fiction are increasingly becoming a reality. Yet, like in literature, their allure remains the same—a form of escapism from reality. These productions originate from our creativity and are meant to provide real solutions to a serious problem: the successful transformation of our planet into an ecological time bomb. Taking a pulse on the brightest minds of the planet and our changing climate, Pope Brock concludes that "TEOTWAWKI" (The End of the World As We Know it) is coming: "Experts at the Massachusett [sic] Institute of Technology say the 10 billion people on Earth in 2050 will require seven to eight times the largely poisonous energy we're generating now, or would if they were still alive. The inexorable message: We've got to escape fossil fuels whatever it takes."

In response to the TEOTWAWKI phenomenon, Brock outlines in his essay "The Moon is full of money" how one of the places we are looking for solutions are the skies—or beyond them to be more accurate. One possibility is to use the moon as a source of clean energy, minerals and, potentially, as a colonial settlement if planet earth were to become uninhabitable. Our motivation to transform the moon into a new frontier is not merely an existential conundrum but is driven by a strong profit-incentive: money. Brock predicts, "corporations, hand-in-glove with governments, will hegemonize the moon."

The moon's most direct contribution to assisting human civilization in the future could be the beginning of an energy revolution fueled by "helium-3" (He-3). A substance scarcely found on earth but bountiful in the moon, He-3 would be a source of clean energy, generous calculations estimate that He-3 could provide us with energy for hundreds if not thousands of years. However, the infrastructure and technology necessary to extract He-3 from the moon,

[8] In *The Upside of Down*, Thomas Homer-Dixon labels the twenty-first century as "the Age of Nature" (13).

transport it to earth and then transform it into a usable energy source doesn't exist or isn't technologically possible yet.

An alternative and more realistic source of clean energy coming from the moon is the implementation of "Lunar Solar Power (LSP)." LSP entails installing solar panels on the moon and channeling the energy of the sun from the moon to the earth via satellites into "receiving stations" on earth. While the technology needed for such an endeavor would be easier to create, implementing the LSP project is highly unlikely, not only on the moon, but on the earth. LSP's satellites could be used as weapons of mass destruction, like the satellite Icarus in James Bond's *Die Another Day*, which could magnify the sun's power and burn anything on the surface of the earth as easily as a child can burn an ant with a magnifying glass, except hundreds of times more powerful.

Echoing and profiting from the optimistic sentiments towards outer space is SpaceX, a private spaceship and rocket manufacturer whose ultimate goal is to set the stage for the colonization of other planets.[xliv] SpaceX is increasingly dictating and playing a role in the future of space travel since it has become a private contractor for the National Aeronautics and Space Administration (NASA) and for the United States government and military. (A nod to Brock's assessment of space as a profitable economic entity that will be divvied up by corporations and national governments.) SpaceX's CEO, Elon Musk, is an eccentric visionary who leads other companies like Tesla, SolarCity and Neuralink; companies that seek to invent and design the future of technology and the increasing role that said technologies will play in our lives. Recently, SpaceX successfully launched more powerful rocket, the Falcon Heavy. The Falcon Heavy is an update from a previous model, the Falcon 9, which had been used to transport supplies to space stations orbiting the earth. The launch poses a positive outlook for Musk's plan

of one day sending people to space in SpaceX's B.F.R. (Big F***ing Rocket) and making "multiplanetary"[xlv] life truly possible.[xlvi]

Closer to home, other alternatives are being explored. Rising global temperatures in the Arctic are leading to a thawing of the permafrost—soil that has been frozen for thousands of years. Vast swaths of land stretching across the Arctic Tundra from Siberia, Canada and the United States reinforce the effects of climate change are melting, releasing carbon dioxide and methane. Methane is also a greenhouse gas and a byproduct of organic decomposition, except that it's 30 times more powerful than carbon dioxide in capturing heat.[xlvii] Currently, the freezing temperatures stop or reduce the rate at which the bacteria in the soil decompose organic matter in the soil. In all, the permafrost holds double the amount of carbon that is present in the atmosphere.[xlviii]

Thawing permafrost poses a huge problem, not only because of increased methane emission, but also because it's affecting the landscape and leading to sinkholes, as methane and carbon dioxide—produced by decomposition—accumulate under the soil and burst. The melting ice is also converting the permafrost into wetlands. Sergey and Nikita Zimov, a Russian father-and-son duo are trying to avoid the thawing of the permafrost by reintroducing a team of grazing animals into their "Pleistocene Park"[xlix] in the Siberian Steppes to transform the wooded landscape into the grassland it was thousands of years ago. Grasslands are a habitat far more suitable at maintaining cold temperatures, since the grazing animals compact the snow and make it harder to melt, thus avoiding increased thawing of the permafrost. However, a vital species is not on the grazing roster yet! And that is the woolly mammoth. Geneticists are hard at work at bringing the mammoth back from the grave using well-preserved mammoth remains that were ironically discovered thanks to the melting of the permafrost.[l]

Meanwhile, back on planet Earth…

As we experiment or conceive of different solutions to climate change, like becoming a multiplanetary species or reviving extinct species, time is running out. Climate change is the ultimate existential and defining feature of the 21st century. Across the world, cities like New Orleans, Louisiana, Jakarta, Indonesia, Mexico City, Mexico, Rio de Janeiro, Brazil and Cape Town, South Africa are indiscriminately experiencing symptoms of a changing climate manifested in the form of rising sea levels, resource scarcity (especially water) and/or increasing levels of violence. And these symptoms are occurring faster than remedies for the malady are developed.

The political, social and economic ramifications of climate change are increasingly asserting themselves across the globe and will dramatically exacerbate existing inequalities and issues. Climate change—an ecological phenomenon—is having significant geopolitical impacts because it's a positive feedback loop: a changing climate leads to a reconfiguration, redeployment or destruction of the biological energy sources which our societies have been built and depend upon, leading to social stress as resources become unavailable.

In *Tropic of Chaos*, Christian Parenti analyzes a spike in violence across the world through what he calls the "catastrophic convergence": "poverty, violence and climate change" (5). The title of the book comes from the "belt of economically and politically battered post-colonial states girding the plant's mid-latitudes"—the Tropic of Capricorn and the Tropic of Cancer—made up of 2.7 billion people (9). Encompassing 46 countries, these states are at risk of failing and are succumbing to increasing levels of violence due to rising environmental stresses that are tied to a changing climate change. The reason why these countries are so susceptible to climate change is because their economies are reliant on a predictable climate to produce

foodstuffs and goods for export. Moreover, the power of the state in these countries has been significantly corroded by neoliberal policies and the legacy of proxy wars between the United States and the Soviet Union during the Cold War.

Environmental degradation is particularly worrisome because it leads to a rapid deterioration of State power and is compounded by population pressures, that take the form of greater urbanization and a preponderance of slums. These demographic occurrences render climate change as the ultimate existential crisis of the modern era since it threatens to destroy the nation-state system through the normalization of chaos and violence: "the nation-state may be entering a period in which its usefulness as a concept for organizing societies will be severely challenged" (27). Kenya, Somalia, Afghanistan, Brazil and Mexico are some of the countries that Christian Parenti visits to report from the trenches on the battle between states and a changing climate: increasing drought and unpredictable rainfall are shattering local economies that rely on subsistence agriculture and are leading to a rise of a shadow transnational economy. These developments highlight the extent to which sustainability and resource protection are as integral to state security as an effective, well-trained police force is necessary to maintaining order.

Analyzing these worrisome trends that are impacting the world order, I will focus on the current state of Mexico, which will serve as a useful case study and point of comparison to contextualize what the Age of Nature could have in store for us.

Get to the 'lifeboats'!

"Mitigation and adaptation" are the existing weapons we possess to combat climate change (10). "Mitigation" being the actions we undertake to reduce the stress we place on the environment; take for example converting the Siberian tundra into the wholly mammoth's

backyard. “Adaptation” being the social, political and technological responses that we undertake to *adapt* to a changing climate; like building a B.F.R. and skipping town to destination Mars. However, adaptation has an element of duality—it can be for the better or for the worse. Positive adaptation takes the form of solutions that produce positive outcomes for society and individuals, for example, building more resilient and sustainable communities that can withstand environmental stressors. Bad adaptation, however, is, well, very, very bad and will engender different responses based on a country’s coffers and the strength of its political institutions; overall, negative adaptation takes the form of increasingly fraught societies with little centralized political control and an uptick in violence and human displacement.

Unsurprisingly, two forms of negative adaptation are taking hold: “the politics of the armed lifeboat” and, inversely, the failure of the nation state. The former is a reactive response by First World countries to the anarchy that is taking hold over Third World countries; a “green authoritarianism” that responds to the violence of Third World countries with more violence and oppression (11). The latter—that is, the failure of the nation state—is a result of the fractured political institutions that have resulted from neoliberalism and/or cold war militarism being confronted by climate change.

Not only have these two negative forms of adaptation gradually become the status quo, but they are also mutually reinforcing: without cooperation between states to mitigate and adapt to climate change, these problems will only worsen; rising violence in Third world countries leads to increasing fear in First world countries whose populations will most likely vote for populist, strongmen (or strongwomen) that can insulate them from the danger occurring beyond their borders.

The election of Donald Trump is a case in point and a foreseeable foul taste of the future.

Published in 2011, in *Tropics of Chaos* Christian Parenti more or less predicted the outcome of the 2016 election, where Hillary Clinton's platform of inclusivity lost to Donald Trump's nativist and populist message:

"There is a real risk that strong states with developed economies will succumb to a politics of xenophobia, racism, police repression, surveillance, and militarism and thus transform themselves into fortress societies while the rest of the world slips into collapse. By that course, developed economies would turn into neofascist islands of relative stability in a sea of chaos."

Political instability across the globe drives us towards populism and fascism because it produces fear.

The United States government, under the Trump administration, has become a microcosm of an "armed lifeboat" by issuing a series of regressive policies that rollback mitigation efforts, like opting out of the Paris climate agreement[li], and by restricting migration through increasing border militarization, exemplified by Trump's campaign promise to build a wall. A promise that might soon be fulfilled. Prototypes have been completed near the Tijuana-San Diego border and the United States might soon burn through piles of money in the construction of a ("yuge") 30-foot border wall along the Mexico-U.S. border with a price tag of $18 billion dollars.[lii] An epitome of the lifeboat coming into being.

A more accurate metaphor for the armed lifeboat phenomenon, however, would be that of the "Crystal Palace" Peter Sloterdijk describes in *Im Weltinnernraum* (2005). The crystal palace is a reference to the structure that was built in London to house the Great Exhibition of 1815:"an enclosure so spacious that one might never have to leave it" (qtd. in Jeffries, 107). The crystal palace symbolizes both the evolution of Frist World countries into an "exclusion zone" and the fragility of such an enclosure (108). Parenti argues that a crystal palace approach is not

sustainable in the long term since "climatological collapse…will overwhelm the armed lifeboat" (Parenti, 20). Hence, First World countries will not be exempt from the externalities of climate change. Therefore, we will either learn to live with and mitigate climate change, or even the crystal palaces will be stoned into shards of glass.

The Flexible Border

Forced displacement is leading to unprecedented levels of human migration. Estimates predict that 200 million to 1 billion climate refugees will be on the move by 2050 (Miller, 96). Currently, most migration occurs within countries as people move from the countryside into cities when agriculture is no longer a plausible way to make a living or fails to provide physical sustenance. Climate change is not the sole contributor to the demise of subsistence agriculture, "policies of agricultural deregulation and financial discipline enforced by the IMF and world Bank" in the name of neoliberalism have immensely contributed as well (Davis, 15). Climate change does, however, have more immediate impacts. In Bangladesh, flooding along the coast—caused by rising tides and more powerful and frequent storms—are driving 500,000 people per year into the slums of the capital city, Dhaka—70% of the slums' inhabitants are climate refugees.[liii]

States are evolving in response to these demographic trends—some are extending their sovereignty by enhancing their ability to build borders as others are wilting. Say, if a Bangladeshi climate refugee would try to cross into India, he is very likely to be shot (Miller, 46). However, nation-state's adaptation goes further than stricter and more violent policing of its borders.

Traditionally, nation-state borders are physical boundaries—rivers, mountains, arbitrary invisible lines, etc.—that are mutually agreed upon between states through consent (or force).

Said borders then dictate the sovereignty of a state over a given territory. This historical (Eurocentric) conception of borders stems from the Treaty of Westphalia. The treaty was signed in 1648 to conclude the 30 Years' War and is remarkably outdated because "[the 21st century border is] defined more by political and economic power than by national sovereignty" (Miller, 73). Powerful countries, like the United States and the European Union, are 1) expanding the reach and strength of their borders through increased spending on border militarization and 2) placing political pressure on foreign states, providing them with the hardware and training to enhance their capability (and willingness) to police their own borders. Their objective? Thwarting would-be migrants/climate refugees from even reaching their *real*, mutually agreed upon borders.

The creation and enforcement of these flexible borders is usually justified to combat a separate problem. Mexico has effectively become a border, a buffer zone so to speak, of the United States to combat drug trafficking through the Merida Initiative, "a bilateral anti-narcotics initiative funded by the United States and Mexico" (Paley, 31). The Merida Initiative began in 2007, after president Felipe Calderon set out to combat drug trafficking soon after taking power in December 2006. The main objective of the Merida Initiative was to target criminal organizations and to improve border policing. On the ground, the Merida Initiative has led to the militarization of Mexican society and has preyed on the legal and social vulnerability of Central American migrants.

Mexico is situated between the United States and Central America. Central America is currently being devastated by the catastrophic convergence of violence, poverty and climate change, and its nation-states are unable to respond. The northern triangle of Central America—Guatemala, Honduras and El Salvador—is part of a "dry corridor," which hosts a seasonal

drought between July and August. The length of this drought has been exacerbated due to climate change that has led to reduced rainfall.[liv] The countries in the northern triangle are also victims to dire poverty and violence because of the vulnerability of their political institutions, which is rooted in neoliberalism and the legacy of the Cold War. The historical involvement in the region by the United States, who sought to contain any leftist-led governments from taking power, led to violent civil wars that still scar society with social and political instability. Without a way to make a living in the countryside or in the cities and under the threat of constant violence and death, people are forced to migrate north as a form of adaptation, escaping these effectively failed states.

In response to Central American state failure, Mexico's southern border, and the country as a whole, has been subject to increased policing. The Mexican military and police have been deployed internally to target the forms of transport undocumented migrants utilize—cargo trains and buses— by deploying checkpoints across transportation nodes and networks (Miller,78).

La bestia (the beast) is the nickname migrants use to refer to the cargo trains that run on the Mexican rail infrastructure network. The trains travel from the Mexican cities of Tenosique and Tapacula, near the Guatemalan border, to the three main crossing points on the Mexican side of the US-Mexico border: Tijuana, Ciudad Juarez and Reynosa.[lv] Migrants hop onto *la bestia* (the cheapest form of transportation available) to expedite their migration north, at a huge risk. *La bestia* is targeted by both state forces and criminal organizations to extort money or labor from migrants because they are easy pickings since they travel on top or between the railroad cars, exposed to the elements. To deter migrants from even attempting to hop onto *la bestia*, the trains have begun to be operated at faster speeds, making it harder to jump onto them (Miller, 76). As a result, the mutilations and deaths caused by people falling onto the tracks, have only

increased. It's difficult to accurately predict the amount of Central American migrants that have lost their lives seeking to reach the US, since only NGOs record the extent of this humanitarian calamity. It's estimated that 70,000 Central American migrants have gone missing since 2006 seeking a better life, their whereabouts and predicament remain unknown, especially for tortured family members who will never have a conclusive answer and might indefinitely hold on to a false hope (Miller, 80).

70,000 missing migrants is only spilt milk. Over 200,000 Mexicans have perished since the war on drugs was kick-started by the Merida Initiative.[lvi] Mexican society is in tatters and the country is a powerful example and case study of the impacts of the catastrophic convergence peppered with economic liberalization. First and foremost because Mexico highlights the "politics of the armed lifeboat" phenomenon since the country has been transformed into a border—that is a border of the United States. Second, the ruling party's former, long-standing practice of clientelism through one-party politics resulted in a retraction of the State since it weakened political institutions and is reflected by underfunded municipal and state governments.[lvii] Third, Mexico is producing climate refugees and is a major thoroughfare for Central American climate and political refugees fleeing north; increasing and more powerful droughts in Northern Mexico and more erratic and powerful downpours in the South could displace anywhere from 1.4 to 6.7 million Mexicans by 2080 because of their potential inability to grow corps, forcing them to migrate to the United States.[lviii] Lastly, Mexico's political elite wholly embraced neoliberalism with the advent of the North American Free Trade Agreement (NAFTA).

A Match Made in Heaven: Neoliberalism and Paramilitatrism

For over a decade, since 2006, Mexico has been fighting a war on drugs. The costs have been exorbitant and it has fractured the state and Mexican civil society through the emergence of a predatory and powerful informal economy that has the capability to supplant the State. As a result, there is emergence of simpler political organizations rooted in violence.

Mexico's ailment can be attributed to three factors: neoliberalism, a despotic and corrupt form of governance and the militarization of society. Neoliberalism is—as Michael Clune's perfectly defines it in his article, "What Was Neoliberalism?"— "an economic doctrine that favors privatization, deregulation, and unfettered free markets over public institutions and government." A society that is ruled by neoliberalism is one where a complex network of actors engage in economic transactions for profit. The role of the State is relegated to provide social and political stability so that these economic transactions (i.e. the free-market) can occur. In essence, neoliberalism portrays the free-market as a magical thing because from these disparate transactions, eudemonia can be achieved—it's bonkers! It's important to note that neoliberalism does not necessarily signify a retreat of the State. Rather, it's a release of power to non-state actors. The use of the word "market" is a misnomer. It serves to deceives for "free-market" is a loaded term that hides the power structures functioning in a society and taps into the imaginary of a democratic, participative and inclusive set of transactions that will bolster society's ability to solve both economic and social ills.

A close idea of what the free market looks like is the violence and lack of governance that is plaguing countries in the tropic of chaos. In the case of Mexico, violence is on the rise. The emergence of neoliberalism in Mexico can be tied to NAFTA, which went into effect on New Year's Day of 1994. A treaty between Canada, the United States and Mexico, NAFTA was meant to facilitate cross-border trade and to grow the Mexican economy. The agreement favored

foreign companies and deeply affected up to 5 million[lix] small farmers, who make up nearly half of all Mexican migrants searching a better life in the United States: "Under NAFTA, the government dismantled most of the agencies that offered assistance and administered subsidies to small farmers" (Parenti, 197). The Center for Economic and Policy Research, a think-tank based in Washington, D.C., conducted a study twenty-three years after the institutionalization of NAFTA titled "Did NAFTA Help Mexico?" The study concludes that the trade agreement has led to increased poverty, has forced Mexicans to migrate to the US and had produced "decades of economic failure by almost any economic or social indicator." Clearly NAFTA did not institutionalize a free-market, rather, it made it permissive for the State to withdraw important government services.

An unlikely beneficiary of NAFTA was Mexican drug cartels. The free trade agreement tossed them a bone as it facilitated the smuggling of drugs. A 1998 internal report by the US Customs Service concluded that "the rising tide of cross-border commerce" had become a lucrative opportunity for Mexican drug cartels to build a more effective infrastructure to import drugs to its customers in the United States (Parenti, 201). As a result, the pockets of Mexican drug cartels deepened—and so did their power over local police and government. With their businesses thriving and expanding, drug cartels could buy and bribe government officials.

The practice of drug cartels buying off government officials continues to this day. In the state of Morelos during the 2015 municipal elections, the head of the *Los Rojos* cartel provided one million pesos (approximately $50,000) to finance the political campaign of 11 mayors from different political parties. After succeeding in winning their office, the mayors were expected to turn a blind eye to the cartel's activities, pay a monthly "*derecho de piso*" (fee) and direct the use of public funds according to the cartel's wishes. *Los Rojo's* investment paid off handsomely.

Since placing the mayors in office, they have collected anywhere from 100,000 to 500,000 pesos ($5,000-$25,000) a month from the mayors.[lx]

The degree to which criminal organizations have embedded themselves within the institutions of the Mexican government is alarming. Sergio Gonzalez Rodriguez is a Mexican investigative journalist who focuses in portraying and depicting the violence that plagues his country. Inevitably, his gaze turned into analyzing the drug war in his book *El hombre sin cabeza (The Headless Man)*. In an interview about his book with the Uruguayan website Canal 180 (www.180.com.uy), Gonzalez's assessment of Mexico's state of affairs is that "en México tenemos una degradación institucional, por eso hablo yo de la quiebra del Estado de derecho, absoluta. Hay una impunidad de los delitos del 99 por ciento" ("in México we have an institutional breakdown, that is what I speak of when I mention the foundering of the rule of law. 99% of crimes are unpunished). The breakdown of the rule of law is embedded in the symbiosis of drug cartels with government institutions, as Gonzalez goes on to explain: "Primero, el problema del narcotráfico en México no es un asunto externo a las propias instituciones, sino que es consustancial a las instituciones. Los narcotraficantes no están fuera del estado, ni fuera de los gobiernos, ni fuera del poder político y económico. Están dentro de él" (First of all, the problem with drug trafficking in Mexico is that it's not a problem that exists outside of its own governmental institutions, rather it's consubstantial to those institutions. The drug traffickers don't exist outside of the state, or outside of the government, or outside of the sources of political and economic power. They exist within it").[lxi] The state and the *narcos* are one in the same, making it extremely difficult to address this political crisis.

In *Drug War Capitalism*, Dawn Paley supports Gonzalez's assessment of the drug war. Paley concedes that, at times, there is indeed a struggle for power between the State and criminal

organizations for control over territory. However, more often than not, three is a high degree of collusion between State actors and criminal organizations, dispelling "the notion that there is a clear division between state forces and crime groups," which is nothing but "a hegemonic idea promoted by nation-states and the mainstream media" (17). Payle also bolsters the argument that neoliberalism is the culprit behind the uptick in violence and connects "US investment in the drug war to the increased violence," a causal relationship that began with the Merida Initiative (32). Payley's book argues that the coexistence of neoliberalism and paramilitarism—enabled by State actors working hand in glove with criminal organizations and vice versa—serves to disenfranchise and coerce people into fear for the purpose of producing profits for private corporations, which only serves as an incentive to continue the militaristic behavior of both governments. Violence is therefore a means to expand capitalism since fear subjugates Mexican society into a state of constant attrition, allowing "transnational corporations access to resources" that would otherwise be inaccessible (15).

There is ample evidence that the Merida Initiative has not been unsuccessful at curbing the drug war and has only led to unrestrained violence. Semaforo Delicitvo, a non-governmental organization, reported that in 2017 drug violence rose dramatically. Homicides linked to criminal organization rose 55% from 12,224 in 2016 to 18, 989 in 2017. Semaforo Delectivo argues that by targeting the leaders of criminal organizations, the Merida Initiative decentralizes existing criminal outfits and creates new ones— rather than killing the snake, cutting its head creates a hydra. Violence then spreads and intensifies across the country as the new criminal organizations vie for turf or seek new profitable destinations, including to top tourist destinations like Acapulco and Los Cabos. Santiago Roel, the director of Semaforo Delictivo, explicitely attributes the rise in homicides to these struggles over strategic territories and markets.[lxii]

In the aforementioned interview with the Uruguayan website, Canal180, Gonzalez Rodriguez supports the connection Paley and Roel make between the Merida Initiative and violence: "Hemos tenido el incremento nefasto de una sociedad policíaca…No se está aplicando el dinero en desarrollo económico…sino exclusivamente en nutrir una máquina de policías que combate con violencia a la violencia, y sabemos muy bien que esto nunca es la solución a los problemas" ("We've experienced the growth of a police society…the money [from the Merida Initiative] is not being invested into economic development…instead, we have nurtured a policing machine that responds to violence with violence, and we know well that this is never a solution to problems"). The militarization of society through the Merida Initiative has thus had the unintended consequence of arming criminal organizations in response to State repression, rendering them more aggressive and creating a conflict that is impossible to control, even for the State. By challenging the State's ability to protect civil society, the drug war has thrown Mexican society into limbo, leading private citizens and communities to question the legitimacy of the State, opening the way for other groups to fill this vacuum of power.

Criminal organizations in Mexico do fight over territory. Recently, the Cartel de Jalisco Nueva Generacion (CJNG) has been expanding violently within Mexico.[lxiii] CJNG is one of nine major criminal organizations that the hegemonic discourses of power deem to be in direct confrontation with the state. The CJNG is an offshoot of the two original drug cartels (the Gulf cartel and the Guadalajara cartel) that have been morphing into larger, more powerful and violent cartels due to the pressure of the US government to target the leaders of the organizations; a policy that dates to 1985 when the US government pressured the Mexican president, Miguel de la Madrid, to capture the leaders of the Guadalajara cartel after they murdered Enrique Camarena, an undercover DEA agent.[lxiv]

One of the CJNG most recent incursions have been into Mexico City, where they left a "narcomanta"—a public service announcement by the drug cartel, written on a large cloth, that is left in public spaces, in this case, a pedestrian bridge over the city's beltway.[lxv] The message is addressed to all citizens and lays out that the intention of the CJNG is to take over by eliminating the 'H' cartel. A cartel that they accuse of colluding with government officials in the federal police and the Mexican equivalent of the DEA to extort people. The CJNG claims that the purpose of their incursion is to protect the people and that they will not allow the practices carried out by the 'H' cartel and their government associates to continue.

The justification that the CJNG provides for taking over is an interesting one because the cartel presents itself as a source of protection, seeing that the representatives of the State are complicit in endangering the peoples' welfare and utilizing the State's alleged monopoly on violence for nefarious purposes. In effect, the CJNG is taking a role that is often accorded to the State—protecting its citizens. In doing so, the cartel is privatizing the state.

Privatizing the State

The modern state is built on the "depersonalization and legal rationalization of political power and administration" for the purpose of legitimizing a monopoly over the use of violence (Parenti, 91). In a modern state, the individuals who staff the administrative and governance roles of the bureaucracy are not fixtures of the system, nor do they have a personal possession over it, they merely operate it to fulfill and procure the rights and needs of a State's citizens. The failure and absence of the state is when this fundamental principle is overridden—political power is exercised by private individuals for their own personal profit. Such is the case in Mexico, illustrated by the actions of the *Los Rojos* cartel and the CJNG. Nevertheless, these are not the only examples of the privatization of the state in Mexico.

In "Losing Faith in the State, Some Mexican Towns Quietly Break Away", *The New York Times* (NYT) reporters visited Tancitaro, Michoacán, Monterrey, Nuevo Leon and Ciudad Netzahualcoyotl, Estado de México to shed light on the usurpation of the authority of the Mexican state. Across Mexico, communities are independently reconfiguring themselves politically by privatizing the state due to the rising tide of violence engulfing the country, which these communities see as being "rooted in the corruption and weakness of the state." Utilizing different tools at their disposal, the three communities visited by NYT correspondents have achieved some success in repelling the violence that plagues the rest of the country by taking on the responsibilities of a failed state: a militia system bankrolled by avocado exports in Tancitaro; the use private corporations to staff and restructure the corrupt government police force in Monterrey; and community-building reforms through an accountable local government bureaucracy in Ciudad Netzahualcoyotl. The important takeaway of this devolution of State power is that it exemplifies forms of adaptation towards rising levels of violence; a harrowing trend that will or has already been ushered in by climate change across the tropic of chaos.

Mexico is a useful as a case study because it demonstrates the extent to which the catastrophic convergence of "poverty, violence and climate change" combined with neoliberalism exacerbates existing conflicts, like the drug-war, and makes them difficult or nearly impossible to resolve. Militarization has only served to degrade Mexican society through rising State- and cartel-sponsored violence. As a result, the State is spread thin and unaccountable to such an extent that it's being privatized by private individuals, criminal organizations and civil society.

Tightening a Screw with a Hammer

As climate change worsens, the State is inevitably doomed, since a changing climate "increases society's demands on the state while decreasing [the state's] ability to meet those demands" (qtd. in Parenti, 63). Neoliberalism, the current global orthodoxy, places a huge strain on the global system, since it inhibits the ability of the State to address some of the structural issues that fuels the powerlessness of the state to carry out basic forms of governance.

The nation-state system conceptualizes state's sovereignty to be enclosed by their borders. Innately, states are inward looking, for their borders limit the reaches of their sovereignty and hence their jurisdiction and accountability over certain issues. Therefore, coordination between states to solve cross-border issues can be difficult due to the territorial constraints imposed by borders and—because states tend to be rational actors—self-interest.

Climate change is a borderless phenomenon, a problem that transcends the borders of the 193 sovereign countries recognized by the United Nations. The impact of climate change will differ drastically across the globe. Some countries will be more hard hit than others by changing weather patterns, natural disasters, etc. Likewise, a state's ability to respond to these challenges will be reliant on a myriad of factors, most notably the pockets of their tax payers. Thus, the incentive and urgency to act will be different for every state. For example, small and poor nation-states that might disappear in the 21st century due to rising tides, like Micronesia, are more inclined to act, yet are wholly incapable to stop climate change or to get other nation-states to act with the same existential resolve as them. In the meantime, affluent, powerful countries that have the resources to develop a bureaucracy and infrastructure to insulate themselves form the immediate impacts of climate change and the resulting human displacement, might defer to act until the problem becomes unavoidable. Additionally, these powerful states, can opt out or defer

from committing to agreements that curb their sovereignty to combat climate change, facing little or no repercussions for their decisions.

The absence of synergy between states to solve climate change by, at least, imposing wholesale reduction in carbon emission is placing the nation-state system under extreme stress, especially along the states in the tropic of chaos. The nation-state system is entirely incapable of resolving climate change because it was not conceived to foster cooperation. In 1648, following a protracted war, the nation-state system devised in Munster, Germany was designed to protect the sovereignty of a state over a given territory —embodied in a prince's decision to choose the official religion of their country—from the encumberment of other states to avoid future conflict.[lxvi] Hence, states were designed to be wary of each other and to act in their own self-interest to defend their sovereignty and to foster cooperation in the form of military alliances to protect their existence and national integrity. The rise of nationalism through a shared national identity, language and culture, only exacerbates distrust between states because it enables state's and their citizens to apply the label of "other" to those who come from other states, leading to the insular behavior that is being embraced so fervently by populist and nationalist political leaders.

The magnitude and urgency of climate change predisposes a strong and united response—one that cannot be guaranteed by self-interested actors. Assuring cooperation among 193 nation-states to solve climate change is like trying to tighten a screw with a hammer—we are utilizing the wrong tool for the task we're being asked to fulfill. Henceforth, the nation-state will most assuredly be incapable of handling the added challenge posed by the union of neoliberalism and climate change.

Neoliberalism is a conscious attenuation by the nation-state of its own power since it favors increasing private ownership by non-state actors, implying a loss of sovereignty as

transnational businesses can lobby for and divert immediate action on climate change—further offsetting any cooperation between states to fight climate change in the name of ensuring profits for private corporations. The 370-year-old experiment that began with the Treaty of Westphalia might have to be scrapped.

The privatization of the State takes different forms. Adaptations to climate change like SpaceX's vision of transforming humans into multiplanetary species and the Pleistocene Park's reintroduction of the wholly mammoth are blatant depictions of the failure of the nation-state to provide suitable solutions to the existential conundrum that is climate change. Less inventive but equally a form of adaptation to the failure of the nation-state is violence.

The extent to which different actors are replacing, displacing and competing with the nation-state remains a question. However, when adaptation takes the form of violence, it poses a problem of governability, which, placed within the broader systemic global trends of violent disruption and chaos and the construction of crystal palace states, further mitigates any possibilities the nation-state system might offer to resolve climate change.

The border wall is itself a form of adaptation in the Age of Nature—the crystal panes of the palace being placed on the iron edifice. For Trump, the rationalization of propping up a larger wall is that, in the end, it will be cheaper than addressing "the price of social ills created by illegal immigration."[lxvii] Although President Trump would most likely not correlate climate change with an increase in undocumented immigration to the United States, since the president is doubtful of the veracity behind climate change to begin with[lxviii], Trump portrays a worrisome trend being ushered in by climate change: a world that devolves to simpler political organizations, where modern institutions like the United Nations are debased in the self-interest of powerful individual nations and the nation-state system corrodes under increasingly fraught

societies decimated by resource scarcity, population stress and violence. Parenti describes this potential new reality as a "civilization in decline, open-ended counterinsurgency, a rising tide of violence" (27). However, present trends in Central America, Mexico and the United States showcase that this reality is already becoming the norm and not the exception. With that being the case, Elon Musk, you better hurry and build that Big F***king Rocket before shit hits the fan—pardon my French.

V. Conclusion

In retrospect, I realized that I set out to vulgarize the answer to one question: what does the future have in store for us? Every generation probably beliefs in the uniqueness of their historical moment—and mine is no different, except we are faced with some serious existential challenges, climate change being one of them. Throughout the process of writing this thesis I hit many intellectual walls. I came to the realization that I haven't read enough and, over the course of many pages, I played in the kiddie pool of a couple of important intellectual and philosophical questions.

Writing is inherently a selfish act for every piece of writing is about the author, Professor Conceatu likes to say. And I agree. I chose to write about this subject because I wanted to place the different courses I had taken at DePauw into conversation with the experience I had in the Border Studies Program.

So, what is the importance of *Aftershocks*? In my essays, I shed light on important facts about human nature: we are existential beings with an embedded sense of self-aggrandizement and hubris that also have the capacity to endure disaster and use it as a social glue to show benevolence and kindness to others; I made an analysis of our fragile, historical moment, which is, in part, a result of outdated forms of political organizations called nation-states, that have been outdone by neoliberalism and climate change; I also explained what "collapse" signifies from a theoretical standpoint and how, within collapse, there is an opportunity for the creation of a very different reality than the one created by modernity—albeit, a new reality that will likely be produces through literal blood and toil.

In 1970, Henri Lefebvre correctly outlined the importance cities will play in the 21st century, he even describes cities as having subverted nation-states into a "semicolony" due to the

control over resources they exert over "the national territory" (170). Lefebvre wrote the *Urban Revolution* to answer one question: "what occurs during the *critical phase*(/zone)?*"* (16). The "critical zone" is a unique historical period in human history when the city, through speculative capital and real estate, becomes the central engine of global economic production. What Lefebvre couldn't foresee was what was going to come from this radical redefinition of human life on earth: would it or would it present the opportunity for human beings to come together (like Solnit argues hope does) to change the world through revolution or through the arousal of revolutionary actions inspired by the "right to the city" (150)? Or would it lead to a continuous degradation of people's agency and of life on earth? Lefebvre largely fails to answer this question.

Max Horkheimer, one of the thinkers of the Frankfurt School, became disillusion by the inability of intellectuals to convince society to do an about face on capitalism and consumerism and proposed in 1937 "that 'the commodity economy' might usher in a period of progress until, 'after an enormous extension of human control over nature, it finally hinders further development and drives humanity into a new barbarism'" (qtd. in Jeffries, 149). Like Lefebvre, Horkheimer had a "gut feeling" that modernity was driving civilization towards uncharted territory, except more explicitly, Horkheimer situates the future as being a violent one that possesses a 'barbarism' unlike any other we have ever seen. That very much happened in World War II with the use of new methods of waging violence upon each other and the physical and ideological development of the finely-tuned death machine that was Holocaust, but it could largely occur again in a world of crystal palaces.

I situate my work as an exploration of this "gut-feeling" that these Marxist philosophers grasped at—and one that I have myself not been able to riddle out. The benefit I have over these

giants is that I'm standing on their shoulders and am given the benefit of having lived far after them, possessing the knowledge of the history they tried to foretell. What I have taken from this assignment is that the best solution is a simple one where we don't succumb to the temptations of fatalism and of the need to embrace both hope and action in one hand and a book on the other. I sincerely hope that this thesis will not be the extent of my academic and intellectual career.

Notes

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[viii] Beltrán del Río, Pascal. "Diez Reflexiones Sobre El Temblor." *Excélsior*, Excélsior, 21 Sept. 2017, www.excelsior.com.mx/opinion/pascal-beltran-del-rio/2017/09/21/1189800.

[ix] "…a long Western tradition of preoccupation with the remnants of collapsing civilizations, which can be traced at least as far back as the eighteenth century…The Germans, always a proficient people in the coining of compound words, invented the term *Ruinenlust* to describe this new passion" (*The Pleasures and Sorrows of Work*, 315).

[x] "In the absence of a systematic, scientific treatment of collapse such concerns range untethered to any firm, reliable base" (Tainter, 2).

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[xiii] On chapter sixteen Diamond identifies twelve pressing environmental challenges that will test our societies. These are: loss of natural habitats ex deforestation; loss of wild food sources ex fisheries; loss of biodiversity; loss of fertile farmland to erosion and soil damage; depletion and eventual consumption of all fossil fuels; access to safe drinking water; hoarding the photosynthetic energy of the sun, depriving plants of the energy they require to grow; pollution of natural habitats; the introduction of "alien species" to habitats they are not native to (492); global warming/climate change ; unrestrained population growth; and the spread of first world consumption habits to third world nations.

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[xv] "Forever Shopping" by Marcel Crozet. *New Philosopher*. Issue 18, Nov 2017-2018.
[xvi] "In Rwanda, land shortages resulting from population growth and soil degradation were a major underlying reason from population growth and soil degradation were a major underlying reason for the bitter hatreds and violence that led to the horror of the 1994 genocide" (Homer-Dixon, 150); "…Malthusian dilemma: more food, but also more people, hence no improvement in food per person" (Diamond, 320); "The 1994 events provided a unique opportunity to…reshuffle land properties…It is not rare, even today, to hear Rwandans argue that a war is necessary to wipe out an excess of population and to bring numbers into line with the available land resources" (Diamond, 325-26).
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