Overconsumption and Modern Consumerism and Its Consequences

Ryan Poursohi

Department of Political Science, Diablo Valley College

POLSC 120: Introduction to Political Science

Adjunct Professor John Kropf

November 17, 2025

Abstract

Capitalist societies rely on constant economic growth to function. To achieve this, we have been consuming the Earth's resources at an unsustainable rate and using ever-growing amounts of energy. The issue is that a majority of the energy we consume comes from nonrenewable resources that release copious amounts of greenhouse gases into the atmosphere. The consequences of our overconsumption of Earth's resources, along with the emissions we release into the atmosphere every year, are becoming increasingly apparent. If society does not make a collective effort to reduce consumption and greenhouse gas emissions, the Earth will face ecological demise. Proposed solutions to the problem have focused on replacing our sources of energy production with renewable sources. The root cause of the problem, which is overconsumption, is rarely addressed. This paper examines the causes of overconsumption, its effects, and proposed solutions to climate change.

Overconsumption and Modern Consumerism and Its Consequences

Despite massive investment in renewable energy, the ever-growing amount of overconsumption in contemporary capitalist society is leading to great ecological and environmental disasters. Our planet is one with limited resources, and the idea that we can reduce climate change and save the planet by switching to a green power grid is simply a pipe dream. Ever since the Industrial Revolution, global emissions have been on the rise, and this trend continues, even as renewable technologies expand. Although renewable energy sources are growing, overall energy use significantly outpaces the speed at which renewable energy is being implemented.

Human nature's tendencies towards overconsumption, expansion, and the short-term solutions being proposed will drive humanity towards ecological self-destruction, unless changes are made to halt the current pace at which we are moving.

In 1950, the global population was 2.5 billion, while in modern times, it has more than tripled to nearly 8.3 billion. There has also been a significant increase in the amount of energy used per capita. Though the amount of energy consumed per person varies depending on socioeconomic factors, the average amount of energy per capita in America was 22,100 kWh in the 1950s. Studies show that the number is now up to 70,000-85,000 kWh. So, not only is the population 3x larger than it was just 75 years ago, but each person also consumes more (World Population, 2011).

The significant rise in global emissions after 1950 is due to both a largely increasing population and an increase in energy consumption per person. While switching to green power

sources can provide supplementary benefits, the core of the problem remains overconsumption. The only way to solve that is to reduce the amount of energy each person uses significantly.

How is the amount of energy a person consumes determined? Well, it extends far beyond things like your monthly power bill or the amount of gas required to fuel your car. The amount of energy you use is determined by the energy required to produce everything you purchase or consume. For example, if you buy a plastic toy, you are now contributing to the emissions caused as a byproduct of the energy needed during manufacturing. Or, if you own an electric vehicle, every time you charge it, the energy needs to be generated somewhere, and it's likely not all coming from renewable energy sources.

Defining overconsumption.

Overconsumption occurs when humans utilize resources at a rate faster than they can naturally replenish. It is often driven by the desire for more than what is actually necessary. That can be goods, energy, or services. This habit of consumption beyond sustainable limits is largely ingrained in contemporary capitalist society, and it is a significant factor driving environmental degradation.

Overconsumption extends beyond being a personal choice; it is deeply ingrained in society, rooted in human nature, and fueled by capitalism. Overconsumption is exacerbated by the consumerist culture readily apparent today. Wealth and material possessions are often associated with things like social status and personal success. This view, which equates wealth and material possessions with happiness and social status, is destructive. This phenomenon can be seen in the “keeping up with the Joneses” effect. In which individuals feel pressure to constantly keep up with or exceed the consumption of their peers. This effect turns consumption into a societal expectation and a habit (Brabaw, 2023).

Consumerism is reinforced by the capitalist system. Capitalism relies on continuous economic growth, which is achieved by getting people to buy things that they do not need and buy more than they need. Companies produce as much as possible to maximize profits, and use deceptive marketing tactics, planned obsolescence in products, and a focus on encouraging people to buy more than they need. Online shopping applications like Amazon make this process even easier; it takes less than 5 minutes to order something online.

Lastly, humans love to consume in general, and online shopping makes it even more addictive. Excessive and unnecessary shopping is often used as a way to cope with problems, since it provides an immediate dopamine hit and a sense of control. The term for this is “Retail Therapy”. People buy things all the time that they do not need, and the main goal of corporations is to influence you into making that mistake. Corporations intentionally design their products and advertising to take advantage of psychological patterns; for example, companies strive to make the purchasing process as fast and seamless as possible. Although on the outside, this seems like a good thing, it disconnects people from the decisions they are making by making it take only a second to buy something, so you are much more likely to make impulsive purchases without thinking about it. They also appeal to people's insecurities and social pressures by suggesting that purchasing a product will alleviate those issues.

Karl Marx’s idea of “commodity fetishism” is also a great contributor to overconsumption. Commodity fetishism is the concept that in capitalist societies, there is an intrinsic value placed on products that goes beyond the labor, materials, and environmental cost that creates them. Instead of seeing an object for what it's actually worth, there is a false ideological belief that it represents things like status, identity, or holds some intrinsic emotional value (Marx, 1999).

This disconnection fuels overconsumption because it leads to buying things becoming a form of seeking fulfillment, even though that fulfillment is only temporary. As a result, people often prioritize the symbolic value of a product over its actual usefulness. It drives a hedonistic cycle, where consumers chase short-term gratification from buying things they do not need, only to end up wanting more once the initial excitement wears off. This process is called a dopamine loop, and happens when you do something, and it gives you a hit of dopamine, and the brain learns to keep doing that same thing over and over again automatically. It gets to a point where it's no longer about the product you purchase, but rather the anticipation of the dopamine it will give you (Cutillo, 2021).

Corporations such as TikTok, Instagram, Snapchat, and online shopping apps intentionally design their platforms to exploit these reward loops, utilizing behavioral psychology and constant stimulation to keep people consuming and doomscrolling far beyond any reasonable amount. They design their algorithms to keep you scrolling, in search of more entertaining content and new material. The uncertainty of not knowing when the next hit of dopamine will occur is exactly what makes it so addictive (Reed, 2025).

This design mimics a variable reward schedule, which is one of the most addictive patterns of reinforcement in psychology. Personalized ads operate the same way. They analyze your engagement with different types of content and track your search history to show you products when you are most likely to make a purchase, rather than just advertising products broadly across the entire platform. Platforms also take advantage of your insecurities. Modern algorithms are designed to detect subtle signs of insecurity or stress, such as searches or engagement in content related to things like body image, self-improvement, loneliness, and breakups, to then suggest products that are supposedly capable of fixing those feelings, such as

giving ads for skincare products or fitness supplements, or anything that's associated with improving your life and image (Rankin, 2024).

They hit you when you are vulnerable, so you are more impulsive and more likely to make purchases in attempts to cure your boredom and sadness. This manipulation exacerbates the psychological dependence on buying as a coping mechanism by turning emotional discomfort into an opportunity to sell you things.

Social media and online shopping platforms are increasingly growing into single ecosystems, where the same algorithms designed to see what types of content keep users hooked, is now also able to determine what products you are most likely to buy, and boost content that's made to encourage you to buy things, like famous influencers telling people to buy a product because they earn a commission off of making sales. This exact system has been adopted by TikTok, in that content creators can promote products on the TikTok shop, and for each sale made off of their video, they earn a commission.

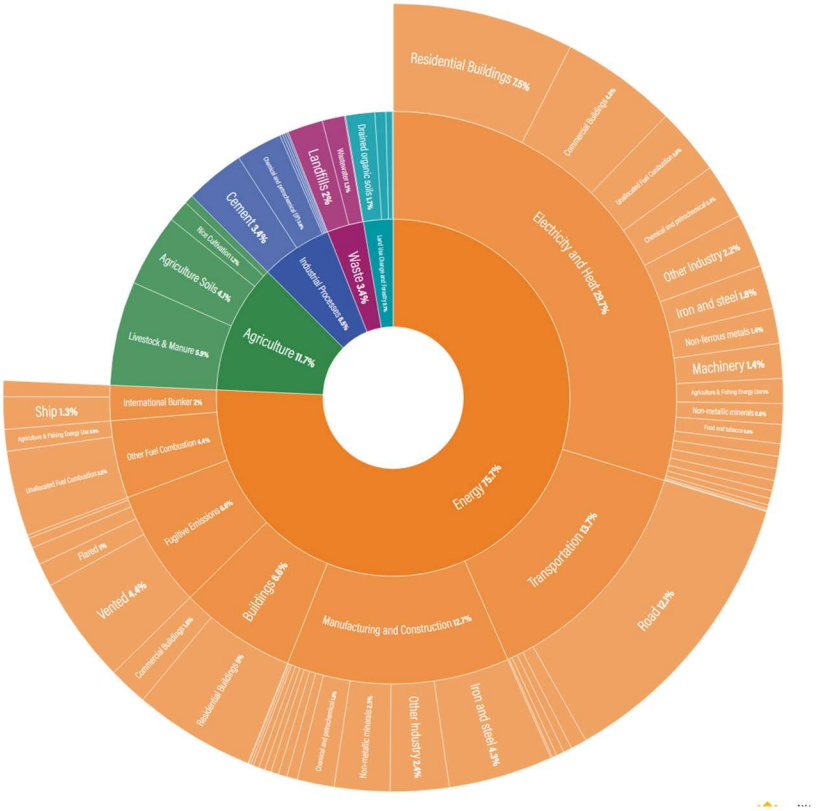
The Environmental Impacts of Overconsumption, and Proposed "Solutions"

The psychological manipulation used in consumer technology greatly exacerbates the primary issue behind ecological collapse, overconsumption itself. This paper will now review the environmental damage caused by overconsumption and the green "solutions" being proposed to fix it.

Overconsumption does not just affect our behavior and society, but it also has direct and measurable impacts on the planet. According to the United Nations, a large portion of global emissions come from burning fossil fuels to produce electricity and heat. The United States Environmental Protection Agency estimated that the economic sector of electricity and heat production made up 25% of global greenhouse gas emissions, based on data from an assessment

done by the Intergovernmental Panel on Climate Change in 2014. Just 7 years later, a newer study by the World Resources Institute shows that as of 2021, Energy production now makes up about 76% of all global emissions (Ge et al., 2024).

While the energy industry is responsible for roughly three-quarters of all global emissions, there are five main economic sectors that are responsible for greenhouse gas emissions: the energy sector, agriculture, industrial processes, waste, and land use change and forestry. There is nuance around what the second-largest sector of global emissions comes from, with some sources saying it's land use change and forestry, while other sources claim that the transportation industry is the second-largest contributor to global emissions. Regardless of what takes 2nd place, the energy sector is by far the most impactful, so it's best to focus on that. Here is a detailed circle graph that illustrates all global greenhouse gas emissions by sector and end-use. This chart is based on data recorded by ClimateWatch in 2021.



While it's essential to understand what sectors contribute the most to global emissions, the consequences of these emissions are equally alarming. The United Nations reports that rising greenhouse gas concentrations are causing significant changes to our planet's climate, ecosystems, and human societies. Ranging from rising global temperatures to ocean acidification, melting ice caps, ecosystems being destroyed, and impacts on human health and food security.

As the concentration of greenhouse gases in the atmosphere rises, the Earth's surface temperature also rises. According to the UN, since the 1980s, each decade has been increasingly warmer than the previous one, with the last decade, 2015-2025, being the hottest on record (United Nations, n.d.).

As a consequence of this heat, there has been an increase in heat-related illnesses and an increase in both the amount and severity of wildfires. When conditions are dry and hot, it's much easier for fires to start and spread more rapidly. The number of wildfires each year has been mostly consistent, as fires are a natural part of the ecosystem, but the intensity, severity, the overall burned areas, and the duration of these fires have gotten worse and worse. These wildfires, being exacerbated by climate change, are detrimental to both the ecosystem and human health. Not only do wildfires release large amounts of c02 into the atmosphere, but they also destroy trees and vegetation that help to filter out some of the CO2 in the atmosphere. According to NASA scientists, parts of the western United States, as well as Mexico, Brazil, and eastern Africa, now have fire seasons that are more than a month longer than they were 35 years ago. NASA scientists have also found that carbon emissions from wildfires increased by 60% globally from 2001 to 2023 (NASA, n.d.).

In addition to climate change, worsening wildfires, it also increases the amount of severe weather events, causing them to be more intense and occur more frequently. It exacerbates droughts in regions that are already water scarce. Warmer air can hold more water vapor, which leads to more water being evaporated and moisture being pulled out of the surface. This, in turn, leads to longer dry spells, greater water scarcity in certain regions, agricultural droughts that affect crops, and ecological droughts that threaten ecosystems. Along with this, droughts can also lead to extreme sand and dust storms, covering greater and greater amounts of land across continents in sand, and reducing land that could otherwise be used for growing food (United Nations, n.d.).

While climate change has detrimental effects on the land, its impact on the ocean are equally severe, if not more so. In recent decades, sea levels have been slowly rising every year due to the melting of ice caps. According to the UN, sea level rise has more than doubled over the last three decades, with an average of 4.77mm being added every year from 2013 to 2022. In addition to causing sea levels to rise, the ocean also absorbs heat and CO2 from the atmosphere, which has led to the ocean becoming more acidic and many coral reefs getting bleached. The UN states that if water continues to warm, by the end of the century, every single one of the world's coral reefs could bleach. Rising sea temperatures also increase the risk of irreversibly losing marine and coastal ecosystems. The UN also estimates that more than half the world's marine species may stand on the brink of extinction by 2100. When it comes to coral reefs, every fraction of a degree matters because with just a 2°C rise, 99% of coral reefs will vanish (United Nations, n.d.).

Climate change also makes coastal storms such as hurricanes more destructive. The warm weather conditions caused by global warming create favorable conditions for hurricanes to

intensify more quickly. Research also suggests that the proportion of significant hurricanes in the Atlantic Ocean, classified as category three or higher, has doubled since 1980 (Environmental Defense Fund, 2025)

All the effects that climate change has on the ocean and tropical weather have significantly impacted the lives of Pacific Islanders, such as those from the islands of Melanesia, Micronesia, and Polynesia. Climate change threatens these coastal communities with flooding, coastal erosion, and storm surges (Parksons, 2022).

According to the United Nations, climate change is also responsible for the displacement of 45.8 million people due to weather-related disasters in 2024. The United Nations also estimates that every year, environmental factors caused by climate change, such as air pollution, disease, extreme weather events, forced displacement, increased pressures on mental health, and increased malnutrition in places where people cannot grow or find a sufficient amount of food, take the lives of around 13 million people. (United Nations, n.d.)

Despite the severity of these impacts, corporations often respond not by reducing their environmental impact but simply masking it behind “green” initiatives. The central core of the problem is overconsumption, but companies still want to sell products, so instead of addressing that, they practice greenwashing in order to give the public a better view of them, so they keep consuming without any guilt. Greenwashing creates an illusion that purchasing a product is environmentally harmless, when that is often not the case (United Nations, n.d.).

According to the United Nations, tactics used by companies to greenwash include claiming to be on track to reduce a company's emissions, when in reality there is no actual plan in place to reduce emissions. Companies can also put misleading labels on products like “eco-friendly” or “green” because there is no standardized definition for either of those words, so they

can be thrown around loosely. Companies also like to inflate how much they are really doing to help reduce emissions by implying that minor improvements somehow have a major impact. Greenwashing undermines real initiatives being taken to reduce emissions and address the climate crisis. Companies use deceptive marketing and false claims of being sustainable to mislead consumers and potential investors into believing that they are sustainable and eco-friendly. According to the United Nations, 60% of sustainability claims made by large European fashion companies are “unsubstantiated” and "misleading” (United Nations, n.d.).

To combat rising emissions and climate change, during the 2015 UN climate change conference in Paris, the Paris Agreement was brought to fruition. The Paris Agreement is a legally binding international treaty, under the United Nations Framework Convention on Climate Change, also known as the “UNFCCC.” The Paris Agreement works on a 5-year schedule, where every 5 years the 195 parties that have signed or ratified the Paris Agreement are required to report the steps and initiatives that they have taken in order to reduce emissions and keep the earth from warming further (United Nations, n.d.)

The only country that is not involved in the Paris agreement is the United States, which formally withdrew as of late 2025. There are three other nations, Iran, Libya, and Yemen, that have signed the agreement but have not yet ratified it. Even North Korea has ratified the Paris Agreement. The United States is the only country that outright rejects participation in the Paris Agreement, and while the US is currently in the agreement, President Trump has formally withdrawn, and the full withdrawal will take place in January 2026 (Perez & Waldholz, 2025; United Nations, n.d.).

Even with international treaties in place, the commitments made to the Paris Agreement are still limited due to the fact that they are more focused on reducing the symptoms of climate

change, rather than the core problem, which is the rampant cycle of overconsumption that many people attribute to today. Focusing primarily on technological solutions, more efficient, and renewable energy sources tend to treat the issue of climate change as one of energy substitution, rather than an issue of systemic overuse of Earth's resources. As long as global demands for energy increase, even the best renewable technologies will struggle to keep up with the pace of increased demand, and emissions will remain high. To truly solve climate change, it requires confronting the contemporary culture of overconsumption and the modern economic systems that rely on and even promote limitless consumption to survive. Even as the capacity of solar and wind energy increases, the overall demand for energy also increases. This leads to renewables just supplementing fossil fuels, not replacing them. There are also many oil mega corporations worldwide that rely on the increasing energy demand to grow, and attempting to swap all energy grids to be renewable is simply not possible without greatly impacting one of the largest and most critical industries in the world. Many economies and nations across the world rely on revenue from the oil industry to survive. With an economic system that relies on perpetual growth to function, it's impossible to slow down the increase in demand for energy, and all of the solutions so far are mostly just attempts at energy substitution, rather than addressing why we use so much energy in the first place.

There are many things that we could do as a society to limit our personal energy consumption, such as focusing on using products that are repairable or do not need to be replaced every few months or taking more time to reflect on the purchases we make, and deciding if they are actually needed or not. But there is only so much that individuals can do in order to reduce climate change. According to an article by the University of Oxford, only 57 producers are responsible for 80% of all fossil fuel and cement CO2 emissions since 2016. (Ives et al., 2024)

In order to reduce the emissions of large corporations, strict policies must be enforced on them by the government. Such as limits on how much emissions they can produce, bans on single-use plastic, Carbon pricing, and more punishment on companies that design their products in order to have planned obsolescence, so fewer things need to be constantly repurchased. Shifting towards a circular economy prioritizes things like reusability, repairing broken products, and recycling materials.

If more people and companies were mindful of the lifespan of the things they consume, overall consumption drops, and emissions go down with it. Expanding the infrastructure for public transportation can also greatly benefit the environment, by allowing people to have a cheap, safe, and efficient way to get around, there is less energy wasted on producing unneeded cars, and there are fewer emissions from consumer vehicles. In countries like France and many parts of Europe, people often do not own cars, not because they cannot afford them, but because the transportation infrastructure is so efficient that it makes no sense to buy a car when public transit can get you almost anywhere for far cheaper.

While there are many factors behind climate change, and the complete solution may not be fully clear yet, switching to things that do not need to be constantly consumed, like cars, which need to be repurchased every few years due to reliability issues, or plastic spoons and utensils that get thrown away after every use. Overall, aiming to reduce total consumption is a better solution than attempting to replace all energy with renewable alternatives. This is not to say that the expansion of renewable energy is useless; however, there are additional steps that should be taken in conjunction with implementing more renewables.

In a utopian society, there would be no climate change. All energy would come from renewable sources, such as solar panels and windmills. Still, the amount of money it would take

to replace all of our existing infrastructure with a new “green” grid is tremendous. Due to other factors like corporate lobbying and consumerism's cultural entrainment into contemporary society, that dream may not be achievable as soon as it needs to be accomplished.

While both renewable energy sources and technological innovation are important tools, they alone cannot solve the climate crisis without addressing the deeper issues, which are humanity's patterns of overconsumption, the consumerist culture that's ingrained into contemporary society, the decisions of large corporations, and governments in the policies they make in order to combat rising emissions and demand for more power.

Whether or not our nature as humans will drive us towards ecological collapse and end as a species is not a matter of inevitability, but the actions that we take as a society to maintain the habitability of Earth. Our propensity towards progress and innovation can help save us, but many simply ignore the effects of climate change due to the fact that it may not greatly impact them during their lifetime. One thing that is naturally combating overconsumption is the declining birth rates seen worldwide in recent years. It's very hard for the Earth to be able to sustain an ever-growing population without facing some harm. According to various sources, we are currently consuming resources at a rate that takes 1.7 Earths to be sustainable, while if everyone lived like the average American, we would need over 5 Earths. (Overshoot Day, 2022)

Thankfully, this problem may be on track to solving itself. Global birth rates are currently at historical lows, and over time, as generations pass, the population will begin to decline. Earth's population naturally declining will make it easier for the Earth to sustain the population.

According to the Institute of Health Metrics and Evaluation, by the year 2100, it's estimated that 97% of countries will not have high enough fertility rates to sustain their populations. Whether or not this decline in population will cause harm or be beneficial is up for

debate, but one thing that's certain is that it will be much easier for the earth to sustain a lower population, at least at our current consumption rate (Health Data, 2024).

References

Albers, S. (2024, December 10). Why "retail therapy" makes you feel happier. *Cleveland Clinic.* https://health.clevelandclinic.org/retail-therapy-shopping-compulsion

Amnesty International. (2024, April 10). Large companies must do far more to cut carbon emissions and limit climate damage. https://www.amnesty.org/en/latest/news/2024/04/global-large-companies-must-do-far-more-to-cut-carbon-emissions-and-limit-climate-damage/

Bloom, D. E., Kuhn, M., & Prettner, K. (2025, June 2). the debate over falling fertility. *IMF.* https://www.imf.org/en/publications/fandd/issues/2025/06/the-debate-over-falling-fertility-david-bloom

Brabaw, K. (2023, July 28). Why keeping up with the Joneses is problematic. *The University of Chicago Booth School of Business.* https://www.chicagobooth.edu/review/why-keeping-up-with-joneses-is-problematic

Cho, R. (2020, December 16). How buying stuff drives climate change. *State of the Planet.* https://news.climate.columbia.edu/2020/12/16/buying-stuff-drives-climate-change/

Christiano, T. (2021, November 15). Algorithms, manipulation, and democracy: Canadian journal of philosophy. *Cambridge Core.* https://www.cambridge.org/core/journals/canadian-journal-of-philosophy/article/algorithms-manipulation-and-democracy/84A19DDC35E3983C0C2FA9FAD01185C9

Cutillo, M. (2021, September 9). Dopamine-driven feedback loops: What are they? *The Outlook.* https://outlook.monmouth.edu/2021/03/dopamine-driven-feedback-loops-what-are-they/

Earth Overshoot Day. (n.d.) How many earths? How many countries? https://overshoot.footprintnetwork.org/how-many-earths-or-countries-do-we-need/

EDF. (n.d.). How climate change makes hurricanes more destructive. *Environmental Defense Fund.* https://www.edf.org/climate/how-climate-change-makes-hurricanes-more-destructive

Ge, M., Friedrich, J., & Vigna, L. (2024, December 5). Where do emissions come from? 4 charts explain greenhouse gas emissions by sector. *World Resources Institute.* https://www.wri.org/insights/4-charts-explain-greenhouse-gas-emissions-countries-and-sectors

Georgia Tech. (2025, September 17). Why do big oil companies invest in green energy? *Research.* https://research.gatech.edu/why-do-big-oil-companies-invest-green-energy

Goldman, B. (2021, October 29). Addictive potential of social media, explained. *News Center.* https://med.stanford.edu/news/insights/2021/10/addictive-potential-of-social-media-explained.html

Health Data (2024, May 18). Health Data*:* Dramatic declines in global fertility rates set to transform global population patterns by 2100. *Institute for Health Metrics and Evaluation.* https://www.healthdata.org/news-events/newsroom/news-releases/lancet-dramatic-declines-global-fertility-rates-set-transform

IPCC. (n.d.). Chapter 4: Sea level rise and implications for low-lying islands, coasts and communities — special report on the ocean and Cryosphere in a changing climate. https://www.ipcc.ch/srocc/chapter/chapter-4-sea-level-rise-and-implications-for-low-lying-islands-coasts-and-communities/

Ives, M. C., Wade, B., & Rekker, S. (2024, April 4). Only 57 producers are responsible for 80% of all fossil fuel and... *INET Oxford.* https://www.inet.ox.ac.uk/news/only-57-producers-are-responsible-for-80-of-all-fossil-fuel-and-cement-co2-emissions-since-2016-new-report

Jago, E. (2022). Algorithmic manipulation: How social media is shaping our theology. *Scholars Crossing.* https://digitalcommons.liberty.edu/eleu/vol6/iss1/9/

Marx, K. (1999). Marx-commodity-Fetishism.pdf. https://web.stanford.edu/~davies/Symbsys100-Spring0708/Marx-Commodity-Fetishism.pdf

McCarthy, B. (2020, June 19). Our love affair with capitalism is killing the planet. *Monmouth Magazine.* https://www.monmouth.edu/magazine/our-love-affair-with-capitalism-is-killing-the-planet/

Meinrenken, C. J., Chen, D., Esparza, R. A., Iyer, V., Paridis, S. P., Prasad, A., & Whillas, E. (2020, April 10). Carbon emissions embodied in product value chains and the role of Life Cycle Assessment in curbing them. *Nature News.* https://www.nature.com/articles/s41598-020-62030-x

Mohanlal, C. (2025, July 10). Online platforms use manipulative design. *European Digital Rights (EDRI).* https://edri.org/our-work/new-research-shows-online-platforms-use-manipulative-design-to-influence-users-towards-harmful-choices/

Morin, A. (2019, November 25). How “keeping up with the Joneses” on social media is damaging everyone’s mental health. *Forbes.* https://www.forbes.com/sites/amymorin/2019/11/25/how-keeping-up-with-the-joneses-on-social-media-is-damaging-everyones-mental-health/

NASA. (2024, October 23). Extreme weather - NASA science. https://science.nasa.gov/climate-change/extreme-weather/

NASA. (2025, May 28). Wildfires and climate change - NASA Science. https://science.nasa.gov/earth/explore/wildfires-and-climate-change/

Perez, A., Waldholz, R. (2025, January 21). Trump is withdrawing from the Paris Agreement (again), reversing U.S. climate policy. *NPR.* https://www.npr.org/2025/01/21/nx-s1-5266207/trump-paris-agreement-biden-climate-change

Parfait E. (2022, September 13). Why young people aren't keeping up: From the Joneses to the Kardashians. *The Conversation.* https://theconversation.com/why-young-people-arent-keeping-up-from-the-joneses-to-the-kardashians-60149

Parsons, C. (2022, May 23). The Pacific Islands: The Front Line in the Battle Against Climate change. *NSF.* https://www.nsf.gov/science-matters/pacific-islands-front-line-battle-against-climate

Rankin, H. J. (2024, June 26). The psychological dangers of marketing. *Psychology Today.* https://www.psychologytoday.com/us/blog/how-not-to-think/202406/the-psychological-dangers-of-marketing

Reed, P. (2025, March 25). Thwarting the social media algorithm with Behavioural Science. *Psychology Today.* https://www.psychologytoday.com/us/blog/digital-world-real-world/202503/thwarting-the-social-media-algorithm-with-behavioural-science

Rose, S., & Dhandayudham, A. (2014, February 3). Towards an understanding of internet-based problem shopping behaviour: The concept of online shopping addiction and its proposed predictors. *Journal of Behavioral Addictions.* https://pmc.ncbi.nlm.nih.gov/articles/PMC4117286/

Terenzi, M. (2024, December 31). Modeling persuasion in social media: A theoretical approach to algorithmic content distribution and manipulation. *Journal of Sociocybernetics.* https://papiro.unizar.es/ojs/index.php/rc51-jos/en/article/view/10992

U.S. EPA. (2020, September 10). global greenhouse gas emissions data. *EPA.* https://19january2021snapshot.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data_.html

UNEP. (2020, December 9). Emissions Gap Report 2020. *United Nations Environment Programme.* https://www.unep.org/emissions-gap-report-2020

United Nations. (n.d.-a). About Carbon Pricing. *Unfccc.int.* https://unfccc.int/about-us/regional-collaboration-centres/the-ciaca/about-carbon-pricing

United Nations. (n.d.-b). Causes and effects of climate change. https://www.un.org/en/climatechange/science/causes-effects-climate-change

United Nations. (n.d.-c). Greenwashing – the deceptive tactics behind environmental claims. https://www.un.org/en/climatechange/science/climate-issues/greenwashing

United Nations. (n.d.-d). Over-consumption in the world's richest countries is destroying children's environments globally, new report says. *UNICEF* https://www.unicef.org/press-releases/over-consumption-worlds-richest-countries-destroying-childrens-environments-globally

United Nations. (n.d.-e). How is climate change impacting the world's oceans https://www.un.org/en/climatechange/science/climate-issues/ocean-impacts

United Nations Treaty Collection. (n.d.). https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en#7

University Of Michigan. (n.d.). U.S. environmental footprint factsheet. *Center for Sustainable Systems.* https://css.umich.edu/publications/factsheets/sustainability-indicators/us-environmental-footprint-factsheet

US Census Bureau. (2021, October 8). World population: 1950-2050. Census.gov. https://www.census.gov/library/visualizations/2011/demo/world-population--1950-2050.html

Vega, E. (2024, April 30). Fordham University Fordham University Fordham Research Commons. https://research.library.fordham.edu/cgi/viewcontent.cgi?article=1162&context=environ_2015

Woolums, A. L. (2023, October 30). The excessive nature of overconsumption in American culture. *UAB Institute for Human Rights Blog.* https://sites.uab.edu/humanrights/2023/10/24/the-excessive-nature-of-overconsumption-in-american-culture/