



This diagram illustrates the research and world view of Trash Academy. Together we explored the invisible impacts of consumer culture driven by corporate interests.  
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Trash Academy

# What is an Implosion?

At Trash Academy, one of our primary goals is to complicate the seemingly simple and straightforward issue of trash. Understanding, unpacking and analyzing complex systems is a fundamental part of our praxis, and towards those ends the implosion method has been very valuable. Working with the implosion method has presented us with a potent opportunity for collective learning; we have found the implosion to be a particularly useful tool for interrogating consumer culture and revealing the hidden connections and complexities behind commonly used and discarded consumer goods.

"Any interesting being...can—and often should—be teased open to show the sticky economic, technical, political, organic, historical, mythic, and textual threads that make up its tissues." - Donna Haraway

The 'implosion' is a unique and fascinating research method for exploring hidden connections and complexities, pioneered and developed by professor Donna Haraway. Those who have found value in this method include educators, researchers, scientists, engineers, systems thinkers, activists hoping to sharpen their analysis of systems of oppression, and many others. Because the implosion method fosters the development of concrete, situated knowledge, it is especially useful for helping us to understand the world as it is rather than as it is perceived through the often subjective lenses of ideology, politics or personal perspective.

Trash Academy's unique angle on communicating via the implosion method involves horizontal collaboration with community members, youth, artists, activists, environmental justice advocates, and experts. Because we prefer to address the serious issues of climate change and environmental justice through the point of entry of fun and creativity, we visualize and diagram the implosion rather than relying exclusively on text.

If you would like to explore the implosion method as a possible educational tool, please visit our website for guidance and detailed instructions: [trashacademy.org/implosion](http://trashacademy.org/implosion)

# IMPLOSION DIMENSION

## Material

Oil and natural gas are the main materials used to make plastics. These fossil fuels are extracted from deep in the ground through oil drilling and hydraulic fracturing.

At each fracking well, up to 16 million gallons of water are mixed with up to 1,084 different chemicals and blasted through the bedrock below. This process cracks the rock and releases natural gas. Both oil drilling and fracking cause serious air and water pollution. Many chemicals in fracking fluid are hazardous to human health and the fluid can seep into the water table, destroying drinking water and farmland. Fracking wells also release methane into the air around them, a greenhouse gas that harms human health and contributes to global warming.

There are 7,788 active fracking wells in Pennsylvania and thousands of miles of pipelines that carry oil and natural gas to be heated and refined at cracker plants. The end result is polyethylene, a substance that forms plastics of all shapes and sizes.

Heat and pressure determine the size and thickness of plastic bags. This process is called extrusion and involves the pushing and melting plastic pellets through a tube. Once printed on and boxed up, plastic bags get shipped from plastic plants to stores all over the world.

In Pennsylvania, plastics are considered a "cradle to grave" issue because every part of the process, from production to disposal, happens in this state. From fracking wells, to pipelines, to cracker plants, to stores, plastic bags end their cycle littered in our streets, floating in our waterways, sitting in landfills, and burned in waste incinerators.

## Disposal/Health

Plastic bags break down into microplastic particles in our soil, ground water, and air, releasing chemicals that make us sick. Obesity, reduced sperm counts, asthma, and increased rates of breast, ovarian, testicular, and prostate cancers can all be connected to the littering and incineration of plastics in our environments.

People of color are much more likely to live near environmental hazards. Studying how the United States deals with its trash exposes the history of these enduring disparities. Just look at where litter, waste incinerators, and landfills are placed in Philadelphia, around the country, and abroad! Not only are places with more people of color targeted for toxic energy extraction, production plants, and waste disposal, but they are also given fewer resources to deal with these harms. This is due to the centuries of racist politics that have formed our economic, energy, housing, education, and judicial systems.

17% of floatables in Philly's waterways are plastic bags. Around the world, plastic bags clog storm drains, getting pulled through sewers into rivers and oceans. By 2050, there will be more plastic in the ocean than fish.

Because of how cheap and thin film plastics are, it doesn't make economic sense to recycle them. Most recycling systems can only process thicker plastics, like milk jugs and water bottles. Even so, the plastic industry has insisted on printing the recycling symbol on bags. This keeps up the facade that trash is being recycled, rather than burned in waste incinerators and sent to landfills.

Ever noticed the recycling symbols numbered from 1 to 7? It's a big lie that all of these types of plastics are recycled. Most systems only accept #1 and 2 plastics, but with the recycling symbol on everything, people put all sorts of plastics in their bin. When grocery bags and other film plastic end up at recycling centers, they clog the machinery, slowing things down with extra costs and labor. The plastic industry intentionally created this number system to make plastics seem more sustainable than they really are!

Plastics first began to be produced on a large scale in World War II. By the end of the war in the United States, incomes and the desire to shop were on the rise. Consumerism and industrial plastic production went hand in hand and in 1965, the plastic bag was invented. Five years later, people began to question the widespread production of plastic when they saw all the garbage. In the face of a growing environmental movement, the plastic industry worked hard to justify itself. Dupont gave \$5 million to form the Council for Solid Waste Solutions, uniting the country's major plastic companies. They lobbied city and state governments around the country, promoting plastics and pushing for the scam of a number system we have today.

## Political

Unable to deal with our own trash, the US annually exports 1 million tons of plastic waste abroad. In countries like Indonesia, Cambodia, Thailand, and Senegal, people sort and melt down plastics, working for low wages in toxic conditions. Poorer, predominantly nonwhite nations should not have to support the consumption of wealthier, whiter countries. This global issue of environmental justice, formed by the long histories of colonialism and imperialism, must be addressed.

Since plastic bags are made from oil and natural gas, it makes sense that they all similarly damage our health, air, water, and climate. The heating of oil and natural

gas to make plastics releases greenhouse gases into the air, trapping heat in our atmosphere. Methane, one of the most powerful of these gasses, is also released from fracking wells and landfills. This causes climate change, leading to issues like desertification, extreme weather events, and sea level rise.

It's no coincidence that the major oil and natural gas companies all own plastic companies too. Corporations like Dupont, Exxon Mobil, Amoco, and Chevron shell out billions of dollars to advertise their industries, publish information that hides and delegitimizes the impacts, negotiate large contracts with chain stores, invest in new plastic production facilities, and lobby legislators to push for government funding and weakened environmental and public health protections.

All of this investment amounts in an overwhelming amount of government support to fossil fuel companies. 85% of all global subsidies go to the fossil fuel companies. In 2017, this amounted to the world's governments collectively spending \$5.2 trillion.

Because subsidies are buried in complicated state budgets and hidden in legislation, most taxpayers don't realize that the United States government funds the fossil fuel industry the equivalent of approximately \$2,000 per person each year.

It's this increased investment, not demand, that drives plastic production. Plastic production is expected to go up by 33% in the next 5 years. The huge government contracts sustain the industry, allowing us all to use oil, natural gas, and plastics at a much cheaper cost than the market would actually price them. This allows us to consume without seeing the true cost at check out. Where we really pay the price is in the costs for healthcare and environmental damage.

## Context/Symbolic

The economic and political influence of the plastics industry plays a huge role in how we view plastic bags. Plastic bags facilitate our Culture of Convenience and Throw Away Culture. They are part of our societal need for "fast and easy" solutions. From check out to disposal, each plastic bag is only used an average of 12 minutes. The positive association with plastics is emphasized on the bags with the classic smiley face print. These bags are produced by a huge corporation called Inteplast, which owns plastic production and packing facilities all around the US and Canada.

Plastics and other disposables are often incorrectly portrayed as essential for good hygiene. In this current health crisis, stores are banning consumers from using reusable bags, plastic bag bans are being cancelled and postponed, and cities are slowing down their

# FACTS

recycling programs. Americans are producing 30 percent more trash than they were before the pandemic and delivery companies like Amazon and Grubhub, who use huge amounts of plastic packaging, are gaining unbelievable profits.

Scientists suspect that the coronavirus actually lives longer on plastic than on porous, reusable materials like cloth. There are ways to stay safe without producing more trash, like washing our reusable bags, washing our hands, and sanitizing products and surfaces after we go to the store.

Our government's value of corporations over people is being emphasized by the current push to roll back plastic bag bans, to increase oil drilling, fracking, and pipeline construction, and for a \$1 billion bailout for the plastics industry. In the face of COVID-19, we need a human and health centered response. Instead of subsidizing more extraction and plastic production, we could slow the spread of the virus by expanding access to testing and health care, mandating paid sick leave for workers, and supporting housing assistance and workers rights to allow people to shelter in place.

About 400 local governments in the US have passed plastic bag ordinances, banning or placing fees on bags. This only affects about 10% of our country. In 2002, Bangladesh was the first country in the world to ban plastic bags, after they were found to clog drainage systems during disastrous floods. 20 other countries have fully banned the bag since then including China, Italy, France, Peru, Rwanda, Kenya, Senegal, Tanzania, and South Africa.

In order to mitigate the plastics crisis, we need larger systemic changes in addition to individual action. Collective action is key to prevent the interwoven issues of litter, air and water pollution, rights for sanitation workers, and climate change. Join a local environmental justice group, like Philly Thrive or a chapter of the Citizens' Climate Lobby or the Sunrise Movement! Engage with others to learn more, grow these movements, and push for change in a strategic way when relevant events, budgets, and legislation emerge. We all need to pressure our city and state politicians to regulate and divest from the fossil fuel and plastic industries and invest in programs and services that keep our communities healthy and safe.



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