

Dartmouth College

Dartmouth Digital Commons

Dartmouth College Master's Theses

Theses and Dissertations

5-2023

Social Reproduction and Covid-19

Caroline I. Donovan

Dartmouth College, caroline.i.donovan.gr@dartmouth.edu

Follow this and additional works at: https://digitalcommons.dartmouth.edu/masters_theses



Part of the [Economic Theory Commons](#), [Feminist Philosophy Commons](#), [Other Public Health Commons](#), [Public Health Education and Promotion Commons](#), and the [Women's Studies Commons](#)

Recommended Citation

Donovan, Caroline I., "Social Reproduction and Covid-19" (2023). *Dartmouth College Master's Theses*. 110.

https://digitalcommons.dartmouth.edu/masters_theses/110

This Thesis (Master's) is brought to you for free and open access by the Theses and Dissertations at Dartmouth Digital Commons. It has been accepted for inclusion in Dartmouth College Master's Theses by an authorized administrator of Dartmouth Digital Commons. For more information, please contact dartmouthdigitalcommons@groups.dartmouth.edu.

Social Reproduction and Covid-19

A Thesis
Submitted to the Faculty
in partial fulfillment of the requirements
for the degree of

Master of Arts in Liberal Studies

by Caroline I. Donovan

Guarini School of Graduate and Advanced Studies
Dartmouth College
Hanover, New Hampshire
May, 2023

Donald E. Pease
Program Chair

Thesis Advisors:

Eric Ramsey

Nancy Fraser

Daniel Lucey

F. Jon Kull, Ph.D.

Dean of the Guarini School of Graduate and Advanced Studies

Copyright by
Caroline I. Donovan
2023

Abstract

As Covid-19 rips across the world we are collectively asked to examine the structures of society to see what is working and what we can change. What can we learn from the roughly 6.9 million deaths (and counting) worldwide? How can we prevent something like this from happening again? This paper follows the course of Covid-19 from its birth in Wuhan, China, to the present day of mid-April 2023. By looking at the ways in which we have reacted to the pandemic, we are able to look forward and imagine new ways of tackling future pandemics and other pressing problems like climate change. Using social reproduction as a basis, we can think about how to center care and culture, rather than money and profit, to make our society more resilient to future emergencies.

Preface

I am not the first person to note this, but I do believe it to be true: when historians look back at this time later, 2020 will be remembered as the year of breath.

George Floyd's last words of "I can't breathe" echoed throughout cities and towns as America grappled with on-going police brutality. This is set to a co-existent backdrop of the Covid-19 pandemic, a respiratory disease that robs people of life by internally smothering them. Breathing, an anatomical phenomenon that people are hardwired not to have to think about, has become the center of our times. The Latin word spiritus- spirit in English- simply means breath. It is with these facts in mind that I tackle this thesis, with inspiration- meaning literally the drawing in of breath- that I begin to tell the story of our interconnected breathlessness and how we can begin to think of ways in which to breathe again.

I'd like to say thank you to my three readers: Eric Ramsey, Nancy Fraser, and Dan Lucey. They have shown immeasurable patience with me as I ramble and explore these ideas. All three have become some of my greatest mentors. I count myself incredibly lucky to have crossed paths with them.

Table of Contents

Introduction	1
Social Reproduction	4
Covid-19	14
Where Covid-19 and Social Reproduction Intersect	38
The Future	54
Bibliography	70

Introduction

In the late fall of 2019, a virus most likely made the leap from an animal to a human somewhere in a market in Wuhan, China. There is probably more to that story, some of which we might not know for years or even ever, but the basic facts remain the same: SARS CoV 2, or more commonly known now as Covid-19, was born in 2019 and has continued to rip across the world since. The World Health Organization estimates that almost 6.6 million people have died of Covid-19 in the years since. Some 632,000,000 cases of Covid have happened worldwide (WHO). The scale of Covid-19 is jaw dropping, as are the variety of responses to it. But Covid-19 hasn't just had effects on people's physical health- the effects of the virus have rippled out into all corners of society, impacting things like work, family life, and social systems in ways that we will not fully understand for decades to come. In the United States the social impacts have been as great as the medical ones, and they have given rise to entire movements around the politics of illness.

One way of looking at this juncture is through the feminist lens of social reproduction. Karl Marx initially wrote of social reproduction in his work *Capital*, theorizing that in a very basic way that capitalism is dependent on the unpaid labor of the household. This was further explored by Friedrich Engels in his work *The Origin of the Family, Private Property and the State*. The essential finding of this theory is that care work and household work are things that are deemed unworthy of payment under capitalism, which works at great benefit to the system itself. This theory was expanded in great detail later by Lise Vogel who integrated the idea that women's oppression is directly connected to the value of reproduction. For Vogel it isn't just about the

individual woman's struggle, but the understanding that the conversation around labor power is also a conversation around the ability of the labor force to reproduce, and care for, itself. Social reproduction is a conversation about value vs. values. How is the creation and care of both people and culture valued and is it valuable? This theory was expanded further by Ashley Bohrer who brought the long history of racial oppression into the mix. In her book *Marxism and Intersectionality* Bohrer is able to show the interwoven and connected ways in which oppression and capitalism intermix, much to the detriment of women of color. Recently, Susan Ferguson has brought the conversation around care and capitalism into the modern economic and political landscape.

You might be asking- what does any of this have to do with Covid-19? Covid-19 revealed blind spots in our collective consciousness that feminist philosophers have been warning about for decades. When Covid-19 hit the United States the weaknesses in care in our system became front page news. Whether it be a lack of childcare available in lockdown, with parents having to work and care for their kids simultaneously, or the lack of workers in healthcare almost pushing the system to collapse- we are talking about the same problem of not valuing care work enough until we need it. For me, much of this speaks to a larger problem that has come to light in the pandemic of the understanding of just how far we are moving away from values and into a system based only on value. Social reproduction offers a theory by which to examine the broader impacts of taking things that should not be measured with monetary worth and putting them into a monetary value-based system. Health is at the top of that list.

In this thesis it is my hope to examine some of the bigger problems that Covid illuminated and bring them into conversation with each other and the broader social and

economic landscape. I want to look at the ways in which we have become vulnerable, in both our social and medical systems, to pandemics. I believe that by looking at the systems of childcare, politics, care work, and money we can better understand how to build a more resilient society. I also want to take a look at what we have given up and how that loss is impacting us currently and how it will continue to impact us. In this particular regard I want to talk about who has been left behind. Who has died. Who has sacrificed and why? I believe that by looking at the overwhelming loss that Covid-19 has caused we can better understand ourselves and where we are headed.

Capitalism intersects with every part of our society, and in the United States we have chosen a particularly brutal form of it to uphold. I want to look at how this loyalty to a system impacts America's ability to successfully fight large pandemics. This is a part of the larger narrative around partisanship in the United States, and how that impacts everything that the government does. I believe that the United States government made some key missteps in the fight against Covid-19 and that they are worth examining and asking why.

Finally, I think that something I have been parsing as I do this research is the understanding of what we have vs what we could have. I will talk about the shift in priorities that I believe has to take place in order to keep our society stable and our planet habitable. There are valuable lessons to be learned from Covid-19 that can be utilized in the conversations around climate change and global insecurity. I believe that the lessons that Covid is teaching us are worth learning, and I hope to sum some of them up in this thesis.

Social Reproduction

What exactly is social reproduction? And how does it impact so much of our lives if nobody has ever heard of it? To answer those questions, it is imperative that we start where the theory was first named, and that is in the work of Karl Marx. In his seminal work *Capital*, Marx noted that much of capitalism was dependent on balancing the fine line of the workforce being able to reproduce and care for itself, while also being able to have people work. In its most basic expression, social reproduction is the way in which societies reproduce both themselves and culture. It encompasses all of the parts of being human that do not quite fit into capitalism neatly- the caregiving of the young and old, the maintenance of the self, and of the community. There are a specific set of things that people need to have social reproduction work in an effective manner, and they are some of the most basic necessities for living: food, shelter, and- under capitalism- money. Though people might be able to reproduce themselves in circumstances without one of those variables, in order to be able to reliably pass on culture and care for each other all three need to be available. Susan Ferguson refers to this as “life-making” which is an all-encompassing term that nicely sums up the goal: this is not just about making workers, but about the making of lives in all of their nuanced chaos (Ferguson 119). For this paper we can think of social reproduction as the things that are not profitable but are also at the very basis of profit- the creation and care of the people. Those same people will go on to make up the workforce and recreate it in their own time.

Though named in Marx’s *Capital*, social reproduction was not the focus of that work, and would be later touched on by Friedrich Engels in his essay *The Origin of the Family, Private Property and the State*. It would also be discussed by Marx’s own

daughter Eleanor Marx in her essay with Edward Aveling entitled “The Woman Question.” Though all of these works discussed social reproduction, it was not fleshed out fully until the feminist movements of the 1960s. While the broader ideals of Marxism have gained and fallen from favor multiple times over, social reproduction theory mostly stayed on the fringes- talked about in feminist literature but rarely outside of it. Recently, as scholars look for better ways to analyze life under capitalism, social reproduction has come more into the broader conversation. Though it is a theory based in Marx’s philosophy, it is also apart from traditional Marxism and can be a useful way to look at many economies- not just communist ones.

To look at the world through the lens of social reproduction it is critical that we set some basic understandings of what capitalism is and how it works. Capitalism is an economic and social system that western society has lived under for the better part of the last 500 years. At a very basic level, capitalism is a system by which trade and industry function. At the center of it is a small number of people who own the majority of the businesses, while the majority of people work for those businesses for an earned wage. Since a small number of people own the businesses- what Marx calls “the means of production”- it is essential that the rest of us earn money somehow (Marx 290). This usually takes the form of an agreed upon wage for time worked. This is in contrast to earlier economic systems where people would spend time making goods- farming or wares- to sell at a market. In circumstances like that, there is no wage being paid for time, but people are making money by a direct trade transaction. Marx calls the selling of time for a wage the selling of labor power (Marx 270). Built into this equation is the idea of some level of exploitation (Marx 345). You sell your labor power but are generally able

to produce more than your worth to the business. This profit is a vital part of capitalism- it is an inherent part of the system and if left unchecked has historically been the catalyst for all kinds of human rights abuses, i.e. child labor, slavery, and inhospitable working conditions. Through things like collective action, workers in the United States have won hard fought battles to gain labor protections for the most vulnerable in society, including children.

Capitalism works because the whole of a society participates in it- so you have very little choice in the matter of whether or not you would like to work. If you don't work, you don't have money, and without money it is extremely hard to take care of the basic necessities like shelter, food, heat, and water. In the United States we have a particularly rigid interpretation of what it means to be a capitalist society- in comparison to our peer countries we do not have the social welfare and benefits programs that almost every other modern country has adopted. We are the modern home of the free market, for better or worse.

Social reproduction functions within capitalism, and is an integral part of it. A necessary part of capitalism is the exploitation of the worker- this happens in both drastic and very benign ways. The famous example is if you are a worker in a factory and you make five hundred dollars worth of goods, but only get paid one hundred dollars for the time that it took you to make those goods, that is wage exploitation (Marx 320). The surplus of that worth is going back into the pocket of whoever owns that factory, not the person who did the work that earned the money. The retort to this is often "but what about the costs of operating a business"- and even with those included, businesses require some level of wage exploitation in order to turn a profit (Marx 325). This can work out in

very small ways- where the differences are not major in wages vs profit. But, in many instances in the modern economy the contrast is much more stark. As globalization has opened up the world's economy and the world's workers there are regularly stories in the news about people getting paid a dollar or two a day to work in a factory. As a consumer there are ways to shop around the more extreme versions of this abuse, but because exploitation is inherent to the system it is almost impossible to fully avoid.

It is not anti-capitalist to say the footing of capitalism is exploitation; it is just a very central part of the system itself. Noting that is important in the context of social reproduction because without that exploitation at the base of capitalism nothing that follows will make sense, including social reproduction itself. Marx based social reproduction on the fundamental idea of labor power. Labor power is how Marx defined the selling of time for capital- the heart of capitalism. Labor power is essential to capitalism- there cannot be a capitalist system without it. But for Marx, there was a lot of labor in everyday life that did not fall under the auspices of labor power. There is no profit in the most basic tasks of living- sleeping, eating, keeping yourself and home clean, caring for children and the elderly- but it requires an inordinate amount of time, and work. Marx knew that he needed to account for this in *Capital*, but what he didn't know was that this theory would later take on a life of its own. This would be social reproduction, a way to account for the unpaid and unaccounted for costs of living and caring under capitalism.

Social reproduction came to the attention of academics with Lise Vogel's book *Marxism and the Oppression of Women: Toward a Unitary Theory* which explored the ideas of social reproduction, and how they could be used to further the women's

movement. Vogel posited the idea of a biological tie to women's oppression- that they could never fully compete with men in a capitalist framework because of the requirements of childbearing (Vogel 148). This was a break from the ideas of common feminist theory of the time which focused on equality rather than equity. For Vogel, there is no way to close the gap without taking the care work of the house and home into account. Vogel noted that women would never be able to compete with men in a capitalist society because women are required to do the work of childbearing by biology, and then also required to do the work of child rearing by society (Vogel 149).

Vogel used biological sex as an important part of her theory, but later scholars like Aaron Jaffe would note that this hierarchy is not determined solely by a binary biology and is inclusive of trans and gender non-conforming people as well (Jaffe 125). This is because caregiving and childrearing are efforts often also assigned to people who are not male- regardless of biological sex. To highlight this feels like it is the natural progression of Lise Vogel's work. As the movement around trans visibility has gained speed, so too has the understanding that these systems of oppression work in chorus with each other. Care and unpaid labor are intrinsically woven into the fabric of capitalism, and gender oppression is not just binary, but works in a layered and interlocking way with other forms of oppression, including racism.

This is the main conversation that Ashley Bohrer discusses in her book *Marxism and Intersectionality*. Bohrer weaves together the ways in which racism, classism, and gender work to create worse outcomes for women of color, especially in the global south, noting:

“This relationship is not unidirectional or unilateral, but rather, these dynamics form a sort of feedback loop: people who are confined to forms of undervalued labor themselves become undervalued in social, cultural, and political contexts and this undervaluation itself continues to frame conditions of precarity and vulnerability that confine people into undervalued labor in order to survive” (Bohrer 132).

Bohrer brings together the ways in which capitalism enforces and reinforces these various systems by keeping women in precarious economic positions. This hierarchy exists on a scale of race and wealth, and is inclusive of geography in its projections. Barbara Ehrenreich and Arlie Hochschild noted that these systems work on a broad scale, but they are also an interpersonal web relating to how women treat each other, especially wealthy, mostly white, women who outsource some of the labor of the home to lower paid women of color who work for them (Ehrenreich 27). In her book *Women and Work*, Susan Ferguson makes it clear-

“In summary, precarious workforces do not come into being magically or naturally. They are produced. In a global system already differentiated along a hierarchically ordered scale of nation states, regional trading blocs, and manufacturing centers, and in which people are dispossessed of the resources needed to reproduce themselves, capitalists have both the means and the motivation to shape the life-making processes of those whose labour they depend on. Their immediate agendas may not prevail in every context, but the pressure to organize social reproduction through certain types of households, education,

healthcare, urban planning, migration systems, and other social policies is ever present. It is systemic” (Ferguson 118).

In both the work of Bohrer and the work of Ferguson there is an ever-present consciousness that this is a system that is inescapable for the vast majority of people, and that it is also fully enveloping. In America especially, we like to think of self-determination as being an important touchstone of our culture, but there is no choice involved in capitalism: everyone participates.

When evaluating a problem through the lens of social reproduction it is imperative to ask the question: does this center the work of living, or does this center the work of profit? Social reproduction exists firmly in the work of living, it is the time and effort needed to care for oneself and each other. Simple, everyday chores like planning and cooking dinner, picking the kids up from school, keeping yourself and your space clean all fall under the realm of social reproduction, but so too do things like passing on languages and cultural beliefs. It is both personal, and also systemic. In a capitalist framework, the time and energy required for these life sustaining tasks can be time and energy that is taken from being a productive worker. To eliminate some of that stress, we have created things like schools and daycares, which take some of the individual work and time needed to care for children and bring it into a society-wide setting. Beyond the educational benefits of having children in a learning environment, schools and daycares also allow parents to export some of the caregiving that is required to paid caregivers which frees up the parents to spend time working. In her work “Contradictions of Capital and Care” Nancy Fraser sums up this dichotomy nicely noting:

“My claim is that every form of capitalist society harbours a deep-seated social-reproductive ‘crisis tendency’ or contradiction: on the one hand, social reproduction is a condition of possibility for sustain capital accumulation; on the other, capitalism’s orientation to unlimited accumulation tends to destabilize the very processes of social reproduction” (Fraser 100).

In looking at a problem through the lens of social reproduction it is that balance- of capital and the ability to be human- that is at the center.

Much of what falls under social reproduction are things that are not negotiable for most people. They are the necessary tasks to maintain oneself and the people around them- they are not frivolous, and they are not optional. You cannot choose not to sleep, or not to eat, without eventually dying. The same is true for the care of those that are unable to care for themselves. Thus far, mental health has not been a center point of this conversation, but it also is an essential touchstone for this lens, as this work is greatly hindered by circumstances that do not support good mental health conditions. You cannot have a workforce that is able to care for itself and reproduce itself without also caring for mental health. This is all collectively true about the stressors that have been brought on by the pandemic- from physical and mental health, to the way in which people were unable to care for their families. We have seen all of these theories being tested in real time during the pandemic, and what has become abundantly clear is that social reproduction has to be considered more deeply by policy makers in times of crisis, as caregivers will almost always choose their social reproduction responsibilities over work. Social reproduction impacts all facets of society, whether or not you are a woman or

caregiver yourself, you are impacted by the way that we value this work- probably both personally and in a systemic way.

Throughout the rest of this paper, I'm hoping to look at how public health institutions and governments fundamentally misunderstood where the loyalties of workers lie, and how that has impacted the efficacy of the public health response to Covid-19. Public health institutions have been acutely aware of this push and pull, between capitalism and social reproduction, but have been thus far unable to accurately gauge how people would react in their own lives. Though we know that some of the central ideas of effective public health align well with social reproduction, they have often come into conflict in the last three years. Effective public health should be centered around clear communication of risk, as well as working within communities to mitigate that risk ("CDC- 10 Essentials"). Neither of these things happened well in the United States during Covid-19. There was very little effective communication of risk, either at the state or national level in the United States. There remains very little community support- with both states and the federal government routinely playing "hot potato" and passing the responsibility back and forth between each other. Effective public health campaigns require a massive collective effort to educate the public about disease. In the United States we had the capability to do that, but the politics and economics of the situation got in the way.

Social reproduction offers a way to examine the problems of our time through the lens of caregiving and "life-making." This lens is a human one, focused on the experiences of humanity broadly and as individuals. It does not have a profit motive, and it will not intentionally further industry. What it does promote is the radical act of

having a life- and doing that within a society framework. Social reproduction in a thoughtful way to look at the real limitations of being human- how finite each individual life is- and make a society around that with the idea of treasuring it, and the earth that we live on.

Covid 19

To understand why and how social reproduction and Covid-19 intersect it is crucial to follow the history of Covid-19 itself. To follow a disease is to be part detective, journalist, and doctor. In the case of Covid-19, the journey begins in Wuhan, China, probably in a wet market; the theory that this was an unintentional lab leak has also been floated, though there is not enough scientific evidence to substantiate it. With either scenario the next chapter of this story is clear: In the late part of 2019 people began to show up at the local hospitals displaying a range of worrying symptoms. This included things like sore throats, trouble breathing, very high fevers, low blood-oxygen saturation-but also things like a loss of taste and smell. This mystery disease caused lung damage and many patients were placed on ventilators. For many people by the time they got to the hospital it was too late. The fast progression and severity of the disease had local doctors worried about some kind of unknown pathogen (Campbell).

Under normal circumstances, where an easily transmissible pathogen causes serious illness, the country is required to report this outbreak to the WHO. They would then be able to mobilize the international public health infrastructure against it-including researching its origin and pathology. This did not happen with Covid-19. What we can assume was in fear of panic and economic blowback, China did not tell the world about this new disease (Woodward 215). Instead, the world missed an important containment window, and the pandemic grew to a world-wide phenomenon.

In late 2019 a smattering of people began to arrive at the hospitals in Wuhan, China, with a variety of severe illness symptoms. Originally noted as a “pneumonia of unknown origin” the patients were very sick with high fevers and trouble breathing. The

severity of the illness, combined with how quickly it seemed to develop left doctors and nurses concerned. They reported the illness up the chain to China's Center for Disease Control, but Doctors also sent samples to a private lab for testing- they wanted to know exactly what they were dealing with ("CDC Museum Covid-19 Timeline"). When the sequencing started to come back as a coronavirus similar to SARS the doctors knew that what they were dealing with was a much bigger deal.

In 2003, China had dealt with an outbreak of Severe Acute Respiratory Syndrome- known as SARS- and had been at the center of international scrutiny over the government's handling of the disease. During the initial outbreak of SARS the Chinese government was not forthcoming with the international health community, waiting three months to notify the WHO about the outbreak. This caused the outbreak to spread worldwide leading to the infections of ~8000 people and deaths of some 800. SARS prompted the Chinese government to invest in public health infrastructure- giving more authority to the Chinese CDC, as well as investing in public health programs across the country. Though the reaction to SARS was late, the outbreak was brought under control within 8 or 9 months. With aggressive quarantining and monitoring SARS was stopped from becoming a much wider spreading disease (SARS). The trajectory has not been the same for Covid-19.

One of the main differences between Covid-19 and the earlier SARS virus is the way that the virus had mutated to become more contagious to humans. Covid-19 has the ability to spread via asymptomatic exposure, meaning that someone who is not showing symptoms of the disease can pass it along to anyone they encounter. Covid is spread via aerosolized particles, meaning that it doesn't require someone to cough or

sneeze directly on you. They just have to be breathing the same air. None of this was known in the earliest days of Covid-19, and because of the cultural conversation that has grown out of the pandemic some of this basic science is still disputed in the discourse around Covid-19- especially around the effectiveness of masking and air purification.

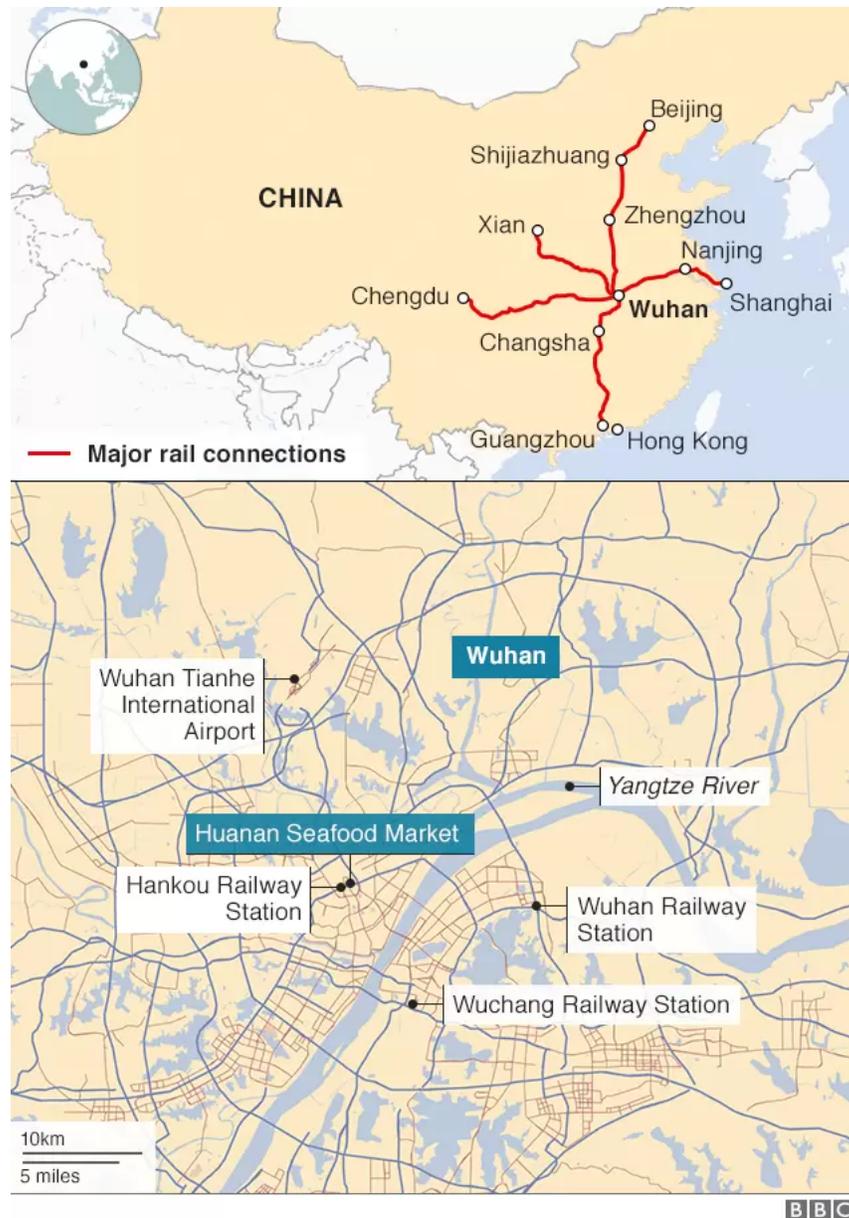
On January 5th, the Chinese government received the full genetic sequence of Covid-19 from a Professor at Fudan University named Zhang Yongzhen. Zhang is a virologist who works on RNA research, and he has collaborative research projects with colleagues around the globe, one of whom is Professor Edward Holmes at the University of Sydney. Zhang's lab was able to sequence the virus in forty hours working non-stop. Once it was sequenced, they realized that it was startlingly similar to SARS, and that they were dealing with something much worse than they had expected. Zhang immediately notified Wuhan Central Hospital, as well as contacting the Chinese Ministry of health and speaking with the local public health authorities in Wuhan. His warnings were clear- they needed to take this virus very seriously. His upload of genetic data sat unpublished for 6 days, until his collaborator in Australia, Edward Holmes, asked him if it would be ok to upload it. Zhang said yes. On January 11th, 2020, the world scientific community got its first look at Covid-19 (Campbell).

Allowing the international scientific community to see the data of this new disease was critically important. There are many pivotal points in the story of Covid-19, and the uploading of the genetic data to virologica.com, is certainly one of them. There can be no progress towards curbing an outbreak without first getting the science out into the open. This was not what the Chinese government wanted. They had been extremely tight-lipped about this outbreak and had banned labs from sharing the

sequencing data. Zhang claims that he did not know about the ban, and that after his data was uploaded the Chinese authorities came to inspect his lab (Campbell).

Zhang wasn't the only person to be intimidated by the government in the early days of Covid-19. An ophthalmologist at Wuhan Central hospital named Li Wenliang had also run into trouble with the authorities. On December 30th, in a WeChat group for Wuhan University alumni Li had shared an internal diagnostic report of a suspected SARS case at Wuhan Central Hospital. Though he had asked for confidentiality, the report went viral. On January 3rd, Li and a group of other doctors were summoned to the police station and reprimanded for making false statements about an unconfirmed SARS outbreak. Li would later contract Covid-19 and die by February 7th (Li).

Once Zhang's data was uploaded the international scientific community was in a race against time, and they knew it. Soon labs across the world began working on the data, using it to create tests for the virus and understand how it is similar to other pathogens. Outside of the scientific community and those with ties to China- especially Wuhan itself- there was less known about Covid-19. The international press didn't seem to know how to cover the emerging disease, and they were not helped by the politicians across the world. In a very general way, though it seems that both the Chinese government and the international health community knew that this had the potential to be bad- it also seems like they did not want to alarm anyone. Stability is one of the core beliefs of the People's Republic of China and knowing that is a key to understanding the early days of Covid-19. Another thing that is important to understand is the basic geography of China.



(“Wuhan” BBC)

China is a country with a landmass similar in size to the United States- the pair are the third and fourth largest countries by landmass in the world. A major way that China and the United States differ is in population size. China has some 1.4 billion people. That is quadruple the population of the United States, and much of the population in China lives in urban areas. Wuhan- the city where Covid-19 first took hold-

is a city of 11 million people. Wuhan is a regional transport hub and an industrial city, but Wuhan is not one of China's biggest cities. You would need to double the population to get to the size of China's second largest city, Chongqing at 22.2 million people. Shanghai, China's largest city, has 24.8 million people. In the conversation about Covid-19 it is imperative to keep the scale of the country close. It determined everything that has happened in China since 2020.

Another way in which the United States and China differ is that an estimated third of China's workforce are migrant workers. As the country has become more economically strong, there has been a shift in the population- people coming into the cities to work in factories and live in factory housing, while traveling home if and when possible to maintain ties to their villages ("Labour Migration in China and Mongolia").

Wuhan, an industrial city, sits in Hubei province which has some 10 million migrant workers, and thus as Covid became a concern for the government, so too, did the question of what to do with the migrant workers (Hernandez). During the SARS epidemic, China learned that the most effective way to stop the transmission of an airborne illness is via testing and quarantine. Using a lack of hosts to starve the virus out. In the case of SARS this policy took a few months, but it eventually worked very effectively.

In the case of Covid-19 the timing of the discovery of the virus happened to coincide with the Chinese New Year. This celebration is the largest annual migration of people on the planet as Chinese people from the cities return to their villages to celebrate the new year with their extended families. In 2020, the new year started on January 25th, with people beginning to travel in the weeks before. This means that when the

government discovered and sequenced Covid-19 they had a short window to decide whether or not to quarantine people in the cities, or to have them travel home for the new year and quarantine there. They decided to do the latter (Regan).

In the meantime, the virus began to spread. The first lab confirmed case of Covid-19 outside of China was found in Thailand, followed quickly by a case in Japan, and one in South Korea. By January 20th, the first lab-confirmed case of Covid-19 in America was found in Washington state. On the 21st, the Chinese government officially confirmed that human-to-human transmission is the main way that the virus is spreading in China.

On January 23rd, 2020 China finally locked down Wuhan. They announced the lockdown in the early hours of the morning- around 2AM- and by the 10AM lockdown hundreds of thousands of people had fled the city. At the same time, the international health infrastructure was lagging in its response to Covid. The WHO had yet to declare the virus a public health emergency of international concern, which made it harder for them to fully mobilize the international health community. That declaration didn't come until January 30th (WHO Timeline).

In the United States, on January 17th the Center for Disease Control began screening passengers from Wuhan in some major US cities. This escalates to a Level 3 Health notice on January 28th advising people against non-essential travel to China. By January 30th, the United States had confirmed person-to-person transmission between two people in Illinois with no recent history of travel. By February 3rd, the Department of homeland security began requiring 14-day quarantines on all flights from China and all passengers who have traveled to China in the last 14 days.

The virus was moving quickly, and the international health community was struggling to keep up. In the next month Covid-19 landed in Europe, causing the Italian health system to come to the brink of collapse. The Italian government locked down the country on February 23rd as cases continued to rise and the beleaguered health system struggled to meet expectations. Italy's lockdown was a wake-up for the general public in Europe and the United States that Covid-19 was not going to be a small outbreak. The press coverage began to change to take the virus more seriously as a threat.

In the United States, Donald Trump was secretly worried about the virus, but actively downplayed it in public. He would later go on to tell Bob Woodward that he was trying not to cause a panic in the general public, but the consequences of his reaction would reverberate through the entire pandemic (Woodward 233).

In theory, the United States had been preparing for a viral pandemic for years. Beginning with President George W. Bush, there was a concerted effort to get the federal government into shape should some kind of major disease hit. In 2005 he announced a plan to combat an influenza pandemic (Charatan). The plan would have three main goals: detecting outbreaks, stockpiling vaccines, and having an emergency plan in place. This was funded by \$8 billion dollars in emergency funding from Congress. At the time Senator Edward Kennedy of Massachusetts called for more spending to ensure that hospitals and other healthcare facilities would have the capacity to handle a flood of patients (Charatan). This infrastructure, especially the emergency management plan, should have lent itself well to the Covid-19 pandemic. But, in the years since the Bush administration there has been less focus on public health at the national level- and by January 2020 much of these stockpiles and plans had been either defunded or unused.

The Trump administration did not put much of priority on pandemic preparedness, even though Donald Trump himself is a notorious germaphobe. This became a major problem in the United States as the pandemic progressed. By March case counts worldwide began to rapidly pick up pace. By March 11th there were 118,000 cases in 114 countries and the World Health Organization formally declared Covid-19 a pandemic (“CDC Museum”). In the United States, the pandemic came to New York.

Hospitals in the United States are not covered under a national health service like in many other western countries. The health system in the United States is a patchwork of non-profit and for-profit entities that work as service providers. With that in mind, it is worth knowing that most of the time hospitals shoot for an occupancy rate somewhere around 70%. That means that they have 30% of their beds open (Conlen). The normal, routine medicine is what hospitals are usually accounting for- surgeries, emergencies, chronic and non-chronic illnesses. These numbers are not meant to support an additional system-wide health crisis. The across the United States the pandemic has tested the ways that hospitals are able to function under immense pressure- and in New York, it was no different.

The first lab-confirmed case of Covid-19 came to New York in early March (Goldstein). It was a doctor who had recently traveled to Iran, but though this was the first lab-confirmed case there is some evidence that the virus was spreading more widely in the city (Carey). By mid-March the virus spread had begun to rapidly accelerate. On March 15th the city closed schools (“CDC Museum”). The New York City public school system is the largest in the country with some 1.1 million students- many of them rely on city social services for food and care that happen at school. The concern about the

impacts of the virus on young people as well as the ability to spread in the school environment precipitated the move to online learning on March 23. The initial plan was to close schools until April 20th, but children of all ages would not be back in person full time for over a year until May 2021(Heyward).

In late March things continued to escalate, and New York saw a jump in cases with 30,765 being recorded on March 29th. The Navy brought in the hospital ship USNS Comfort to take some of the pressure off of New York's hospitals ("CDC Museum"). The city morgues were unable to handle the influx of bodies, and refrigerator trucks were set up outside of hospitals. The city itself was under a sort of partial lockdown- all non-essential businesses were closed, and many businesses had restricted hours. The normally bustling city was eerily quiet, except for the ever-present sound of sirens. The surge in New York barreled along into April, and at the height of that surge New York City was averaging 10,000 cases a day. The death count for that time would end up being revised multiple times to include people who died without a confirmed test, or died of another co-morbidity to Covid. On April 7th New York City recorded 800 deaths from Covid 19 (Thompson). New York City was in the grips of the first city-wide public health crisis it had seen in a century.

The problems at the national level complicated the response to the case surge in New York City. Due to the shutdowns worldwide, the global supply chain had been thrown out of whack and medical supplies- especially ventilators, masks, and protective equipment also known as PPE- were unavailable. Due to the rise of a globalized supply chain, there was less immediate availability of goods in America, and President Trump was loath to use the Defense Production Act to nationalize the production of much

needed supplies- they waited until late March to invoke it and only started ordering ventilators to be made in mid-April. Donald Trump left much of this coordination to his son-in-law Jared Kushner who did not want to coordinate a national buy-in of masks, and instead left states to bid against each other in the marketplace (Confessore). As the pandemic ramped up in New York, the governor at the time, Andrew Cuomo, publicly and privately noted his discontent with how the national response was being orchestrated. He coordinated deliveries of loaner ventilators from other states, and even some from the Chinese government. He asked doctors and nurses from across the country to help the NY medical community and adjusted licensing requirements to make it easier for them to come and help in New York's beleaguered hospitals. Though these were all steps that would have needed to be taken, they are all steps that should have been taken at the federal level- not by the states themselves. Cuomo was also using this moment further his political career, and some of how New York counted deaths- particularly in nursing homes and long-term care facilities would come back to haunt him (Ferré-Sadurní).

To understand what was happening at the national level at this time it is important to add some background into the dynamic in the White House itself. Donald Trump became America's 45th President in 2016- beating Hillary Clinton in the electoral vote count. During the first few years of his Presidency, Trump had focused on the economy, and on undoing much of the work that his predecessors had done. This included things like relaxing regulations on banking and industry, giving tax cuts to the wealthiest Americans, and letting the funding for the pandemic preparedness program that Bush had put in place lapse. Donald Trump is vocal about his opinion of himself as a deal maker. He approached his presidency with that self-image in mind, but often came up short.

When Covid-19 hit, Trump and many of his advisors were most concerned about the US economy. He actively downplayed the threat of the virus to keep up the appearance that everything was fine (Woodward 275). In some ways, his response to Covid was similar to China's. He was privately unnerved by the virus, but publicly worked to make the risk seem minimal. He would call Covid-19 things like "Wuhan Flu," "the China Virus," or any other term that he could think of on the fly to tie it back to China.

The Trump administration focused most of their efforts on vaccines and treatments, rather than on non-pharmaceutical interventions. The lack of available masks meant that there was a campaign to stop regular people from using them, which would echo later in the pandemic as a talking point for the anti-regulation and restriction crowd. At one point, Donald Trump assigned his son-in-law Jared Kushner to coordinate the buying of PPE for the United States (Confessore). Kushner ardently believed in the free market and was adamant that states would have to fend for themselves and do the work of securing their own supplies. Kushner eschewed the conventional way of coordinating US government responses and instead initiated a task force of volunteers- young people from Goldman Sachs and McKinsey- to coordinate the national response and hunt down supplies. This eventually ended up later on being a part of a whistleblower complaint that was investigated by congress. Much of the work that Jared Kushner and his task force did was either inefficient, expensive, too late, or some combination of the three. By the time the ventilators that the US had ordered came online, it was apparent that ventilators were not the best way to treat patients with Covid-19 (Confessore). By the time they would get their friends or connections to make a deal, many of the people who had needed the supplies were dead.

At every turn the Trump administration chose the wrong answer, and Americans died because of it. Adequate testing is deemed essential in any pandemic so that you can know how and where the virus is spreading. There was a testing plan in place that Jared Kushner had overseen the creation of, but at the last minute in April the plan was scrapped (Eban). After this, the states were left to figure out their own testing models. FEMA distributed some of the tests that the US government had bought, but they would only distribute them to places with known outbreaks, which is in conflict with the entire point of testing during a pandemic. At the time the idea was floated that the Trump Administration had abandoned the coordinated approach because they felt that most of the severe outbreaks were in the Blue States in the country (Eban). Unfortunately for the White House political advisors, Covid-19 did not seem to care about state borders.

The Executive Branch was not the only part of the United States government to absolutely bungle the early days of the pandemic. The Center for Disease Control under the leadership of Dr. Rob Redfield was behind by almost every measure available. Contact tracing, testing of wastewater, coordinating local and national public health efforts should have all fallen under the CDC's purview. The CDC released a test February of 2020 that malfunctioned, and it took the agency weeks to rectify (Chen). The tests had been contaminated in the CDC lab that was manufacturing them. In the meantime, the FDA loosened its restrictions on who could make tests, and more private sector companies began making and selling them. The data issue was never fully fixed, and instead the most reliable source for Covid-19 Data in the United States was a lab at John's Hopkins called the Coronavirus Resource Center. As a member of the Coronavirus Task Force, Dr. Redfield routinely went on television and stood behind

Donald Trump as he downplayed the effects of the virus and even downplayed it himself in interviews (Woodward 255).

Dr. Tony Fauci was the director of the National Institute of Allergies and Infectious Diseases-NIAID- from 1984 until his retirement in late 2022. During the pandemic he has become a polarizing figure in the United States. Dr. Fauci took on the mantle of being a public health spokesperson throughout the pandemic. He has regularly appeared on television and in print nationally, and has been varied in his recommendations to the public. Because of this exposure he has become a target of right-wing conspiracy theorists and the anti-vaccine movement, known colloquially as anti-vaxxers. In late March Dr. Fauci noted on an appearance on CNN that the US was in danger of having 100,000 to 200,000 deaths from Covid-19 (Allyn). The number of deaths from Covid-19 in the United States as of March 11th, 2023, is 1,119,762 people. The level of death was unimaginable then, and it keeps rising every day.

The Trump administration's only major success was in the choice to aggressively invest in pharmaceutical companies that were working to produce a vaccine (GAO). There were three vaccines in the United States that made it to the market- two were based on new mRNA technology, and the third was a viral vector vaccine. Later on, another vaccine made by Novavax also hit the market. The discovery and creation of the three original vaccines in the short amount of time that it took was almost a type of kismet. mRNA technology is something that had been researched consistently since the 1980s, but it had never been deployed in a vaccine before. As for coronaviruses, research since 2016 enabled the vaccine to be made ("Decades in the Making: mRNA Covid-19 Vaccines"). To have all of these things align at once was a

great confluence of events, but to have them align perfectly with their need in a global pandemic is somewhat amazing. Prior to this pandemic there had never been a coronavirus vaccine. The SARS and MERS outbreaks had been of major concern to the international health community and had spurred research that ended up paying off in the wake of Covid-19. The vaccine program was called Operation Warp Speed (GAO). Essentially, the US government agreed to buy millions of doses of the vaccine, and whichever one worked they would use first. It turns out that both the Moderna and Pfizer vaccines initially worked quite well against severe disease and death. The Johnson and Johnson vaccine also worked well and had the added benefit of being a single dose vs the two required for the other options. Though the vaccine development was a great success, the Trump administration would not get to see their plan followed through. Trump would be very reluctantly forced to leave office after losing the 2020 Presidential election.

Throughout the months of 2020 between April and the end of the year the country dealt with outbreaks spreading across various cities- schools across much of the country would remain closed as would daycares. Limited visitation would be allowed at nursing homes and long-term care facilities as they had the most vulnerable populations to the virus. Prisons would also be locked down, a choice that has brought up conversations about whether the treatment of imprisoned populations during covid has been humane. The Navajo nation was hit especially hard by an outbreak in the summer (Thielking). In July, President Trump sent a letter to the UN Secretary general announcing that the United States would be leaving the World Health Organization in light of how they handled the pandemic. This was something that he had been threatening since May (Huang). He believed that the WHO was too slow in its response, and too “China-

centric.” This was a political move by Trump and would ultimately not matter that much- after Trump left office Joe Biden happily reinstated the US in the WHO.

Political unrest hit the country in the early summer of 2020 with the release of a video of police officers in Minneapolis killing a 46-year-old man named George Floyd. Derek Chauvin, one of the police officers, leaned on Floyd’s neck for 9 minutes and 29 seconds as he slowly asphyxiated. His last words were “I can’t breathe” which became the slogan for the Black Lives Matter movement which gained steam in the aftermath. Protests and marches were held in cities across the country throughout the summer. The Black Lives Matter movement was a catalyst for putting the spotlight on who the pandemic was disproportionately impacting and why. The data had by that time begun to compile about the racial inequities in the death and illness counts of covid-19. People of color were impacted by higher rates of disease and death (Hill). There are a multitude of theories about the reasons why- poor medical care available, an over representation in service work, a distrust of medicine due to historic abuses. It is probably a mix of many of these factors working in combination with poverty and racism, or racist societal structures, that has caused this gap. The Black Lives Matter movement choosing the slogan “I can’t breathe” during a respiratory pandemic that disproportionately impacted people of color is not a fluke, but an acknowledgement that the social systems we have in place for care are not inclusive enough- and the consequences of that exclusivity are devastating in a pandemic.

In late August there was the first confirmation of a case of reinfection by the University of Hong Kong (“CDC Museum”). This was important as there was thought that infection would allow a person to have protection from Covid-19. By October of

2020 the vaccines would be in stage three of their respective trials, all with outcomes looking positive.

On October 2nd, 2020, President Trump tested positive and had to spend days in the hospital at Walter Reed Medical Center. Even though he was severely ill, he had his motorcade drive him around outside so that he could wave to supporters. This drive was dangerous to his security, and also sent a bad message about the seriousness of quarantining while sick to the general public. The general election took place in November, with Donald Trump losing to Joe Biden. The pandemic played a part in this loss, but it was not the only driver of Trump's loss as his Presidency had been chaotic.

When Joe Biden took office in 2021 the pandemic was still roaring along. He was sworn in on the steps of the capitol to a mostly empty mall- just 14 days after the January 6th riots. The riots themselves had been an attempt by Donald Trump to stop Congress from certifying the results of the 2020 election. More than 2,000 people fought their way into the US capitol, trapping congress people and their staff in the building as well as endangering the Vice President who was there to certify the results. The rioters injured 138 police officers and at least 4 people died that day. The rioters destroyed property and ransacked offices. In the years since there have been congressional investigations as well as criminal trials for some of the participants.

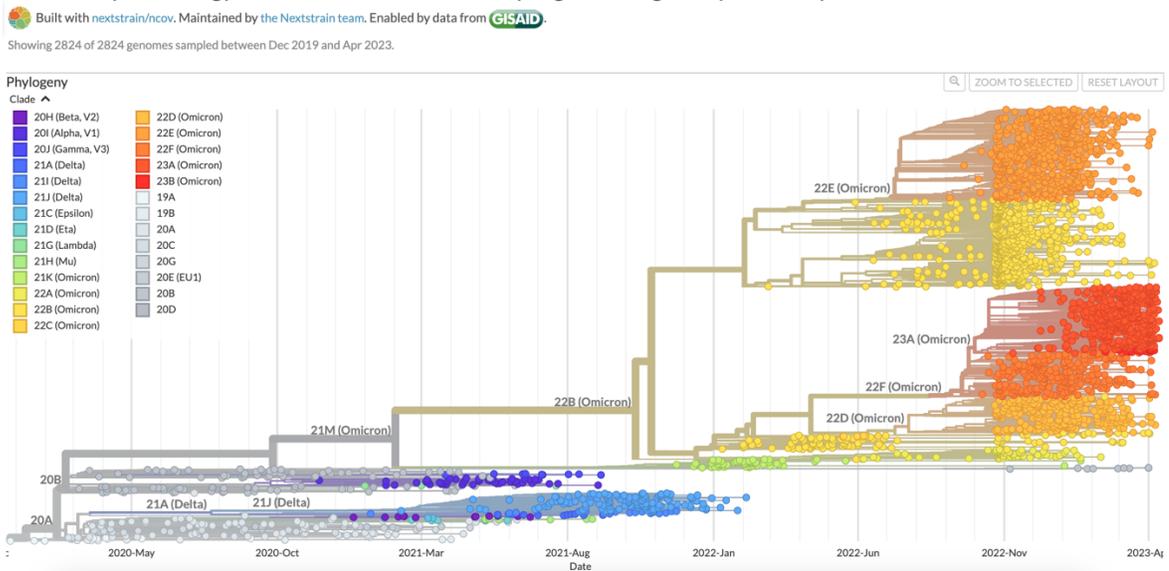
In the middle of November 2020, the Moderna and Pfizer vaccines had both come back as extremely effective in trials, and the FDA granted them both Emergency Use Authorizations by the end of the month (“CDC Museum”). This meant that the United States could start distributing vaccines. The roll out was slow at first, as manufacturing worked to keep up with demand. At risk groups were vaccinated

first- healthcare workers, the elderly, and people with specific immune risks. For everyone else it was a waiting game, first waiting on eligibility and then supply. Before leaving office at the end of December President Trump signed the COVID Relief Act into law. This was a sweeping bill that authorized funding for unemployment, business loans, the purchase of Covid vaccines and testing kits, as well as direct cash payments to the American people (“Advance Child Tax Credit and Economic Impact Payments”). In early 2020 when all non-essential businesses had closed the unemployment rate had ballooned to 14.7%. There was major concern about the economy and how it would recover from the abrupt halt caused by Covid. This bill was Trump’s attempt to ease those fears.

For the Biden administration the focus was on beefing up the supply of vaccines and getting them distributed across the country. The White House response centered on vaccination and getting as many people vaccinated as possible. Biden, like Trump before him, was anxious to get people back to work and he knew that in order to do that they had to have some level of protection from the virus. Under Biden there was a new head of the CDC, Dr. Rochelle Walensky. As a general rule at this time, the CDC was less focused on things like testing and contact tracing and more focused on vaccination. Eventually, even masking became a controversial subject as people began to reject mask mandates across the country, in spite of how well they worked to contain the virus. There was some money in the federal bill to help schools and federal buildings improve their indoor air quality, but that was not a national message taken up as a campaign by the CDC.

Something that was also not focused on much by the federal government was the prevalence of long covid. Long Covid is an illness that occurs in the weeks, months, and years after a covid infection. It can include a variety of symptoms which can be as mild

as being a little tired, to as severe as full on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome-ME/CFS from here on. Covid-19 is not just a virus that causes lung damage but can do damage throughout the body. Long covid patients sometimes test positive for Covid on and off for months, which gives the virus enough time to mutate.



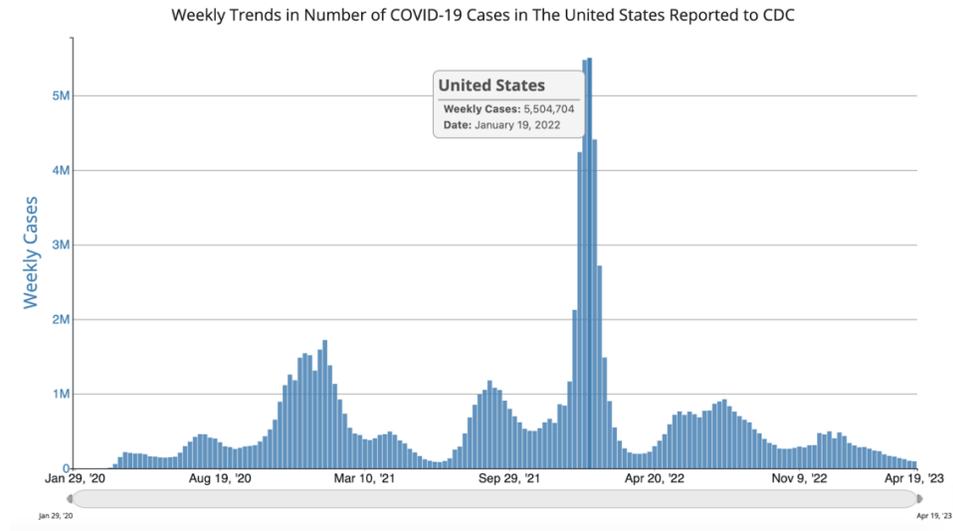
(Genomic Epidemiology of SARS-CoV-2)

Throughout the course of the pandemic, Covid-19 has gone through multiple mutations, which have subsequently caused waves of cases. The graphic above shows the sheer volume of mutations that have happened over the course of Covid-19 until the present time. In 2021 one of those mutations- the Delta variant- became the more dominant strain in the United States. The variants posed a problem for public health officials worldwide as the vaccines were not up to date to match the currently spreading variants. Covid-19 once again caught the world's public health infrastructure in a lag. By the winter of 2021 the dominant variant would be Omicron, and the number of cases would explode. The vaccines were remarkably effective at keeping people from dying,

even as case numbers rose, but they did not stop long covid and were unable to fully prevent people from getting sick.

By early 2022 the world was seeing the highest number of cases it had seen. During the omicron wave the United States saw a record height of cases with one week in January reporting some 5.6 million cases. Though the disease was much less deadly because of the vaccination campaign, it still killed a lot of people. By March 2022 states started to repeal their indoor mask mandates. This was due to a variety of factors including pressure from conservative groups in the United States that took up masking as an issue of rights.

From the early days of the pandemic, the virus and the responses to it were politicized. By their nature, viruses do not care about politics, borders or boundaries. If you are exposed, they will get you sick. The way that humans react to them becomes an inherently political venture, as with any social interaction. Covid-19 was an interesting case of this because both the virus and the response have been politically weaponized. From the very start when Donald Trump tried to isolate the virus as being the “China virus” to the point in 2022 when taking the most basic public health precautions was deemed liberal propaganda. Throughout this entire timeline there was a very loud and very angry section of the American population railing against vaccines, and they grew in popularity as the public health messaging failed to get to people quickly enough.



(CDC Covid Data Tracker)

By the end of 2022 there were very few Covid-19 precautions left in place.

Domestic travel in the United States didn't require a negative Covid test anymore, masks were not required in most workplaces and businesses, even some healthcare settings and hospitals began removing the requirement. This was while the consistent Covid-19 case rate was well above 150,000 cases a week in the United States alone. The White House and the CDC have taken an approach that leans towards the ideology that people should get vaccinated and that will take care of the risk. Unfortunately, that doesn't account for the percentage of the population that is unable to be vaccinated- the people who are immunocompromised, or severely ill. In leaning into this policy, the Biden administration hoped to get America's economy back up and running. From reopening schools in 2021, to encouraging people to head back to work in person, Joe Biden has aggressively championed the economic goals he set while running for President, and they have come at the cost of Covid-19 protections. This decision making did not happen in a vacuum, though. There are many members of the public who felt that the Covid-19 precautions had gone too far and that the personal sacrifices made had not been in step with the threat

of Covid-19. The unrest of both the Black Lives Matter protests in 2020 and the January 6th storming of the Capitol building happened against the backdrop of the worst economic situation in a decade- with very little promise of things getting better. Joe Biden's decisions to reopen the nation fully, and to leave the decisions of public health up to the individual may have eased some of this tension, but it created a much larger risk that the pandemic would become something more akin to an endemic disease.

In 2023 Congress and the White House refused to extend the funding on critical Covid-19 protections (LaFraniere). This removed funding for free testing as well as free vaccines. Both at the federal level and the local level officials have been encouraging workers to return to work in the office instead of working from home. Covid-19 has not stopped mutating in this time, and as of right now the United States has been through waves of Alpha, Delta, Omicron and its mutations BA.5, BQ.1.1, and the most recent strain to become a variant of interest- XBB1.16. With these mutations Covid has become more easily transmissible, though currently the disease has not become more lethal.

As of March 12, 2023, the United States has had 103,672,529 cases and 1,119,762 deaths from Covid-19 (“CDC Covid Data Tracker”). The numbers are an outstanding condemnation of the United States response to the pandemic. Especially as the death rate, though lower than it originally was, is still running somewhere around 1,800 deaths a week. The scale of this death and disease is astonishing. The odds of getting long covid are somewhere around 20%, though that number has fluctuated over time. At this time, vaccination does not help much with prevention of long covid (Reardon). Early studies have shown that there are some populations who are more affected by long covid including older women with comorbidities. This understanding,

coupled with the focus on returning to regular life, makes the United States population vulnerable to long-term illness from Covid. These illness risks are not lessened by infection and might actually be compounded (Belluck). This is especially concerning for populations of the country that have little control over their exposure like people who live in nursing homes, people who live in multi-generational homes, people who are incarcerated- including those who are being held pre-trial. To have the health policy of the country be something along the lines of “we’re moving on” is a gross miscalculation of what this virus is capable of.

This timeline of Covid-19 has happened simultaneously with other outbreaks of serious diseases worldwide. In Africa since 2020 there have been outbreaks of both Marburg Virus and Ebola. Monkeypox and Measles have both seen relatively large outbreaks in the United States, as well as abroad (“CDC Current Outbreak List”). With Monkeypox there was a concerted effort to get the most impacted populations- gay men in cities- to get the vaccine and get treated. The public health campaign, which included community organizing by cities and local organizations was a resounding success as Monkeypox cases fell dramatically.

Running concurrent to all of these human diseases, there is a world-wide avian flu- H5N1- that is impacting bird populations globally. This flu has been shown to have mutated at least once- in a mink farm in Spain- so that mammal to mammal transmission is capable. There is thought that it is also possibly spreading among sea lions in Peru as well, as large numbers of them have turned up dead (Wang). There have been a few cases of animal-to-human transmission with H5N1, but no human-to-human spread as of yet. The international health landscape is focused on Covid-19, but that doesn’t mean that

the next pandemic isn't already brewing. Diseases, unfortunately, do not take a break. In the next portion of this thesis, the focus will be on how we can look at the pandemic through the lens of social reproduction, and how we can tackle public health crises with this in mind going forward.

Where Covid-19 and Social Reproduction Intersect

The theory and context discussed in the previous chapters gives a good groundwork to discuss Covid-19 through the lens of social reproduction. The pandemic has tested social systems worldwide, and some reactions to this stress have fared better than others. In this chapter I want to look at how different systems were tested and what that meant for the people who have been living in them. Specifically, I think that it is important to talk about social reproduction and disease in the context of work and family in capitalism. One thing is clear about the Marxist-feminist interpretation of social reproduction- it values life, and it values the full depth of living for the most people. This is not a theory that is solely about reproduction of people to create workers akin to creating automatons to work in a factory, but it is about the broader ways in which society can support the full spectrum of humanness- regardless of capital. It is worth noting up front that social reproduction would inherently put the need of the most vulnerable first. In this pandemic we have seen that capitalism does not do that- in fact it often sacrifices the most vulnerable in the quest for more capital.

To investigate this dichotomy, it is important to look at where we are and how we got here. This section is about what we have now- not what we could have, not what we should have, but what has transpired since March 2020. It is easy to think about ways in which we could change things- the next chapter of this thesis will be the pie in the sky ideas for a better future using social reproduction. But, in order to be able to think about the future we need to look around at the present response to Covid and how that stands up when thinking about the care of people. Most of what has transpired since the early days of Covid is not good news. Vulnerable people continue to die, there is a redistribution of

wealth happening, and we are unsure what Covid-19 might do to people in the long term. The present is, admittedly, a very bleak place. But there are some spots where the realignment of society since the pandemic began has offered some interesting insights.

To start this conversation, we must go back to the start of the pandemic itself, and the early decision-making in China. There are a few points that are abundantly clear from the early days of Covid-19. The first of which is the most obvious available to us with the clarity of hindsight: China did not lockdown Wuhan quickly enough, missing the window to contain the spread of Covid-19. This was not because China did not have any understanding of the danger of disease. After SARS, the Chinese government definitively knew the value of containment. But the Chinese government values stability and they chose the immediately stable route, which probably exposed them to much more instability in the long run.

China also should have opened its scientists and doctors to sharing data much earlier. There is evidence that doctors working in Wuhan knew that they were dealing with something extraordinary as early as December 26th when Dr. Zhang Jixian reported a set of concerning images of patients' lungs and quarantined the patients in a separate part of her hospital ward (Li). Those doctors should have been able to communicate more openly with scientists around the world. Hiding Covid-19 set the world back on the timeline and made it much harder to contain downstream. Not letting the international science community in means that China has chosen to leave the entire world in an extremely vulnerable position- unable to gain clarity about the beginning of the outbreak. The second essential of public health is “investigate, diagnose, and address health problems and hazards affecting the population (“CDC-10 Essentials”). This needs to be a

cooperative worldwide effort, which is the whole point having organizations like the World Health Organization. Disease will not wait for international border conversations to take place, regardless of how complicated that makes things for the various governments of the world.

To contain the virus would have required an earlier aggressive lockdown and testing scheme- as well as shutting down the airport and train travel. At the center of social reproduction is the idea that humans need certain conditions to reproduce themselves- to state the painfully obvious point: you cannot talk about social reproduction if people are dead, ill, or dying. Maintaining a system that keeps people from getting sick, and continuing to keep them well is a form of social reproduction, as health is an essential part of maintaining and caring for yourself and others. But health is not often distributed equally, and that is certainly true in the Covid-19 pandemic. The disease itself hit the elderly especially hard.

In the United States we focused on the wrong metric from the start of the pandemic, and it continues to badly inform our response. Much of the data around Covid-19 in the United States has focused around the death rate of Covid-19. We have measured waves of Covid by it, but it is not the most useful metric for a disease like this. In the case of Covid-19, death rates tell a story of where we are with treatments, and how vulnerable our population is. They do not adequately tell you about the severity of disease- death rates do not tell you about the possibility of being disabled. Public Health with a social reproduction lens would measure cases, but it would also measure markers of living rather than dying. Death rates could not play a central role in that because they tell you more about what you are not doing, rather than what the disease itself is doing.

Death rates as a data point might tell you about how many older people you have not protected, but they do not tell you whether or not you are safe.

The deaths of the elderly is a gruesome conversation that started in the early days of the pandemic and has continued into the present day. At the center of this conversation is how much it matters whether or not the elderly die of Covid-19. At one point in March of 2020, in an interview with Tucker Carlson on Fox News about whether or not the country should reopen schools and businesses Texas Lt. Governor Dan Patrick said “no one reached out to me and said, ‘As a senior citizen, are you willing to take a chance on your survival in keeping the America that all America loves for you children and grandchildren?...And if that’s the exchange, I’m all in” (Sonmez). To have an elected official talking about leaving a large chunk of the vulnerable population to fend for themselves to get back to a state of “normalcy” was shocking at the time but would become a more popular talking point as the pandemic continued.

Although most people are not as obvious as Dan Patrick, in America there is an undercurrent of individualism that runs counter to the goals of public health and does not work within the context of social reproduction either. This was not a product of the pandemic but was instead the expression of a long-simmering divide in the American populace that has been encouraged by politicians for the past few decades. This attitude, that everyone should fend for themselves despite how much damage they might do due to the person sitting next to them, is either misinformed or misanthropic or possibly both. It was fed in the United States mostly by conservative lawmakers and pundits who were not countered well by the national public health infrastructure or the democratic party. The lack of ability to communicate to the American population, and to

be a world leader against Covid-19, is a massive public health failure. Its result was the overwhelming loss of many older and vulnerable people. Something that we as a country have not grappled with yet is how losing so many elderly people will impact us- the histories, lessons, and stories we've lost and will not ever get back.

In some areas this became a rallying cry to do more. On the Navajo nation, one of the hardest hit parts of the United States, a group of young people who were frustrated with the federal government's response to Covid-19 started "Protect the Sacred" a campaign to raise awareness around the devastating impact of the virus on the elderly (Thielking). Through a social reproduction lens, the care of the elderly and the vulnerable is an essential part of a fully functioning society. Social reproduction is an intergenerational idea, and as it's the non-paid life-sustaining work, the kind of communal campaigns to keep the vulnerable safe would be at the top of the to-do list in a crisis like Covid-19.

A point of concern in the coming months and years is the impact that Covid-19 can potentially have on people's long-term health. The possibility for Covid-19 to drastically impact the disability landscape is something that has not gotten as much attention as some other Covid stories. If the early statistics are true and 1-in-5 people who get Covid contract long covid, and if even a small number of them end up with long term illness or disability, that could be a huge number of people who need care in the coming years (Belluck). To be disabled is not easy in any country, and the United States is no different, but the types of illnesses that Covid-19 leaves behind are also hard to diagnose and have in the past often been labeled under the general terms of malaise or hysteria. Covid-19 can cause brain fog, CFS/ME, POTS, as well as lung damage and heart damage

(Belluck). There is no situation where having some 20% of cases have long and severe complications is ideal, but to further complicate the situation, covid long haulers also remain a risk to the rest of us, as that is one of the ways that the virus itself mutates. Covid potentially being a life altering disease, even without severe initial illness, is one of the many ways that this virus is cruel. Unfortunately, it has been able to take advantage of some of our greatest weaknesses- including individualism and arrogance to make itself at home.

In America, the myth of rugged individualism is a way that capitalism keeps society striated and unable to coordinate for better working and living conditions. Social reproduction is completely dependent on community, both in a family structure but also in a broader community. The dismantling of community shows up in funny ways throughout the country- it's in the defunding of public spaces like libraries. It's in local laws that make loitering illegal. It's in the lack of parks in many neighborhoods, and the lack of community centers. It is the slow chipping away at any spaces where people might gather and enjoy themselves for free. Without having these community structures intact, it makes overcoming something like Covid-19 much harder. Rugged individualism becomes a major hindrance in a public health crisis. The 4th tenet of public health is to "Strengthen, support, and mobilize communities and partnerships to improve health ("CDC 10-Essentials"). That task becomes almost impossible in a context like America in 2020, where the national discourse has been so hostile to the idea of community. In theory, public health should take place at the local level, but in 2020 we saw the national discourse around Covid-19 overshadowing local efforts. It is impossible to build community, either locally or nationally under circumstances like that.

The international approach to the pandemic greatly differed from the United States. In March 2020 the United States asked all non-essential businesses to close and asked people to stay home from work and school for two weeks to slow the spread of the virus and to lessen the burden on the healthcare system. The United States was not alone in this type of approach. China had finally put Wuhan on lockdown at the end of January. Italy was the first country to lockdown in Europe in early March (Bosa). Both Italy and China had much more strict lockdowns than in the United States. There was a ban on travel, public events and spaces, schools closed, and all of this was carried out by the military in both countries. In the United States each state had control of lockdowns and it was mostly an ask without the threat of the military or police getting involved. Flights in the United States did not stop, nor did rail travel. There were far fewer flights during this time, but you could still fly to most destinations domestically. Since 2020 this semi-lockdown has often been weaponized by politicians as an infringement of rights, but the declaration of independence was pretty clear about the order of things: life, liberty, and the pursuit of happiness come in that order for a reason- the most obvious being that you can't do the second two if you're dead.

Across the world when countries shut down, they also provided some level of financial support, or a government guarantee that they would be protected in their jobs, or some level of basic necessities. In China there were food deliveries to buildings, in France and Italy they paid people most of their salaries to stay home (“Policy Responses to Covid-19”). In the United States we did not fund our shutdown, and we offered very little direct financial support until later in the pandemic and even then it was minimal in comparison to the amount of money lost for most people in wages (“Advance Child Tax

Credit”). In the United States we uphold a form of capitalism that is particularly harsh and has very little social support in comparison to our peers. This culture of bootstrapping your way up, with the American Dream being centered around rising from the poorest to the richest levels of society, makes it all but impossible to adequately support people in an emergency. This culture is in conflict with social reproduction as it makes caring for yourself and others dependent on impossible odds- the odds of obtaining the American Dream. People cannot care for each other if they are constantly working- let alone care for themselves. This form of capitalism is particularly dangerous in a situation like a major public health crisis as it doesn’t give anyone the support they need to keep themselves and their families healthy. People will always choose social reproduction- they will always care for their kids or families. In the case of Covid-19 because of how we have structured the response in the United States, that has meant asking people to choose between the possibility of an illness that can have effects anywhere from a runny nose to disability and death, or going to work to make money to feed their families. In some ways, the pandemic opened up many peoples eyes to this push and pull between what is best for caring for themselves, and what is best for capital.

It wasn’t just in the conversation around monetary support from the government, but also in the conversation around childcare and schools. In order for the economic system to work in the United States we need schools to be open- children need to be looked after and they require attention and circumstances that allow them to learn and grow. Part of why we have industrialized the school system is to allow parents to work- it’s also why the school day starts so early. When schools closed in 2020 and didn’t fully open for over a year, many parents of the United States were forced to balance both work

and childcare simultaneously. This is the worst of both worlds- and put undue stress on both children and their parents. In this time, many women left the workforce to become full time care caregivers for their children (Ferguson). This type of gap is what Lise Vogel and others were talking about- how women became the ones who had to give up jobs in order to care for the children who were sent home for over a year. There is some debate about how many women left the workforce permanently, as of April 2022 that number was floating somewhere around 1 million women (Ferguson). Over time that number might become lower, but those women will never be able to make up that lost time in the workforce. It will be interesting to see the longer-term data on this- how the pandemic has impacted women's employment and what that means for everyone.

This was also born out differently throughout society, especially worth noting are the differences in experiences depending on wealth and racial demographic. Indigenous Peoples, Black, and Hispanic populations fared worse with Covid than White and Asian Americans (Hill). Some of this disparity is because of employment types, with more Indigenous, Black, and Hispanic people working in jobs that were not able to be done remotely (Hill). This disparity is a dividing line between white-collar and blue-collar work and is also a clear delineation between the jobs that were deemed essential, even though they are generally jobs that do not pay well. The essential workers of 2020 were people who ran grocery stores, pharmacy workers, and truck drivers. As a rule, none of these jobs are held with the esteem of the professional class, but they should be as they are jobs that make society function, unlike many white-collar jobs.

In the conversation around value there is room for discussion of the way that one of the few government aid programs that did happen in 2020 was the Paycheck Protection

Plan- PPP- which allowed the Small Business Administration to loan out money that would later be forgiven if the businesses met the criteria outlined. For all intents and purposes this was a much-needed bit of relief for the small businesses of the country. What ended up happening was that many of the loans were fraudulent and some of them were to huge corporations that did not need them (Pfeiffer). Though aid for businesses and individuals was desperately needed, the fact that much of that money was taken by large corporations shows how hard it is to distribute indirect aid. The hope for this program was to keep businesses and their workers in good financial shape so that they would be able to withstand the lock down. Even with PPP loans, many businesses closed, and people went on unemployment in record numbers. In many states the systems were overwhelmed with requests as some 14% of the US population was out of a job. It would have been better, both for public health and for the government, to just pay the entire country to stay home and then settle any determined surplus at tax time in 2021.

The ultimate set of essential workers in the pandemic have been healthcare workers. Doctors, nurses, and support staff worldwide took the brunt of the force at the onset of Covid-19. From the healthcare workers who started dying in Wuhan a few weeks after the onset of the pandemic, to the people who had to reuse PPE for weeks on end in American hospitals, healthcare workers have been pushed to the brink worldwide, and many of them have died or left their jobs. As they leave, the rest of us become less safe in a pandemic situation- like we're in right now. In 2020 hospitals simultaneously laid off workers and asked for bailouts while paying their CEO's exorbitant amounts of money (Silver-Greenberg). Under the US version of capitalism, everything is a possible profit-making enterprise including hospitals and healthcare. Healthcare workers get caught in

the crosshairs of this almost from the time they begin getting training. We had a shortage of doctors and nurses in the years prior to the pandemic because of some of these pressures on the healthcare industry, but the addition of a deadly pandemic has only grown the gap. As the baby boomers continue to age and need more care this will become even more of an acute problem.

When doctors and nurses needed PPE they were unable to get it through their regular methods because the international supply chains had been disrupted as factories and boats across the world stopped. PPE wasn't the only thing that was in short supply- there was also pressure on foods, electronics, and cars. This highlighted the downside of the global capitalism market. Capitalism relies on the cheapest labor available, and that is generally found in countries that have less stringent labor laws. In order to keep prices artificially low on goods, companies outsource the labor to make them to a country where their money can go further for labor. Covid-19 showed some of the major flaws in this system. First, the migrant factory workers in China that left the cities to travel home to their villages accelerated the spread of Covid-19. Then, because the factories and ports were shut down, there was the lack of available medical supplies including things like ventilators and masks. The rationing of PPE left healthcare workers more vulnerable to infection, as well as impacting morale. The Trump administration could have used the defense production act to fill some of the gaps that emerged, but it would not have solved the overall precarity that the supply chain was in. Three years later and it still is not fully sorted out.

Globalization in a capitalist system has the potential to leave us all very vulnerable to disasters and disease by simply making the life saving necessities we

need unavailable. In the case of Covid-19 when so little was known about the disease initially, the healthcare workers were put at a distinct disadvantage and in direct danger without proper PPE. The global supply chain lag has also impacted things like medications and the basic everyday things that medical facilities need to run. In the search for the most profit, we have inadvertently let capitalism make us all even more vulnerable in times of emergencies- times when we are collectively all already in danger. Social reproduction doesn't require the local manufacture of goods- though Marx was more broadly against globalization of the marketplace- but it does require that people are able to live in society while caring for each other and themselves. The supply chain falling apart one way that need is not met.

Another way that Covid-19 changed society was how people adjusted how they were living in response to the pandemic, especially the workers that were able to work remotely and fled the major coastal cities of New York and San Francisco for more, cheaper, space in rural areas or smaller cities (Dowell). This is mostly an exodus for those who have been able to afford it- this is not a phenomenon that crosses class lines. Low interest rates combined with a now remote job gave many people the push to buy housing outside of cities. This search for more space for people who had enough cash to afford moving did weird things to various real estate markets across the country. People have been buying homes in what were once considered fly-over states like Ohio (Dowell). This exodus out of cities has created a spike in the price of homes across the country (Beals). In some cases- like the people moving to Ohio- there was a long-term drought of people moving there after the great recession. Traditionally, the major cities have been the home of white-collar work, but with the forced adaptation to remote work,

there is a chance that people will be able to live outside of the major cities for a longer term. This has an impact on those cities, though. A lack of commuters and lack of in-office workers has meant that downtowns have had a shift in the businesses that exist there to serve them. This exodus has put a strain on the resources of rural areas- in Vermont the spike in housing prices has had an impact on the local population as home prices have risen significantly in the last three years (Black-Plumeau).

Though it is understandable that people would want to flee small apartments for more space in rural areas- the resulting real estate spike across the country means that there will be less opportunity for disadvantaged groups to become home buyers. It also has the effect of driving up rental prices across the country, which makes more people's housing precarious. In 2021 the CDC declared a national eviction moratorium, a move that was eventually declared unlawful by the Supreme Court. The argument was that people being removed from their homes presents a valid public health risk during a pandemic. Though this was probably true, it does not solve the underlying issue of how expensive housing has become and is not a long term solution for housing reform. The steady rise in housing prices across the country is something that will have a long, slow burn effect for years to come.

In conjunction with the conversation around housing is the conversation around remote work. These are both conversations about social reproduction. Remote work allows the worker to have more time to spend in their personal life, not commuting. Originally, remote work was touted as being more popular with women, especially mothers, as it gave them more flexibility and time to spend with their kids and at home catching up on housework. Though this has recently become more of a focal point for

men too, who realized that they enjoyed the work of social reproduction during the pandemic (Miller). The realization that there is more to life than work or the process of getting to work was a major awakening for many people in the pandemic. Capitalism intentionally pressures everyone into a life of unlimited productivity, but when we are all forced to renegotiate that norm simultaneously it means that things that were missed before are now a priority. The idea that men would also enjoy raising their children is so obvious, but because of how we have structured our society they didn't even get the chance to know what they were missing until a global pandemic showed them.

Remote work is at the center of another set of conversations- the first is the conversation around commercial real estate and what companies should do with those spaces. The second is that there is a power dynamic that is ingrained in office work culture that requires a middle manager to be ever present and watchful. The pandemic has largely made this role obsolete- instead allows workers to do their jobs without the ever-present lingering of a watchful boss. The return to the office is also not universally supported for other reasons. Women of color reported that they do not want to return to in-office work, as they find the dynamic exhausting (Williams). The office as a micro-social system requires that everyone adheres to a set of ambiguous rules that are often rooted in racism or sexism. Remote work is a bypass of a lot of that, and it gives people the security of their own space without a commute.

This was never a part of Marx's original ideas about social reproduction, and it was not considered by many of the other authors noted in the theory section. This is because the idea that so much of the workforce would have the opportunity to test out working outside of a traditional work setting at the same time would have seemed

unrealistic to many of these thinkers. The best thing for society to have to reproduce itself, and care for itself is more time. Remote work captures back some of the time that people spent commuting and it also mitigates some of the damage done by interoffice politics.

Public health, when done correctly, should educate the public about the risks that they are incurring while also doing whatever is in their power to mitigate those risks. Though Donald Trump asked the country to stay home in early 2020 on the advice of the public health officials, he did not follow through with a clear and strong message about the pandemic. What resulted from that was a pandemic that killed 1 million people in the United States alone. Neither the administration of Donald Trump nor the administration of Joe Biden has done enough to keep the public informed of their risk. There is not adequate national data- no national testing program and limited wastewater surveillance. Masks have been discouraged. What has been aggressively encouraged is a “return to normal” but without any clarity on what that really means for anyone.

The damage that this pandemic has done to the reputation of the American public health infrastructure might prove to be the part of this that is insurmountable. Public health only works if there is trust in the institutions- and there is very little trust in the CDC or the NIH among the American public. You cannot build a society that has any level of security or stability without having a well-functioning public health infrastructure- especially if the society in question is one that is built on democracy as opposed to a dictatorship or kingdom. Trust and community are central ideas to social reproduction theory, as social reproduction depends on the group rather than the individual to work. The CDC has damaged its own reputation by its inability to meet the

challenges brought by Covid-19. The nation doesn't trust it. Without this trust it is impossible to build community and care, and that is antithetical to social reproduction. The CDC is in desperate need of at least reform, if not a full-blown organizational demolition and rebuild.

The pandemic has shown us some of the ways that we are vulnerable, and how thinking within the framework of social reproduction we can rethink some of the choices of our society. It has also shown us great hope in the ability of people to do amazing things in the face of great odds. In the next portion of this thesis, I am going to think about ways in which we can move from our current state and into a more thoughtful future.

The Future

What does it mean to envision a future through the lens of social reproduction? To build a society with the idea of social reproduction at the heart of it, it is important that we recognize the finite nature of both ourselves and our planet. Humans are not machines, and yet societally we have left very little space for the tangible realities that all of us will face: infancy, illness, aging, and eventually dying. In the beginning of this paper, I mentioned the radical act of having a life. What I meant by that was the fullest context possible- not just enjoying your life by going to the movies with your friends but understanding that everyone's lives come with these most basic of human traits. You cannot easily avoid aging, illness, and death- they are the only things that we all have in common. With that in mind, I believe that social reproduction offers a way to look at society with the idea of being inclusive of the human experience and the finite nature of the individual. Social reproduction centers that which makes us most human- the inter-generational passing of culture through the care of ourselves and our communities. To center this work is often in conflict with unfettered capitalism- in the way that we measure profit, it is not considered profitable. To make a society that is not in conflict with social reproduction we need to understand that there are some things that are more valuable than capital accumulation.

There are countries that work to put guardrails on their economies- the Scandinavian countries are often cited. In the case of the United States, any progress would be welcome. In looking for direct action ideas on how to better utilize social reproduction in public health, I am struck by how many of these ideas were already in place and were ignored during the Covid-19 pandemic. Things like community care,

stockpiling of supplies, and valuing vaccines and research are not new ideas- they are playbook from the post war era in the United States. In some ways it is reassuring to understand that these goals are not only possible, they have happened before.

As we look into the future, we know that there will be more pandemics, and that they might already be here. In the last year we have had outbreaks of Ebola, Marburg Virus, and Monkey Pox happen, as well as a mutation within the H5N1 flu making it transmissible between mink- the first mammal-to-mammal transmission of that disease (“CDC Current Outbreak List”). Under the current political constraints in the United States, it is hard to be able to predict how the general public would react to another pandemic. Feelings about masking and vaccines vary widely among individuals, and there has been a major effort to firmly polarize public health efforts in the United States. With these thoughts in mind, I would like to think both acutely and abstractly about ways in which the United States could be more prepared in the case of the next pandemic. Some of these are painfully obvious- including things like payments to stay home and a stockpile of PPE for medical facilities. These are real tangible things that the government can do to better prepare for a disease and most of them are ideas from the actual plan that the Trump administration did not follow.

Social reproduction is focused on caretaking as the center point of society- you cannot reproduce people or culture without care at the center. Much of the literature of social reproduction is focused on the home, and the care-taking that individuals partake in within their smaller social circles. During the Covid-19 pandemic we have seen the importance of both the small circle, and the larger systems of care in the United States. As a rule, if we are going to fare well in the next pandemic, we have got to place care

work at the center of the plan. Thinking with care-work at the center of a plan, a variety of scenarios come to mind where we can make small but monumental changes to how we currently do things, which would have a great impact on our pandemic response.

The first thing that we can do is pay people to stay home- especially in the case of an easily transmissible illness. In paying for people to stay home, we alleviate some of the major barriers to containment that the United States experienced early in the pandemic. Keeping people from getting sick should be a priority, and in order to do that we need to take into account the things people need to survive, including things like food and water, shelter and money. Asking people to stay home with limited direct government support undermines the ability of public health infrastructure to do their jobs in the long run and undermines the public's opinion of the public health officials and the government itself. This leaves the public extremely vulnerable to anti-public health narratives, which have a cascading effect where people do not take these agencies seriously. We have seen some of this in the United States, and we will continue to see it unless there is a shift in how we respond to threats from the start.

To better respond to the next pandemic the nation should have a stockpile of personal protective equipment and basic medicines and should maintain it indefinitely as a matter of national security. If we find ourselves in a situation like 2020- where the national stockpile is depleted and there are problems with the supply chain- the President should use his or her powers within the defense production act to create the supplies that we need. Keeping care work at the center of society includes keeping care workers safe and well-supplied with the very basic medicines and protective gear they require. It also allows us to not put them in the uncomfortable and dangerous

situations of being maskless or re-wearing protective equipment. To center care work means to center the most vulnerable- the chronically ill, disabled, elderly, and children- and with that in mind it is important that we are able to give them, and everyone else, the most basic health safety we can by having an abundance of whatever PPE is required for the pathogen at hand.

In her book *Long Shot*, Kendall Hoyt makes the case that we need to heavily invest in vaccine research and creation as a matter of national security. Hoyt's book was written before the pandemic but feels prescient as the world needed a brand new type of vaccine to take on Covid-19. That we had the research in the pipeline was a stroke of immense luck- something that we cannot count on in the future. Hoyt's book is focused especially on the possibility of a bioweapon, which is probably more pressing now that we have seen the damage that an un-weaponized pathogen can do to the global society. Even outside of the mechanism of national defense, vaccine research is something that should be invested heavily in as a public health priority. The saying is that preventative medicine is the best medicine, and there really is no better preventative medicine than vaccination.

To go with vaccine research there has to be a more concerted collective effort to undo the harms that the anti-vax movement has caused to vaccine's reputations.

We cannot effectively combat pathogens with vaccination if people refuse to get vaccinated- something that we are finding with Covid-19 vaccines currently. This is an ideology that is causing outbreaks of measles in the United States- a disease that was thought to be a relic of epidemiological history not that recently ago. There are many ways to combat vaccine misinformation, but the first step is to make a concerted national

attempt to do that. Science education- as well as a better education on what it means to live in a society- should be at the top of the list for ways to do that. In order to tackle the challenges that a new pandemic might bring, we need to have clarity about the resounding failure of science in communicating with the public up until this point. Rectifying that should be a world-wide priority, especially in places where vaccine hesitancy is growing. The United States needs to change the narrative around vaccination from one of fear to one of clarity and information. We have had successful public health campaigns in the past- AIDS, Smallpox, and Polio are some of the largest ones- and we are capable of doing it again.

Related to this, but somewhat different, is the reputation of the world's public health institutions including the WHO and the CDC. The damage that has been done to the CDC in the United States is hard to understate. The early organizational fumbles including communicating with states about how and when to test people, and even sending out faulty tests, created a confusing atmosphere behind the scenes (Chen). In public the CDC was not building confidence with the American people, either. Official announcements often ran counter to the information available on the agency's website (Chen). There is no way to contain any pathogen without having clear and concise information given to the public at regular intervals. The fact that in order to conserve PPE for healthcare workers the CDC encouraged people to either mask with cloth masks, or to forgo masking entirely, did not instill confidence when masking became an imperative later on in the pandemic. There is a growing theory within the medical field that while medical doctors themselves are an important part of public health, they might not be the best equipped to be public health leaders as they are trained to focus on individuals,

where public health is about systems and populations- especially science communication (Reinhart). Though there is no way to tell that without testing it, in the year since Rochelle Walensky took over at the CDC there has been a promise of a full overhaul, but there are still problems with a lack of clarity in the messaging, with the CDC quietly changing guidelines on their website instead of launching full messaging campaigns (Bennett). To restore trust the CDC has to be allowed to clearly communicate with the American people about how they can protect themselves- even if that message is sometimes in conflict with the economic goals of the government.

On the world stage, the World Health Organization needs to be empowered to do a full investigation in China into the origins of Covid-19. Until they are allowed unfettered access, we will never get a clear picture of the way that Covid-19 became a human disease. The WHO only functions because member states agree to adhere to the rules it sets forth- but in the case of China, they did not do that. If we want to prevent the next pandemic, the WHO has to be allowed to get to the bottom of the science. It's an imperative in social reproduction that the systems we have in place to keep people alive in a pandemic be strengthened.

From a social reproduction standpoint, one of the most essential things that we can do both to stop disease but also to further society is house people. The pandemic put a spotlight on how hard it was for unhoused people to receive healthcare- in fact one of the main selling points on the one-shot vaccine from Johnson and Johnson is that it was easier to use on transient and unhoused populations. Unhoused populations are in danger of a multitude of diseases that do not normally impact their housed counterparts (Institute of Medicine). They face outsized mental health problems, as well

as diseases that can manifest with a lack of basic hygiene availability. Unhoused people are extremely vulnerable to variations in nutrition too. To allow people to do the work of “life-making” we must first as a society agree that everyone has a right to have the tools available to them to make a life. Unhoused people are not a US specific phenomenon, they are in almost every country on earth. But, the United States is uniquely rich enough to be able to tackle this problem head on and give people places to live. Especially as climate change continues to grow, the way that we are housing people in general is going to become a bigger public health priority worldwide.

An example related to that is pursuing better indoor air quality measures. Public buildings should all have better air filtration, but especially in schools and care homes. Though in the conversation around pandemics and airborne pathogens this seems extremely obvious, it is also an important point in the conversation around climate change. As climate change progresses we are seeing a drop in air quality across the globe (American Lung Association). Indoor air quality improvements can save lives in both a pandemic and climate change scenario- and it seems like the smallest lesson we could learn from Covid-19.

So many of the ideas that can be implemented as we look to the future are built on the foundation of a collective ‘buying-in.’ I do not mean this in the literal way of exchanging money, but in a cultural way of collectively committing to do things together. We have been living in America in a culture of demolition and privatization. With the rise of neoliberalism since the 1980’s we have seen so many basic services become for-profit entities. This is the nature of capitalism when it is unrestricted. It will take what you already have, privatize it, and sell it back to you. There is a heavy

collective loss that we all pay in a system like this. It does not allow for the building of new things- both in the physical and nonphysical. Even knowledge production at universities is affected as the idea of what is “worth” studying becomes a metric by which people choose majors and classes. The worth that they are talking about is not the intangible type measured by fulfillment or interest, it is the very tangible: money after graduation. To be a community that buys-in we have to shift our current priorities away from capitalism’s need to monetize and justify and into a system that builds things because they are going to be for the greatest good. This cannot happen in our current form of capitalism because creativity and ideas are things that are incubated with time- and time is money in capitalism. In order to reimagine how we approach problems, we have to give space for the act of imagination. Change cannot happen without that space. Part of this work is rebuilding stronger and better public health infrastructure, but the other part is radically re-envisioning the way in which we interact with the earth in the time of climate change. As we move more and more into the climate crisis it has become abundantly clear that our current way of living is not sufficient to meet the task in front of us. We need to rethink everything, from how people travel to how they live, to how we grow food and conserve land. Climate change is going to be the ultimate test of our ability to buy-in and it will require a world-wide effort.

This is important in disease management because it has become increasingly clear that there is a link between human incursion on wild spaces and the jump in zoonotic diseases (Leal Filho). As we push our current way of building further and further into uncleared land, we are finding that there is more and more contact with animal species that are especially prone to carrying disease. We do not yet know how

Covid-19 came fully to infect humans, but there is evidence that it came from a wet market in Wuhan, probably making the jump from an animal there. As I noted earlier, the H5N1 avian flu is a zoonotic disease that could possibly jump to people more frequently. As we push nature closer to the brink of collapse, we are pushing ourselves closer to collapsing with it. There is a dark undercurrent in pop culture where tech billionaires talk longingly about colonizing mars in order to escape our dying planet, but there seems to be a misunderstanding about one of the most basic facts of human existence. That fact is that we only live on Earth- and any attempt to wish that away does not change the fact that all of those people talking about Mars are doing it while standing on Earth. With this in mind it makes more sense that we would focus innovation on Earth instead, working to collectively move ourselves out of the way of harm by mitigating the harms that we have caused.

This collective buy-in has to be led by world leaders, and there needs to be some kind of coordination and international agreement. We need people to believe that we can overcome these incredible problems, because that is the only way that we will actually be able to do it. In terms of disease, things like the aforementioned vaccine research and understanding of our impact on zoonotic disease transmission is a must. But it is also worth thinking about how redesigning our current way of life could better serve our physical and mental health as well. Walkable towns and cities, better transportation options, and more community spaces should all be a part of this consideration. As we move into more automation it is worth renegotiating our societal understanding of work and payment. Working less, cooperative ownership of companies, and redistribution of

profits to workers is something that companies have been trying in the current ecosystem, and it will be interesting to see what will come out of the move away from work.

Social reproduction puts care at the center of the structure, and that is with good reasoning: we're all going to need to care and be cared for in our lives. As a part of the rethinking of society, we should rethink how we make Medical Doctors. MD's should not be as rare as they are now- in theory they should be in abundance. As it stands right now there are a small number of medical schools in the United States and an even smaller number of placements in hospitals for internships and residency. Those placements are paid for by the US government as a way to standardize medical education. If the pandemic has taught us anything it's that we need more doctors working in direct care roles across the country. In order to do that, we need to let anyone who can get into medical school in and if they can get through that, they should automatically get a placement. Right now, we make medical students bear the brunt of the cost of medical education up front through loans and fees. We should make all college and graduate school free, but we should especially make things like medical and nursing school free. There is a public good in having a lot of doctors and nurses, and it's not a gap that can be easily immediately filled. Scarcity is a part of capitalism, but it should not apply to things like healthcare workers. We need to combat that by aggressively changing our priorities and being clear about what our society needs.

Another way in which we need to think about priorities is by thinking about the things that make us human and working as a society to create the conditions that foster those things. Art, Music, Dance, Science, Math, these are all special to humanity, and they are not all necessarily easily monetizable. Virginia Woolf famously

gave a speech, which she later turned into a short book, called *A Room of One's Own* which is about the things that a woman needs to be a writer. She noted the importance of money, and of having your own space to be creative (Woolf 6). It is interesting that if we think of the “life-making” that Susan Ferguson was talking about, creating art and culture would be a larger part of that. Woolf knew that there was no space in society for women to have time to think and be creative- she felt this keenly in her works. But she had clarity on the subject that few had noted before- you need somewhere to think, you need your basic needs met, and you need to have time. In order to take on the world's challenges we need to give people the time to think, and if they need it may be the place to think too.

Climate change and pandemics are going to precipitate necessity for a large-scale investment in our infrastructure. We need to change how we move goods and people around the world, as cars and airplanes are too energy inefficient. There is a movement towards battery-powered vehicles, but they come with problems like the minerals in their batteries being dug by children in west Africa. To face these challenges, we have to move away from individual transportation- like cars- and into more collective transportation- like trains or buses. This compounds a public health crisis, because public transit can be a site where diseases are more easily spread if there aren't enough mitigation efforts. Making public transit safe in the short term and long term are different but related problems. In the short term we could hand out masks at bus and subway stations. We could add better quality air filters both to the stations and to the trains and buses themselves. In many cities like New York and Boston, the subways are chronically underfunded, leaving them woefully behind their counterparts in Europe. Public transit, like doctors, should be considered a public good and not a profit-making center. Public

transit should be free as a way to get people to use it. If we want people to stop using cars, we have to make the alternative more appealing and significantly cheaper.

The biggest shift in how we approach a pandemic in the United States would come if we nationalized the healthcare system. Social reproduction and private medicine are incompatible. To be able to more effectively handle things like Covid-19 we need to move away from the employer-based health insurance model that we currently have. The United States pays more than any other country on earth for healthcare, and we do not have great outcomes either. We cannot afford to turn a blind eye to how vulnerable this has made all of American society to illness. Like Kendall Hoyt's vaccines, our lack of accessible healthcare itself is a national security risk. We need to move out of a for profit model because that incentivizes illness rather than incentivizing staying well. This will not impact the ability of capitalism to stay the main economic force- capitalism still flourishes in many countries that have nationalized medicine. England is one. The international home of banking, Switzerland, is another. Though those are both much smaller countries, they both can offer lessons in what works and what doesn't. National healthcare would also allow the CDC to better do its job. In England the NHS has much more access to data during Covid, as they are the ones keeping track of the nation's health. We need to strengthen our healthcare system before the next pandemic happens, and nationalizing our medical system is the best way to do that.

In 2016, Donald Trump ran for President with the slogan of "Make America Great Again." I do not think that there was ever a time when America was truly great- I think that is a myth that Trump played into get the vote of mostly white people who felt like they had been forgotten. The thing that I think that Trump was tapping into was the

longing for an idea that was prevalent in the post-war year in the US: that the country could do anything if we just tried. This lost feeling of capability is what I think we should be aiming for as we look for ways to better protect ourselves in the future. With Trump this idea came preloaded with misogyny and racism, but what if we stripped those parts away and thought about this lack of hope as a way to approach these bigger problems. To look forward with a sense of urgency and problem solving, rather than looking backwards for a society that didn't exist. This is the buy-in that we need. We need to change the hopelessness that people feel in the face of such existential problems as a pandemic or climate change into thoughtful and workable actions.

There is very little risk in doing something- but there is a lot of risk in doing nothing. As it stands right now, we do not have the political ability to tackle these large problems as our political institutions are in the midst of playing catch-up. Worldwide we have a loud and growing far right movement that does not believe in government and is working to dismantle even the most basic of government supports. As we progress in this pandemic it has become abundantly clear that some of the loudest critics of disease mitigation are also economically invested in treatments or are interested in profiting off of having their workers come back to work in unsafe environments. Capitalism requires that we are active, if unwilling, participants in it. If left unchecked, capitalism and the search for more money will push all of us to the brink of collapse, either via disease or via destroying the planet, and it looks like that cliff might come sooner than any of us have expected.

There is an antidote to this, though. Through collective action workers have been able to push the boundaries of capitalism back countless times throughout history. Unions

offer a way for workers to band together in the workplace and demand more from both their employers and the state itself. In the case of healthcare, some of the strongest voices speaking on behalf of workers and patients are the nurses unions throughout the country. Doctors are unable to unionize, which is something that should change. We would all benefit from doctors using collective action to reign in some of the more outrageous aspects of the healthcare industry, in the way that nurses have been able to. To tackle capitalism head-on, we must face the glaring reality that it is sacrificing both us as individual people and the planet in the quest for money. The basic necessities of living should be available to every person on earth- regardless of financial standing. Everyone should have the opportunity to build a life, and they should not have to start building it without help from society.

Social reproduction can offer a way to analyze the systems that we have in place, and to think about new systems that we can make in the future. By centering care and community rather than rugged individualism, we can rethink the way that we approach many of our society's biggest problems, including public health. At the center of this project is the idea of “life-making” in all of its varied forms. To do this effectively there needs to be a reckoning with the damage that unfettered capitalism has wrought on both the environment, and also people. Humans are not an infinite resource, and we need very specific circumstances to thrive. We need food and shelter, we need community. Capitalism requires that we all work for a wage in order to be able to afford the conditions for “life-making” but it is interesting to imagine a society which understands the physical limitations of being human and puts value on the short amount of time we have here. The pandemic has taught us many lessons about the importance of care, and

how fostering care networks is an essential part of humanity. It has also shown us that we are capable of great things when inspired- even if that inspiration comes from dark places. The creation of the Covid-19 vaccines has been a major achievement for human innovation. If we can somehow learn to combine the ideas of innovation with community and care, humanity would be able to work through so many of our problems. Climate change and disease are going to require us to be innovative and also to work together to overcome them. Centering the most vulnerable and their needs at the center will bring a better outcome for all of us- especially if we are talking about pathogenic diseases. The interconnected nature of our social problems requires interconnected solutions.

There is a deeply pessimistic streak in modern politics and punditry in the English-speaking world, and it mostly centers around gaining the most capital regardless of the damage it does to others in the present or future. This short-term way of doing things is squeezing the planet and making people sicker. We need to rethink the idea of the cost of doing business and calculate the actual costs into things. Globalization has made it easy to off-shore work for a cheap wage, but it has also made it easy to off-shore dirty work, moving polluting businesses to the other side of the world as environmental laws began to crack down on pollution. Unfortunately, the whole world is a system- and we need to look at this problem as something that is impacting us globally and locally. Like disease, climate change doesn't care about national borders. There are no laws that pandemics abide by. There are no laws that natural disasters abide by. Thinking of the world in a holistic sense- as every action having an equal reaction- would be better for everyone.

Social reproduction offers a way in which to envision a better world for humans- for us to understand that in order to thrive we need to live in harmony and community with each other and the planet. This might mean that the current way of doing things has to change- and that change might be more incremental, but it will need to happen. There are too many variables outside of human control that will not allow us to keep living as we have been living without severe consequences for every person on the planet. We need to look at all of our systems and think about whether or not they are serving humanity or capital, and if they are serving capital what is the cost? In the future we will look back at this time as a critical juncture- and we will either be doing it from our amazingly redesigned society or from the crumbling chaos that will descend if we do not change. The pandemic has been a warning, and it is important that we heed it and move ourselves into a more sustainable and healthy future.

Bibliography

- “Advance Child Tax Credit and Economic Impact Payments - Stimulus Checks.”
USAGov, <https://www.usa.gov/covid-stimulus-checks#:~:text=Child%20Tax%20Credit,COVID%2D19%20Stimulus%20Checks%20for%20Individuals,%241%2C400%20in%20March%202021>.
- Allyn, Bobby. “Fauci Estimates That 100,000 To 200,000 Americans Could Die From The Coronavirus” *NPR*, NPR, March 29, 2020, <https://www.npr.org/sections/coronavirus-live-updates/2020/03/29/823517467/fauci-estimates-that-100-000-to-200-000-americans-could-die-from-the-coronavirus>
- American Lung Association. “Climate Change and Air Quality.” *American Lung Association*, <https://www.lung.org/clean-air/climate-change>.
- The Associated Press. “China Delayed Releasing Coronavirus Info, Frustrating Who.” *AP NEWS*, Associated Press, 2 June 2020, <https://apnews.com/article/united-nations-health-ap-top-news-virus-outbreak-public-health-3c061794970661042b18d5aeaaed9fae>.
- Beals, Monique. “Rising Home Prices: A Timeline.” *The Hill*, The Hill, 5 May 2022, <https://thehill.com/business/3478213-rising-home-prices-a-timeline/>.
- Belluck, Pam. “More than 1 in 5 Adult Covid Survivors in the U.S. May Develop Long Covid, a C.D.C. Study Suggests.” *The New York Times*, The New York Times, 25 May 2022, www.nytimes.com/2022/05/24/health/long-covid-infections.html.
- Bennett, Geoff, and Courtney Norris. “CDC Director Dr. Rochelle Walensky Discusses How the Agency Is Addressing Covid Shortfalls.” *PBS*, Public Broadcasting Service, 6 Mar. 2023, <https://www.pbs.org/newshour/show/cdc-director-dr-rochelle-walensky-discusses-how-the-agency-is-addressing-covid-shortfalls>.

Black-Plumeau, Leslie. “New Data Shows Unprecedented Jump in Vermont Median Home Price.” *VHFA.org - Vermont Housing Finance Agency*, <https://vhfa.org/news/blog/new-data-shows-unprecedented-jump-vermont-median-home-price>.

Bohrer, Ashley J. *Marxism and Intersectionality*. transcript publishing, 2019. Print.

Bosa, Iris, et al. “Response to Covid-19: Was Italy (Un)Prepared?” *Health Economics, Policy, and Law*, U.S. National Library of Medicine, Jan. 2022, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7985656/>

Bull-Otterson, Lara, et al. “Post–COVID Conditions among Adult Covid-19 Survivors Aged 18–64 and ≥65 Years - United States, March 2020–November 2021.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 26 May 2022, www.cdc.gov/mmwr/volumes/71/wr/mm7121e1.htm.

Campbell, Charlie. “Exclusive: The Chinese Scientist Who Sequenced the First COVID-19 Genome Speaks Out About the Controversies Surrounding His Work” *Time*. Time, 24 August 2020, <https://time.com/5882918/zhang-yongzhen-interview-china-coronavirus-genome/>

Carey, Benedict and James Glanz. “Hidden Outbreaks Spread Through U.S. Cities Far Earlier Than Americans Knew, Estimates Say.” *The New York Times*, The New York Times, 23 April 2020, <https://www.nytimes.com/2020/04/23/us/coronavirus-early-outbreaks-cities.html>

“CDC - 10 Essential Public Health Services - Public Health Infrastructure Center.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 6 Mar. 2023, <https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html>.

“CDC Covid Data Tracker.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, https://covid.cdc.gov/covid-data-tracker/#trends_weeklycases_select_00

“CDC Current Outbreak List.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 30 Dec. 2022, <https://www.cdc.gov/outbreaks/index.html>.

“CDC Museum Covid-19 Timeline.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 16 Aug. 2022, <https://www.cdc.gov/museum/timeline/covid19.html>

Charatan, Fred. “Bush Announces US Plan for Flu Pandemic.” *BMJ (Clinical Research Ed.)*, U.S. National Library of Medicine, 12 Nov. 2005, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1283304/>

Chen, Caroline, et al. “Internal Emails Show How Chaos at the CDC Slowed the Early Response to Coronavirus.” *ProPublica*, 26 Mar. 2020, <https://www.propublica.org/article/internal-emails-show-how-chaos-at-the-cdc-slowed-the-early-response-to-coronavirus>.

Confessore, Nicholas et al. “How Kushner’s Volunteer Force Led a Fumbling Hunt for Medical Supplies.” *The New York Times*, The New York Times, 5 May 2020, <https://www.nytimes.com/2020/05/05/us/jared-kushner-fema-coronavirus.html>

Conlen, Matthew, et al. “How Full Are Hospital I.C.U.S Near You? - The New York Times.” *The New York Times*, The New York Times, <https://www.nytimes.com/interactive/2020/us/covid-hospitals-near-you.html>.

“Decades in the Making: mRNA Covid-19 Vaccines.” *National Institutes of Health*, U.S. Department of Health and Human Services, <https://covid19.nih.gov/nih-strategic-response-covid-19/decades-making-mrna-covid-19-vaccines>.

Dowell, Earlene K.P. "Remote Working, Commuting Time, Life Events All Affect Home Buyers' Decisions." *Census.gov*, 13 Apr. 2022, <https://www.census.gov/library/stories/2021/10/zillow-and-census-bureau-data-show-pandemics-impact-on-housing-market.html>.

Dowell, Earlene K.P. "Working from Home Caused a Spatial Shift in Daytime Population Away from Traditional Job Centers." *Census.gov*, 21 Feb. 2023, <https://www.census.gov/library/stories/2023/02/remote-work-during-pandemic-shifted-daytime-population.html>.

Eban, Katherine. "How Jared Kushner's Secret Testing Plan "Went Poof Into Thin Air." *Vanity Fair*, Vanity Fair, 30 July 2020, <https://www.vanityfair.com/news/2020/07/how-jared-kushners-secret-testing-plan-went-poof-into-thin-air>

Eckholm, Erik. "SARS Is the Spark for a Riot in China." *The New York Times*, The New York Times, 29 Apr. 2003, <https://www.nytimes.com/2003/04/29/world/the-sars-epidemic-fear-sars-is-the-spark-for-a-riot-in-china.html?searchResultPosition=1>.

Ehrenreich, Barbara and Arlie Russell Hochschild, editors. *Global Woman : Nannies, Maids, and Sex Workers in the New Economy*. New York, Metropolitan Books, 2003. Print.

Ferguson, Stephanie, and Isabella Lucy. "Data Deep Dive: A Decline of Women in the Workforce." *U.S. Chamber of Commerce*, U.S. Chamber of Commerce, 16 Dec. 2022, <https://www.uschamber.com/workforce/data-deep-dive-a-decline-of-women-in-the-workforce>.

Ferguson, Susan. *Women and Work: Feminism, Labour, and Social Reproduction*. Pluto Press, 2020. Print.

Ferré-Sadurní, Luis. “Health Agency under Cuomo 'Misled the Public' on Nursing Home Deaths.” *The New York Times*, The New York Times, 15 Mar. 2022, <https://www.nytimes.com/2022/03/15/nyregion/nursing-home-deaths-cuomo-covid.html>.

Fraser, Nancy. “Contradictions of Capital and Care,” *New Left Review* 100 (2016): 99–11

GAO - U.S. Government Accountability Office. “Operation Warp Speed: Accelerated Covid-19 Vaccine Development Status and Efforts to Address Manufacturing Challenges.” *Operation Warp Speed: Accelerated COVID-19 Vaccine Development Status and Efforts to Address Manufacturing Challenges* | U.S. GAO, <https://www.gao.gov/products/gao-21-319>.

“Genomic Epidemiology of SARS-CoV-2 with Subsampling Focused Globally over the Past 6 Months.” *Nextstrain*, Nextstrain, <https://nextstrain.org/ncov/gisaid/global/6m>

Goldstein, Joseph, and Jesse Mckinley. “Coronavirus in N.Y.: Manhattan Woman Is First Confirmed Case in State.” *The New York Times*, The New York Times, 2 Mar. 2020, <https://www.nytimes.com/2020/03/01/nyregion/new-york-coronavirus-confirmed.html>.

Hernández, Javier C. “Coronavirus Lockdowns Torment an Army of Poor Migrant Workers in China.” *The New York Times*, The New York Times, 23 Feb. 2020, <https://www.nytimes.com/2020/02/23/business/economy/coronavirus-china-migrant-workers.html>.

Heyward, Julia. “From shutdown to reopening: Here’s a look at N.Y.C. schools’ trek through the pandemic.” *The New York Times*, The New York Times. 13 September 2021, <https://www.nytimes.com/2021/09/13/world/reopening-timeline-nyc-schools.html>

Hill, Latoya and Samantha Artiga. "Covid-19 Cases and Deaths by Race/Ethnicity: Current Data and Changes over Time." *KFF*, 22 Aug. 2022, <https://www.kff.org/coronavirus-covid-19/issue-brief/covid-19-cases-and-deaths-by-race-ethnicity-current-data-and-changes-over-time/>

Hoyt, Kendall. *Long Shot : Vaccines for National Defense*. Cambridge, Mass: Harvard University Press, 2012. Print.

Huang, Pien. "Trump Sets Date to End Who Membership over Its Handling of Virus." *NPR*, NPR, 7 July 2020, <https://www.npr.org/sections/goatsandsoda/2020/07/07/888186158/trump-sets-date-to-end-who-membership-over-its-handling-of-virus>.

Institute of Medicine (US) Committee on Health Care for Homeless People. "Homelessness, Health, and Human Needs - NCBI Bookshelf." *National Center for Biotechnology Information*, National Library of Medicine, <https://www.ncbi.nlm.nih.gov/books/NBK218232/>.

Jaffe, Aaron. *Social Reproduction Theory and the Socialist Horizon: Work, Power and Political Strategy*. Pluto Press, 2020. Ebook.

"Labour Migration in China and Mongolia." *International Labor Organization*, <https://www.ilo.org/beijing/areas-of-work/labour-migration/lang--en/index.htm>.

Lafranieri, Sharon, and Noah Weiland. "U.S. Plans to End Public Health Emergency for Covid in May." *The New York Times*, The New York Times, 31 Jan. 2023, <https://www.nytimes.com/2023/01/30/us/politics/biden-covid-public-health-emergency.html>.

Leal Filho, Walter, et al. "Climate Change and Zoonoses: A Review of Concepts, Definitions, and Bibliometrics." *International Journal of Environmental Research and Public Health*, U.S. National Library of Medicine, 14 Jan. 2022, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8776135/>.

- Li, Xixing, et al. "Who Was the First Doctor to Report the Covid-19 Outbreak in Wuhan, China?" *Journal of Nuclear Medicine : Official Publication, Society of Nuclear Medicine*, U.S. National Library of Medicine, June 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7262218/>
- Lippman, Daniel. "The Purell presidency: Trump aides learn the president's real red line." *Politico*. Politico, 7 July 2019. <https://www.politico.com/story/2019/07/07/donald-trump-germaphobe-1399258>
- Marx, Eleanor, and Edward Aveling. "The Woman Question." *Marxists Internet Archive: Eleanor Marx*, Westminster Review, 1886, <https://www.marxists.org/archive/eleanor-marx/works/womanq.htm>.
- Marx, Karl, Friedrich Engels, and Robert C. Tucker. *The Marx-Engels Reader*. 2d ed. New York: Norton, 1978. Print.
- Marx, Karl et al. *Capital : a Critique of Political Economy*. London. Penguin Books in association with New Left Review, 1990. Print.
- Mies, Maria. "Colonization and Housewifization," in *Materialist Feminism: A Reader in Class, Difference, and Women's Lives*, ed. Rosemary Hennessey and Chris Ingraham (Routledge 1997), pp. 175–185
- Miller, Claire Cain. "Fathers Gained Family Time in the Pandemic. Many Don't Want to Give It Back." *The New York Times*, The New York Times, 12 Mar. 2023, <https://www.nytimes.com/2023/03/12/upshot/fathers-pandemic-remote-work.html>.
- ODNI Office of Strategic Communications. "Declassified Intelligence Community Assessment on COVID-19 Origins." *Declassified Assessment on Covid-19 Origins*, Office of the Director of National Intelligence , 29 Oct. 2021, <https://www.dni.gov/index.php/newsroom/reports-publications/reports-publications-2021/item/2263-declassified-assessment-on-covid-19-origins>.

- Pfeiffer, Sacha, and Austin Fast. "How the Paycheck Protection Program Went from Good Intentions to a Huge Free-for-All." *NPR*, NPR, 9 Jan. 2023, <https://www.npr.org/2023/01/09/1145040599/ppp-loan-forgiveness>.
- "Policy Responses to covid19." *IMF Policy Tracker*, International Monetary Fund, <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#F>.
- Reardon, Sara. "Long Covid Risk Falls Only Slightly after Vaccination, Huge Study Shows." *Nature News*, Nature Publishing Group, 25 May 2022, <https://www.nature.com/articles/d41586-022-01453-0#>.
- Regan, Helen, et al. "Wuhan Coronavirus Virus Spreads as China Scraps New Year Celebrations." *CNN*, Cable News Network, 24 Jan. 2020, <https://www.cnn.com/2020/01/23/china/wuhan-coronavirus-update-intl-hnk/index.html>
- Reinhart, Eric. "Fixing U.S. Public Health Will Require a Health-Systems Revolution - and for Physicians to Take a Backseat." *STAT News First Opinion*, STAT News, 24 Feb. 2023, <https://www.statnews.com/2023/02/24/fixing-public-health-systems-revolution-physicians-take-backseat/>.
- Reiter, Rayna R. *Toward an Anthropology of Women*. New York: Monthly Review Press, 1975. Print.
- "SARS." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 20 Feb. 2013, <https://www.cdc.gov/sars/about/index.html>.
- Shapiro, Eliza. "New York City Public Schools to Close to Slow Spread of Coronavirus." *The New York Times*, The New York Times, 15 Mar. 2020, <https://www.nytimes.com/2020/03/15/nyregion/nyc-schools-closed.html>.

- Silver-Greenberg, Jessica, et al. "Hospitals Got Bailouts and Furloughed Thousands While Paying C.E.O.S Millions." *The New York Times*, The New York Times, 8 June 2020, <https://www.nytimes.com/2020/06/08/business/hospitals-bailouts-ceo-pay.html>.
- Sonmez, Felicia. "Texas Lt. Gov. Dan Patrick Comes under Fire for Saying Seniors Should 'Take a Chance' on Their Own Lives for Sake of Grandchildren during Coronavirus Crisis." *The Washington Post*, WP Company, 24 Mar. 2020, https://www.washingtonpost.com/politics/texas-lt-gov-dan-patrick-comes-under-fire-for-saying-seniors-should-take-a-chance-on-their-own-lives-for-sake-of-grandchildren-during-coronavirus-crisis/2020/03/24/e6f64858-6de6-11ea-b148-e4ce3fbd85b5_story.html.
- Thielking, Megan. "As Covid-19 Tears through Navajo Nation, Young People Step up to Protect Their Elders." *STAT*, 25 May 2020, <https://www.statnews.com/2020/05/26/navajo-nation-covid-19-youth-response-elders-health/>.
- Thompson, Corinne N. et al, "Covid-19 Outbreak - New York City, February 29–June 1, 2020." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 17 Dec. 2020, <https://www.cdc.gov/mmwr/volumes/69/wr/mm6946a2.htm>.
- Vogel, Lise. *Marxism and the Oppression of Women : Toward a Unitary Theory*. New Brunswick, N.J: Rutgers University Press, 1983. Print.
- Wang, Philip. "Explosion of sea lion deaths in Peru amid deadly bird flu outbreak" *CNN*, CNN, 6 March 2023, <https://www.cnn.com/2023/03/06/americas/bird-flu-sea-lion-deaths-peru-intl-latam/index.html>
- Watkins, Ali, and William K. Rashbaum. "How Many People Have Actually Died from Coronavirus in New York?" *The New York Times*, The New York Times, 10 Apr. 2020, <https://www.nytimes.com/2020/04/10/nyregion/new-york-coronavirus-death-count.html>

“WHO Coronavirus (COVID-19) Dashboard.” *World Health Organization*, World Health Organization, <https://covid19.who.int/>

“WHO Timeline: WHO’s Covid-19 Response.” *World Health Organization*, World Health Organization, www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline

Wilder Smith, Annelies, et al. “Can We Contain the COVID-19 Outbreak with the Same Measures as for SARS?”, *The Lancet*, 5 Mar. 2020, [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30129-8/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30129-8/fulltext).

Williams, Joan C, et al. “Why Many Women of Color Don't Want to Return to the Office.” *Harvard Business Review*, 12 May 2022, <https://hbr.org/2022/05/why-many-women-of-color-dont-want-to-return-to-the-office>.

Woolf, Virginia. *A Room of One’s Own*. Martino Publishing, 2012.

“Wuhan: The London-Sized City Where the Virus Began.” *BBC News*, 23 Jan. 2020, www.bbc.com/news/world-asia-china-51202254.