The Hidden World of Online Shopping

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Abstract: This essay looks at the impact of packaging waste due to online shopping surging during the Covid Pandemic. Through researching the problem, this argues that not only are delivery companies and waste managements to blame, but consumers share a large part of the burden of the harmful environmental effects of the packaging.

Key Words: environment, online shopping, packaging waste

The day I was hired for my first job when I was 16, I would never have anticipated that three days later that I would spend weeks isolated at home with the four walls of my room being all too recognizable. Due to the severity of the Covid pandemic, which became a collective anxiety in 2020, I was forced to take a leave of absence with only two days of working. However, with only a brief taste of the adult world, my mother and other immunocompromised people were forced to give up routine and abandon traditional shopping for their health. This resulted in my mom and many others taking advantage of the convenience of online shopping which would later have unprecedented consequences.

Even before the pandemic we lived in an age of internet dependency where we found ourselves strapped tight to the world of online shopping. Whether it's Door Dash, Amazon or even businesses that are only based in internet spaces, it is difficult to integrate into society without some participation and all kinds of new ways of commerce were created as a result of Covid. E-commerce sales, according to Catherine Boudreau (2021) from the U.S Census Bureau, rose to almost to 32% in 2020. This could be seen with individuals opening their doors multiple times a day to packages that would later pile up on their curbs for trash pickup. This industry has many moving parts that have impacted the environment in different ways. Through the extreme increase in online shopping causing a congestion of packaging waste, the negative environmental

impacts outweigh the convenience and major economic contributions. American consumers must hold themselves, delivery companies and local governments accountable for this waste.

Online shopping is already a more convenient option for consumers and the industry has managed to make it even more with express delivery. But its advertising lacks transparency in its harmful effects to our environment. Express delivery is simply faster delivery where instead of getting orders in roughly five days, consumers can have items at doorsteps the next day. Amazon has been a main player in express delivery but more importantly China is the foundation. With China being the originator for imports in dozens of countries, in the past few years the country has seen its damaging environmental and health effects.

Express delivery, in its mission to travel quick and easy, uses excessive packaging. Companies tend to over-package items for protection, which is a sustainable reason, but has created an unsustainable issue. Companies end up using plastic materials that cannot be recycled solely because plastic is cheaper. In a study investigating express delivery effects, the School of Civil Engineering in Shenzhen China recorded that in 2017, with more than 40 billion orders shipped with express delivery, a large amount of them used plastic material containing polyvinyl chloride or PVC (Duan et al., 2019). The problem with this type of plastic is that it is non-degradable, but commonly used, which puts congestion stress on landfill facilities. These researchers found that about 63% of this plastic waste is being transported to landfills (Duan et al., 2019). This overaccumulation is resulting in landfills turning to incineration for disposal which is presenting the environment with yet another dangerous effect. It is difficult to see a way out of the vast accumulation of trash.

With PVC plastic being burned, low levels of toxic fumes are releasing into the atmosphere adding onto another major issue, climate change. In response to the pleas of the

scientific community, developed nations have been scrambling to find ways to reduce their emissions production.

A popular scapegoat for today's climate crisis is the number of cars on the road emitting CO2 in the atmosphere, but many fail to recognize the piles of waste in our landfills. Similarly, when looking at online shopping as a factor, people only point out the increase of delivery trucks, completely disregarding how landfills are dealing with packaging (Boudreau, 2021). As previously stated, PVC plastic being burned releases low levels of toxic fumes in the atmosphere. However, there are more materials causing an issue. For example, according to the director of MIT's Real Estate Innovation Lab, research was conducted that found cardboard boxes from online deliveries can be linked to one of the largest carbon pollutants in the sector (Boudreau, 2021). This is due to the reliance on incineration of these materials accounting for 105.5 million metric tons of CO2 in 2021 according to EPA data (Boudreau, 2021). Essentially, this issue can be viewed through a domino effect lens. Currently, it is normal again to venture out for everyday activities, but there is still this tight hold on ordering our food, clothing, and necessities online. Online delivery causes more cardboard boxes for trash pickup but if there is too much for recycling sites, then the default method of disposal is burning furthermore increasing our emissions footprint. So, this raises the question, why are people still using online shopping?

The issue with this new rise in behavior is that consumers are unable to see the impacts online shopping has on the environment. Companies have built this shadowy screen of transparency where we are unaware of the implications of express shipping, if any of the materials from the excessive packaging are being recycled as claimed, and where exactly this material is going if not recycling facilities. Poor recycling infrastructure has become a common characteristic in many countries including the United States and China.

Not until 2018 did the United States come face to face with how uncontained their recycling system is. Following the study from Shenzhen China in 2017, the next year China tried to address its incineration pollution by instituting heavy restrictions on imported waste (Ripka, 2018). Even though a fair amount of waste including from packaging was being processed here in the U.S., a large portion of our waste was exported to China (Ripka, 2018). With the high rates of online shopping orders, domestic recycling facilities got overwhelmed. Pete Keller, who is the Vice President of recycling and sustainability at a waste management facility called Republic Services, raised alarms a few years ago when he said, "All of a sudden, material being collected on the street doesn't have a place a go," (Ripka, 2018). Republic Services, however, is a national company dealing with over a million tons of material making the effects of these restrictions from China so imagine the detrimental effects on smaller companies. For example, according to Ripka (2018), Rogue Disposal and Recycling based in Oregon sent most of their waste, including recyclables, to landfills in the beginning of 2018. Once at the landfill, the waste sat there to decompose or was incinerated. Not only Oregon has been hit hard by China's restrictions, but other western states as well. Ripka reports that garbage trucks and officials in these states were refusing to accept items for recycling (2018). This sheds light on how fragile our recycling infrastructure has been for awhile now.

To keep up with China's restrictive list of waste the U.S can export required extensive sorting on our part which should have already been a practice but unfortunately was not. For many companies, separation was too expensive. Our inability to efficiently separate trash resulted in combining all waste for landfills or completely shutting down. If it wasn't for our extreme dependence on online shopping adding to this overproduction of waste our infrastructure cannot handle, we would be in a different position. These restrictions happened at a detrimental

time in our society where we are receiving 3-5 packages a day for our daily essentials, and the American consumer has no idea the packaging is not being disposed of properly. Fortunately, many American waste companies are starting to find other importers for this waste pile up but what about the damage we already caused? There will come a time where no facility can handle the amount of online packaging material we acquire and later throw away.

With online shopping being a major contributor to the economy and our day to day lives, the opposing side of this issue questions if this consumer behavior is even a part of the problem. According to Ripka (2018), the main factors of comparison are whether traditional or online shopping is better for the environment. For example, looking at online shopping's benefits, someone could say that there are fewer people on the roads and more people on the internet, therefore emissions are down. However, when comparing which shopping method is better, consumers are using both. Even though more people are using sites like Amazon and ordering takeout every night, in almost every household there is a mixture of traditional and online commerce, so the comparison almost becomes irrelevant. The important topic to focus on is sustainability. There is no reversing the effects of incinerated material and waste piling up in landfills but there is a way to pave for a cleaner road. Some may say to persuade consumers to be sustainable but is not a long-term solution that can address the billions ordering online. It is a difficult task to change consumer behavior. And because its "invisible," consumers are uncapable of understanding the sheer intensity of how much our packaging waste is hurting the environment because it has become much bigger than we can even imagine.

It is time to pressure top influential companies to adapt to consumer behavior because online shopping has become a habit for our convenience. Amazon is among the most powerful that plays a heavy hand in this issue. According to an article analyzing a report from Oceana

(Mufson, 2021), approximately 599 million pounds of plastic from packaging was generated from the covid pandemic from Amazon. More importantly, of that waste, the amount that was ending up in oceans was compared to, "a delivery van full of plastic dumping it's payload into ocean every 67 minutes," (Mufson, 2021). This report ended up soliciting a response from Amazon, claiming that the report was off in its findings (Mufson, 2021). Whether or not that is true, this illustrates the action that should be taking place against delivery heavy companies on their recycling practices. Unfortunately, if online consumers and large-scale companies do not accept responsibility on these harmful effects then no environmentally responsible operations will take place.

Being a part of the generation that older ones criticize for relying on the internet too much because it could damage our health, it is almost ironic to have them be put in powerful positions and disregard how online shopping could damage our environment. In a sense, older generations were the ones to begin the conversation of doubting technological advances in the first place. Online shopping has grown to heights that seem incomprehensible resulting in packaging waste horrors that cannot be contained without a proper discussion of responsibility. In short, everyone is responsible, from online consumers to big CEOs who make a profit to local governments and states which have failed to develop sustainable recycling infrastructure. There has been a heavy lean towards what's more convenient whether that is not wanting to drive to the grocery store or finding it easier to burn rather than recycle delivery materials. Overall, the accumulation of online shopping waste, no matter how much pleasure hitting the "Complete Order," button in online carts gives us, is molding our environment to merely be a display of all of human nature's consequences.

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