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THE ENVIRONMENTAL ISSUE



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EDITOR'S NOTE

First, I want to thank you all for taking a look at this issue. I know it is a bit different than many are used to, but the team is excited to bring this to you!

The theme of this issue is 'The Environmental Issue,' and we thought it would be a bit hypocritical to speak on this and then print 2,000 copies to distribute around campus. I hope you enjoy the contents of this issue and I hope it makes you think about what you can do to help stop climate change.

If you have seen Reporter's February issue, you know there is a lot of anger towards the lack of reactivity in the world over the climate crisis. Every person pushes the responsibility onto someone else like a hierarchy of denial running up the entire ladder.

Our choices: our purchases, the food we eat, what we wear or where we shop – these have an impact on how our environment works around us.

That is not to blame the consumers, no, but we influence the corporations with our money and promotion. These corporations look for cheap, detrimental and easy ways to get products to us – resources to us, at the expense of the planet.

So what can we do?

This issue talks of multiple instances of possible change within the RIT community, and I encourage everyone to try and find one take away from this to implement going forward.

I would be remised if I did not mention that the largest impact we ourselves can cause would be to stop eating meat and dairy. I know so many people will stop reading right at this point, but I challenge you to at least consider. Animal agriculture is the number one proprietor of climate change in every way. The animal farming industry is the largest consumer of freshwater, the largest producer of waste and greenhouse gas emissions. The industry is the leading cause of biodiversity loss, rainforest loss and soil depletion. I urge you to look through this issue and to take a look at the February issue and really think about these choices. We have the power to make a change and to urge others to make a change as well.

That being said, please enjoy the March Issue and reach out with your thoughts, we look forward to hearing from you.



MARILYN WOLBERT | EDITOR IN CHIEF

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IN THIS ISSUE

NEWS

6

LOBBYISTS AGAINST GREEN ENERGY

Do coal and oil lobbyists stop green policy from being enacted?

8

THE FUTURE OF HEATING AND COOLING

The environmental impact of HVAC systems and the developments for the future

10

UNKNOWN IMPACTS OF EMERGING POLLUTANTS

What happens to the pollutants that don't break down?

12

ENVIRONMENTAL ACCOUNTABILITY

Who is responsible for our environmental crisis?

14

POLLUTION: A SENSORY OVERLOAD

There is more to pollution than carbon emissions or leftover waste

16

AYL: MAKING PAPER

Follow Ritchie as he makes his own paper from recyclables!



Cover photography by **Jack Connolly** and inside cover & TOC photography by **Travis LaCoss**

FEATURES

18

SUSTAINABILITY ON CAMPUS
A look into campus sustainability at RIT

22

RED LINES, GREEN SPACES
What do we do when seemingly sustainable solutions perpetuate environmental racism?

WELLNESS

24

TO MEAT OR NOT TO MEAT?
How sustainable foods and meat alternatives can promote better health

VIEWS

26

SUPERFUND: THE WASTE LEFT BEHIND
The program meant to defend us from toxic waste has degraded faster than any chemical

27

WORD ON THE STREET
Who — or what — is the most responsible for climate change?

28

RINGS
RIT's only digital confessional. Text or call (585) 672-4840

29

NATIONAL DAY ON WRITING WINNER
Our National Day on Writing Short Story winner

“I think [lobbying] is only a moderate or small problem. I think the bigger problem is public opinion.”



LOBBYISTS AGAINST GREEN ENERGY

by *Erin Brache* | illustration by *Forrest Laffely* | design by *Jacob Yoon*

At the time of writing, OpenSecrets reports that Sen. Joe Manchin has received \$1,128,517 from the oil and gas industry since becoming a politician.

During the 2021-2022 election cycle, Manchin was the top recipient from lobbyists in the coal mining, oil and gas, tobacco, savings and loans industries according to [opensecrets.org](https://www.opensecrets.org).

With the Senate divided 50-50, Democrats cannot afford to lose a vote if they want anything passed, including green energy bills.

How much does lobbying from oil and gas companies affect the passage of green energy policy? The answer: surprisingly not that much.

Lobbying: The Basics

“Any attempt by individuals or private interest groups to influence the decisions of government” is considered lobbying by the Encyclopedia Britannica. When people talk about lobbying in politics, however, they usually mean large corporations, or a collection of corporations, giving money or gifts to politicians in exchange for support.

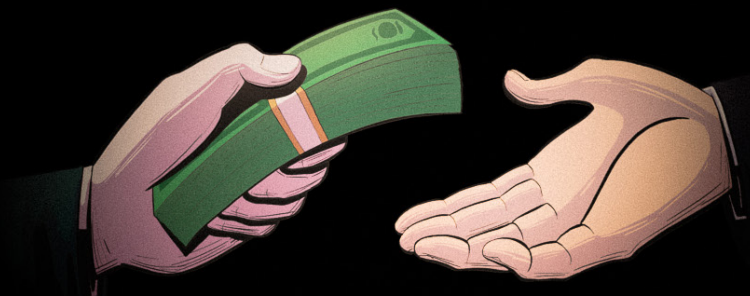
In 2021, \$3.73 billion was spent on lobbying, with some of the biggest spenders like Amazon, Meta (formerly Facebook), Blue Cross/Blue Shield and more companies spending over \$20 million each.

Lobbying is not done just by billion dollar companies. The field also includes lobbying groups for unions, trash collection, magazine publishing and other prominent industries. Each spend millions of dollars every year.

Eric Hittinger, an associate professor and acting Interim Department Chair of Public Policy at RIT, described how lobbying groups will write up draft legislation for politicians if there is a specific wording they want passed into law.

According to Hittinger, most of the time these draft legislations are not used or are heavily edited before becoming the final bill.

However, these draft legislations can pass



into law, such as in 2013 when 82 percent of the lines from a bill that passed in the House were drafted by the bank Citigroup.

According to research conducted by *USA Today*, *The Arizona Republic* and the *Center for Public Integrity*, 10,163 bills introduced in statehouses from 2010-2018 were very similar or almost identical to draft legislation created by special interest groups.

Considering that state legislatures across the country see about 109,000 bills introduced each year, that means that around 10 percent of all bills introduced each year are based on draft legislation.

“Lobbyists are basically there to try and make arguments about how different laws would affect a politician and their constituents,” Hittenger said. “In Manchin’s case, he comes from a state where the fossil fuel industry is an important piece of their economy, so he is sympathetic to those arguments.”

An Unmovable Fear

Politicians are afraid to enact green policy due to one thing: disastrous mistakes. They do not want to be responsible from any possible mishap that could happen during the switch to renewable energy.

No politician wants to be the lawmaker that signed the bill that was not implemented properly and caused a disaster. In short, lawmakers are afraid of change.

While lobbying politicians to go against bills that implement wind and solar energy does not help the climate situation, it is not the only problem stopping these bills from being passed.

“I think [lobbying] is only a moderate or small problem. I think the bigger problem is public opinion,” Hittenger said. “The public has not rec-

ognized the importance of the problem, and so it tends to ... rise to the top of the political agenda.”

Ricky Price, associate professor of Political Science and Legal Studies at St. John Fisher College, believes the public’s blind eye might not be closed for much longer.

“This is something that younger people care about regardless of their partisan affiliation,” Price said.

The other major problem in the way of enacting these policies is that the environment has turned into a partisan issue.

“Any big climate legislation would be considered a ‘win’ for Biden and the Democrats,” Hittenger said. “Republicans are somewhat disinclined to give a big political win to the Democrats, especially with an election year coming up.”

The growing divide between Democrats and Republicans and their refusal to agree on almost any major policy has affected a number of bills, including multiple Voting Rights Acts that have failed in the Senate due to Joe Manchin and Kyrsten Sinema, a Democratic Senator from Arizona.

An Individual’s Power

While it may seem like there’s nothing the individual can do about lobbyist groups spending billions of dollars on politicians, Price disagrees.

“There’s a million things we can do as an individual,” Price said.

Things like writing to elected officials and showing up to town halls to discuss and express support for green policy are some of the personal ways to show support for these causes.

“We know that when you as an individual work with your community in groups that you either form brand new or with existing groups... that is a fundamental transformative act.” Price said.

Groups like the Sunrise Movement have been running campaigns and sit-ins for climate action since 2017, and have worked with notable political figures such as Noam Chomsky, Rep. Ilhan Omar, and Rep. Alexandria Ocasio-Cortez.

When talking about solutions to political problems, one of the most obvious answers is to go out and vote, and this problem is no exception.

“We need to see people start losing elections because of their positions on things. That’s what really motivates politicians,” Price said. “If voters were to punish politicians at the polls, then we would see change.”

Not voting for candidates if they do not have clear climate policy or voting out representatives who do not fulfill their promises sends a clear message to those in office that voters see climate change as a non-negotiable issue.

Voting has been the main method of political engagement that younger generations lack, according to Pew Research Center.

Social media engagement from younger Americans regarding climate change is high, but that does not translate into political change.

While Gen Z and Millennials are more likely to donate money, contact an elected official or volunteer or attend a rally than Baby Boomers and Gen Xers, older Americans are more likely to vote.

Physical support and voting for a movement as dire as climate change can sway politicians more than creating a social media post.

As Price puts it, “Move outside of your Twitter box and into the realm of politics.” **R**



“If voters were to punish politicians at the polls, then we would see change.”



THE FUTURE OF HEATING AND COOLING

by Emi Knape | illustration by Kelly Jin | design by Grace Bukowski

“Fossil fuels are cheaper up front but ... for sustainable sources, you’re paying for installation, not the energy source.”

It’s 100 degrees outside, and sweat is dripping off your forehead. Your only thought is how to cool down, so you race to the thermostat and kick up the AC. Good job! You just contributed to global warming!

Typically, when it’s boiling hot outside or sticky and humid, people gravitate towards the nearest place with air conditioning. However, the emissions released are a large contributing factor to global warming. Unfortunately, it’s virtually impossible to avoid using fossil-fuel-based heating and cooling systems in everyday life. From opening the fridge, to taking a warm shower, to turning on the lights — they’re everywhere.

While the use of heating, ventilation, and air conditioning (HVAC) is inevitable, we have and are developing more sustainable ways of heating and cooling, such as heat pumps and photovoltaics. However, due to cost and attainability, switching to sustainability has been harder than it seems. Simply changing the energy we use though, can make a huge dent in global warming.

PUMP IT UP

According to *Particle*, “There are about 1.6 billion heating, ventilation and air conditioning (HVAC) units [and] by 2030, this number will grow to 5.6 million.” Additional studies have projected that over 25 percent of global warming will be caused by air conditioning within the next 30 years.

Recently, however, there has been a huge push for more sustainable solutions that may limit these contributions.

Rob Stevens, a professor in the Department of Mechanical Engineering, teaches multiple energy and environment classes and has worked with solar thermal programs.

Solar thermal programs use “high temperature heat” to generate electricity. They capture sunlight in order to produce the high temperatures that are needed.

The system is much better suited for warmer climates and would be harder to implement across the planet.

“You have to worry about freezing,” Stevens said. “Systems are much more complicated, which makes it super expensive.”

Solar thermal programs use liquid to transfer heat, they are susceptible to freezing below 42 degrees Fahrenheit.

Heat pumps are another more sustainable alternative. They transfer heat from one location to the other — either from the ground to the air or the air to the ground. Similar to solar thermal programs, instead custom installations and energy prices can lead to heat pumps being costly features.

However, consumers can save more money in the long run since they don’t have to worry about replacing their pump every 10-15 years, as you would have to do with regular HVAC units. Heat pumps have been using the same

technology since they were created, no upgrading necessary.

They offer a practical alternative to fossil fuels and are ultimately less expensive in the long run.

“Fossil fuels are cheaper up front but you have to pay throughout, whereas, for sustainable sources, you’re paying for installation, not the energy source,” Stevens explained. “It’s just a matter of time.”

PLANNING AHEAD

While some might think that the HVAC industry is fighting against these sustainable alternatives to retain their business models, many companies are already working towards implementing them.

Dominic DeLeo has worked for Isaac Heating and Cooling for 26 years, and is currently their Vice President of Residential Operations.

In addition to HVAC systems, Isaac has already been installing heat pumps for a number of years. The company is well-aware of their environmental and economical benefits.

“Heat pumps have been installed in upstate New York since the 1980s. It’s subsidized electric so it makes more sense,” DeLeo said.

In addition to practicality, DeLeo explained how more companies are pushing heating and cooling alternatives with monetary incentives and newer technologies, such as electrochemical machining. The process involves replacing

certain metals with electrolytes to help pass currents and create rapid heat flow.

Due to all these benefits, heat pumps and other forms of sustainable heating and cooling are growing, and many people are choosing against traditional HVAC units.

While there is a push for more sustainable energy, many HVAC manufacturers have also been working on making safer and more environmentally-friendly alternatives to current heating and cooling units. For example, reducing the amount of refrigerant used, along with “ice powered air conditioners,” which freeze water overnight for the next day.

DeLeo, along with many other heating and cooling companies, recognize the negative impact current HVAC systems have on the environment and are pushing for safer technologies.

“Refrigerant is the concern,” DeLeo stated. “[Manufacturers are] changing which refrigerant is allowed and taking more and more chlorine out.”

Refrigerant is made of chlorofluorocarbons, which is a very harmful chemical made up of chlorine, fluorine and carbon. This chemical is very damaging to the ozone layer, and traps heat inside the atmosphere. By reducing the use of chlorofluorocarbons, we are reducing the amount of chemicals being released into the ozone.

HVAC technologies has already come a long way since the early 1900s and are continuously improving. According to Snyder AC, older models used a whopping 6000 watts of electricity, whereas newer models use about 1710 watts — a 250 percent decrease!

“They’re pretty safe at this point, getting away from natural gas is the next step,” DeLeo said.

So although there is still a market for traditional HVAC units, companies are currently working towards making safer alternatives and more sustainable options the norm.

PHOTOVOLTAIC FUTURE

Stevens also discussed photovoltaics as a viable option for water heating. They are becoming more popular, and more are being added to power grids across the globe.

Photovoltaics are a type of electric solar panel that convert heat, through light, into electricity using photovoltaic, or solar, cells.

This type of technology can be used to heat water, and — similar to heat pumps — different incentives are being offered to encourage people and companies to use them.

“Federal incentives, tax incentives [and] financial incentives,” he said. “60 percent of the cost is covered, which helps drive demand.”

While it will be some time before heat pumps and photovoltaic devices take the place of air conditioners and furnaces, there is a push to start using sustainable energy alternatives.

HVAC units aren’t going away anytime soon, but by implementing safer features and encouraging sustainability, there may be a time when you don’t have to warm the earth to cool down. **R**

“They’re pretty safe at this point, getting away from natural gas is the next step.”



UNKNOWN IMPACTS OF EMERGING POLLUTANTS

by Patrick McCullough | photography by Jada Jennings | illustration by Jinlan Li | design by Amanda Macey

Human activity has introduced a number of chemicals and compounds into an environment that has not encountered them before.

Scientists have a decent understanding of beneficial chemicals like fluoride, which has been added to drinking water since 1945 to help prevent tooth decay, and heavy metals such as mercury, which can accumulate to toxic levels in fish through contaminated water.

There are other chemicals, compounds and contaminants whose impacts are less clear. These substances are often the result of legacy pollution — pollution produced by industry that lingers in the environment long after being introduced.

Many of these pollutants are currently under investigation to discover exactly how harmful they are or could become.

PERFLUORINATED CHEMICALS

Perfluorochemicals (PFCs) and more specifically perfluoroalkyl and polyfluoroalkyl substances (PFASs) are a group of artificial compounds that make everyday products more resistant to water and stains.

PFCs can be used to keep food from sticking to cookware, make stain-resistant fabrics and be used as waterproofing. Their presence isn't limited to the kitchen or closet though, as they have also made their way into water supplies across the country.

In 2015, the town of Hoosick Falls, NY was advised to avoid public drinking water after the Environmental Protection Agency discovered high levels of perfluorooctanoic acid in the town's water supply.

In North Carolina, PFASs were detected in 20 public water systems that drew their water from the Cape Fear River watershed, a lingering impact of industrial discharge from Dupont's Fayetteville Works plant.

Paige Lawrence is a professor and chair of the Department of Environmental Medicine at the University of Rochester, and the director of

the University of Rochester's Environmental Health Science Center.

Lawrence's work involves research into how the environment, and the chemicals and compounds present there, can impact human health.

"The carbon-fluorine bond in perfluorinated chemicals doesn't exist in nature, so it's a very strong bond. They are very resilient chemicals, and are very hard to break down," Lawrence explained.

A number of these chemicals have been phased out of American production lines since the 1980s, but the resilience that makes

them so useful means they tend to linger in the environment.

Charles Ruffing is the director of the New York State Pollution Prevention Institute, an organization that works with companies and communities around New York State to help them reduce their environmental impact.

"They're so-called 'forever chemicals' because they persist in the environment for a long time," Ruffing explained. "There's a variety of uses for these perfluorinated materials, and they've been turning up in wastewater and a lot of people's bloodstreams."

"The CDC has been measuring the levels of



“They’re so-called ‘forever chemicals’ because they persist in the environment for a long time.”

PFASs in blood serum, which is obtained from participants ages 12 and older. These tests have detected the presence of four different PFAS in nearly all of the people tested.

The question of how harmful these chemicals are to humans is still under investigation. There is research that suggests that PFAS exposure may have an impact on children's immune systems.

"There have actually been studies ... looking at vaccinations in children," Lawrence said. "Higher amounts of those perfluorinated chemicals is inversely associated with the antibody response to those routine childhood vaccinations."

The consequences of PFAS exposure are still emerging, but their presence — in air, water and soil — is undeniable.

MICROPLASTICS

Microplastics are pieces of plastic debris less than five millimeters in size. These particles have been discovered in freshwater rivers, lakes and all of the world's oceans.

"We don't know a lot about what [microplastics] are doing in terms of health," Lawrence explained. "We all use plastics, and they break down and get tinier and tinier and tinier. Now we have micro, and even nano, plastic particles that have been found in the water, in sediment, in fish and in other organisms."

New techniques have allowed researchers to detect the chemical traces of plastic in human organs, and the question of to what extent these contaminants are present in the human body is still under investigation.

Christy Tyler is an aquatic ecologist and the director of the Graduate Program in Envi-

ronmental Science at RIT. She identifies two main types of microplastics: plastics that start small and enter the environment and microplastics that break off of a larger piece.

Plastics that start small include — but are not limited to — microbeads, which were once present in many health and beauty products before they were banned with the Microbead-Free Waters Act of 2015.

"We call it plastic pollution, but really it's hundreds and hundreds of different kinds of compounds."

"Some [plastic] breaks down before it gets out into the environment. That's things like fleece fabric — microfibers that come off your fleece jacket every time you wash it," Tyler explained.

Plastic waste like bags and bottles shed microplastics as they deteriorate under the sun, wave energy and changes in the temperature.

Studying microplastics is complicated by the fact that, as they break down, their properties can change.

"We call it plastic pollution, but really it's hundreds and hundreds of different kinds of compounds," Tyler explained.

Plastics like polyethylene can come in different densities, with different dyes, plasti-

cizers, fire retardants and UV protectants. These additives can change the plastic's chemical properties, how it breaks down and how toxic it is in the environment.

A plastic's properties can be altered by its environment. Some become more toxic when exposed to certain conditions, and some become less toxic.

"If it's in a water body where there's already contamination, ... some types of plastic act like a little sponge to absorb those different contaminants from the water," Tyler said.

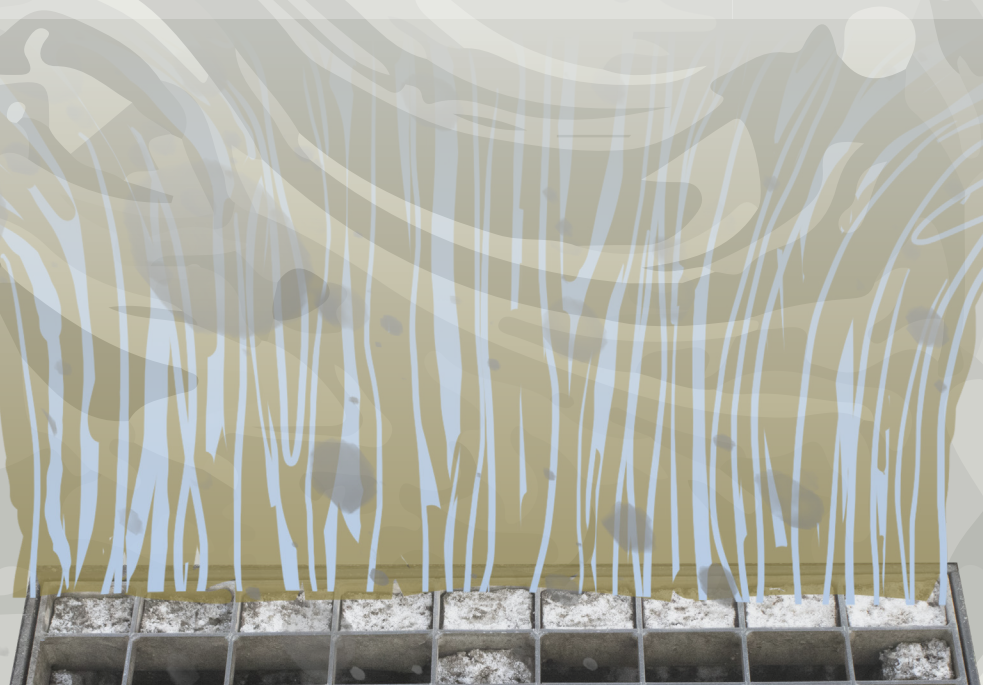
MOVING FORWARD

Pollutants like PFC and microplastics are leftover from a previous time when environmental regulations weren't as strict and the potential impact of these substances were not as understood.

Companies respond to market pressures, and as younger generations become more environmentally conscious, those markets begin to demand more environmentally responsible products and production methods.

"In the corporate realm, some went very willingly, some were dragged into it, but there's definitely a heightened awareness and a call to action," Ruffing said. "Companies realize that if they don't manage this issue they're not going to be financially successful."

If these companies want to win everyone's business, they will have to change with the times. **R**



ENVIRONMENTAL ACCOUNTABILITY

by Rylan Vanacore | illustration by Maeghan McKenzie | design by Jacob Yoon



When it comes to the topic of environmental issues such as climate change and waste production, it is easy to point the blame at faceless corporations. However, there is a possibility that we might also play a role in this.

CORPORATE RESPONSIBILITY

There is no denying that big corporations have greatly impacted our environment. A major unpublished study by the U.N that was released by The Guardian shows that big public companies cause up to \$2.2 trillion worth of damage to the environment yearly.

Amazon's 2020 annual sustainability report showed that the company alone produces up to 60.64 million metric tons of carbon dioxide.

Despite the damage caused by some of these corporations, there is a lack of accountability for their actions.

Enid Cardinal, the senior advisor to the President for Strategic Planning and Sustainability at RIT, weighed in on this.

"Obviously [with companies], there is absolutely a lack of accountability," Cardinal stated. "The fossil fuel sector, in general, has tried to undermine scientific findings around climate change for decades at this point in time.

Many gas and oil companies had a disastrous impact on the environment. One example is the 2010 Deepwater Horizon spill in the Gulf of Mexico that killed 1 million sea birds, 5,000 marine mammals and 1,000 sea turtles.

"Consumers [can help make change], corporations can drive change, there's so many ways that change can happen."

While it's easy to point out the problems big corporations cause, there are also steps that they are taking towards environmental stability.

"[Amazon] from an energy perspective, have been very aggressively working towards reducing their carbon footprint," Cardinal explained. "They are heavily investing in renewable energy to try and address the carbon footprint of their data center operations."

While companies like Amazon are trying to become more environmentally sustainable, with the investment in renewable energy and offering renewable packaging, they still have a long way to go.

One of the challenges to making corporations more sustainable is the complexity of the environmental crisis. While some companies take a step forward they also take a step back.

Amazon may have options for renewable packaging, but they still cause lots of pollution with their delivery service and how many cars they have out on the road.

The problem inside corporations is the lack of care from people in leadership positions. If they aren't advocating for changes, there isn't a way that they can be made.

Neha Sood, the Assistant Director for Campus Sustainability at RIT, pointed out that not all corporations are "the bad guy" when it comes to environmental sustainability.

"A good example of companies that do [environmental sustainability] are B Corps, or benefit corporations," Sood said.

B Corps are companies that are given a certificate for the highest standard in social and environmental performance. Unilever and Danone are certified B Corps.

"Companies like Patagonia, which is a B Corp, have taken out ads in the New York Times [to say] don't buy our stuff, [instead], resell it or reuse," Cardinal explained.

While many corporations are causing harm to the ecosystem, there are others, like Patagonia, that are really pushing for change that is beneficial to our environment.

HOW WE PLAY A ROLE

When it comes to talking about environmental issues, we often do not acknowledge ways we contribute.

Most people have heard how it is important to recycle and not litter, or maybe someone has told you not to use a plastic straw because it harms turtles.

The way we spend money has rippling effects on the environment.

From a business standpoint, there isn't much of a reason for big corporations to care about the environment. Most consumers are still buying less environmentally sustainable items and supporting corporations that contribute to climate change. Studies have shown that only 37 percent of consumers are willing to pay 5 percent more for environmentally friendly products.

Since the demand for eco-friendly products isn't high, there's not an incentive to make them the forefront of retail.

"Part of [environmental sustainability] is needing an educated consumer base to try and drive some of that change," Cardinal said.

By continuing to support companies and products that harm the environment, this enables environmental destruction. If given the

opportunity, we should be more conscious of what we buy. There are also opportunities for us to substitute and make our own products.

"Many of the products that we use, personal care products, we could make ourselves, you could DIY shampoo," Sood stated. "[Shampoo] was created to generate money, it's actually something you can substitute very easily at home with vinegar."

The reason people don't supplement shampoo is that they either do not know how, or have misconceptions about it.

"People are used to this idea, if there's no lather, then [shampoo] is not cleaning your hair," Sood said. "But the reality is that lathers produced by components that are harmful to the health of your hair, for the planet, everything."

"Part of [environmental sustainability] is needing an educated consumer base to try and drive some of that change."

FINDING A SOLUTION

Playing the blame game won't solve any problems. We need more communication between corporations and consumers.

We need to voice what is best for the environment and spread the message to companies, whether it being voting with our dollar or protesting oil sites.

It is also worth noting that there are people who want to live a more sustainable lifestyle, or avoid supporting companies who harm the environment, but run into road blocks.

Lily Ready, a second-year Game Development and Design major at RIT, talked about her struggles not wanting to support Amazon.

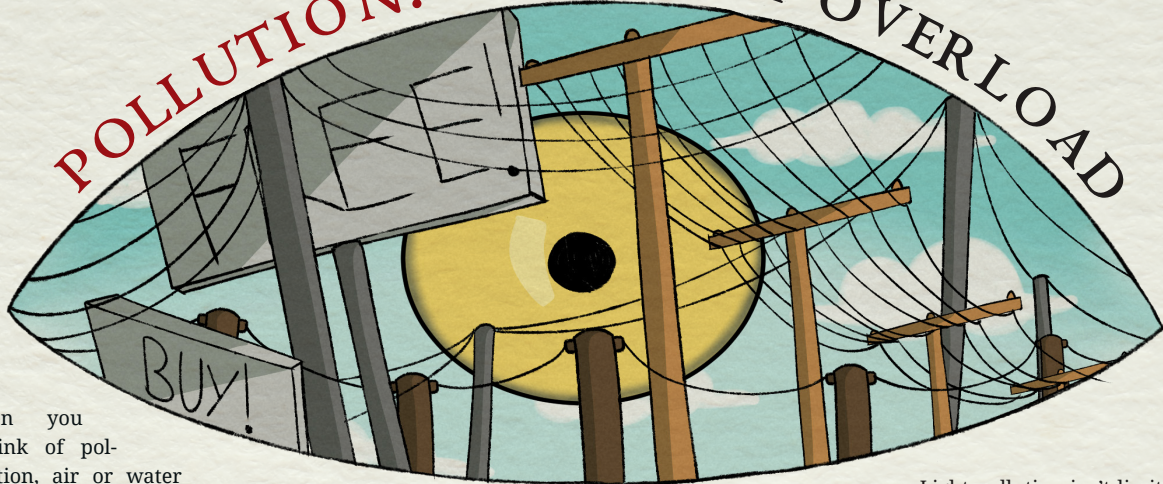
"I try not to support Amazon but I have to shop there because of items only they have," she stated. "Like my laptop charger broke and I really need it. It's only sold on Amazon."

In addition friendly products are significantly more expensive and some people may not be able to afford them.

A solution to this problem would be for companies to drop prices on environmental friendly products as well as produce more of them. This way consumers and companies are both able to help the environment.

"Consumers [can help make change], corporations can drive change, there's so many ways that change can happen," Sood said. **B**

POLLUTION: A SENSORY OVERLOAD



When you think of pollution, air or water

pollution may be the first to come to mind.

Pollutants, however, go far beyond carbon emissions or waste found in the ocean.

Have you tried stargazing recently? Or been somewhere where it seemed so quiet, even though nothing was going on back home for you? These phenomena you experience are caused by lesser-discussed pollutants. Some are non-permanent, such as visual and noise pollutants, whereas others are more dangerous, like food waste, thermal pollution and e-waste.

Visual Pollutants

A commonly overlooked pollutant is visual pollution. Whereas light pollution depends on the sky to be dark, visual pollution can happen anywhere at any time.

Visual pollution is more of an aesthetic classification, being objects that may obscure your view of a location. The scenic views of an area are interrupted by common sights such as power lines, billboards, neon signs and more.

The absence of stars in big cities is caused by light pollution, another form of visual pollution.

Light pollution is “the inappropriate or excessive use of artificial light,” according to the International Dark Sky Association. Light pollution is caused by artificial lights extruding

by *Jay Schading* | illustration by *Kaiya Moultrie* | design by *K. Kelly*

into the environment in large masses. Sources that contribute to this pollutant include large advertisement billboards, exterior lights on buildings, sporting venues and street lights, to name a few. College campuses such as RIT are also huge light pollutants.

These dense areas of light not only affect the population in not having the luxury of witnessing the grand night sky, but it also affects astronomers who study the sky.

Stacey Davis, a principal lecturer at NTID and adjunct professor for the School of Physics and Astronomy, weighed in on this.

“In the astrophotography world, it’s harder to get pretty pictures when you’re dealing with ambient city lights,” Davis explained.

Light pollution on RIT campus — and in the city of Rochester — makes it difficult for astronomy students to use the RIT Observatory.

“On campus, you can look north and see the nice orangish-pink glow of the city of Rochester,” Davis said. “From the RIT Observatory, you look west and you see the obnoxious lights of the lacrosse field and the tennis courts.”

Light pollution isn’t limited to the effects of city lights in the sky; satellites in orbit are also causing light pollution problems.

In an article written by Christopher Ingraham for the Washington Post, “Each individual object in orbit ... reflects a commensurate amount of sunlight back toward the Earth. Multiplied by the tens of millions, the collective amounts to a 10 percent increase in illumination across the night sky.”

With the increase of satellites being added to the atmosphere — many due to the Starlink project by SpaceX — the study and exploration of the universe is becoming much harder to accomplish and will continue to follow that trend.

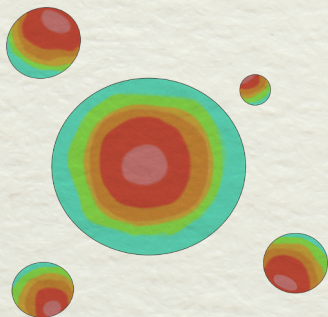
Noise Pollution

Having a quiet place to think is always beneficial. However, finding one can be difficult if you live in a big metropolitan area.

Noise pollution is defined as “regular exposure to elevated sound levels that may lead to adverse effects in humans or other living organisms,” in an article by Environmental Pollution Centers.

Common noise pollutants often go unnoticed by regular people due to the adaptation of hearing them in daily life. These

“If electronics are managed **informally**, then they can lead to a lot of pollution.”



“About **40%** of the food we produce is **never consumed.**”



common noise pollutants often include trains, airplanes, traffic and construction, but the list continues on.

According to *National Geographic*, high-level noise pollution can cause illnesses in people who are exposed to it for long periods of time.

“The most common health problem it causes is Noise-Induced Hearing Loss,” *National Geographic* stated. “Exposure to loud noise can also cause high blood pressure, heart disease, sleep disturbances, and stress.”

Thermal Pollution

Although thermal pollution doesn’t affect humans directly, there are major indirect impacts it makes.

“When an industry or other human-made organization takes in water from a natural source and either cools it down or heats it up,” a piece written for *Conserve Energy Future* – an energy conservation movement – detailing thermal pollution, wrote. “They then eject that water back into the natural resource.”

Warmer waters entering our aquatic ecosystems cause less oxygen to be circulated throughout the water.

Abby Rabinowitz is the associate director for STEM Writing and Clinical Associate Professor at NYU Tandon School of Engineering. She addressed this issue in an article written for the Interfaith Center for Sustainable Development.

“The lack of oxygen kills fish and other aquatic species, while at the same time promoting anaerobic conditions that enable bacteria to thrive,” Rabinowitz wrote.

The effects of thermal pollution can make their way to humans through their impact on aquatic animals.

Although there aren’t any direct effects yet, thermal pollution is still something that should be on the radar of potentially becoming even more harmful.

Food Waste

Food waste is a much bigger problem than society tends to consider it. The majority of our normal population throws food straight to the trash, not thinking about what happens next.

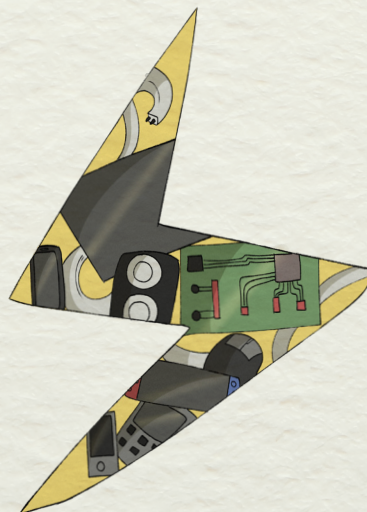
Callie Babbitt, a professor of Sustainability at RIT, reflected on the issue.

“About 40 percent of the food we produce is never consumed,” Babbitt explained.

Where food is consumed, there will always be excessive food waste that ends up in our landfills. Some places that struggle with excessive food waste include restaurants, grocery stores and college campus dining areas.

Landfills make for terrible environments for food to break down in due to the lack of oxygen.

“In that oxygen-free environment, food waste actually breaks down into methane – a greenhouse gas – which is about 30 percent more potent than carbon dioxide in terms of its impact on climate change,” Babbitt said.



Composting allows for food waste to break down into carbon dioxide, thus having a significantly less impact on global warming than sending food waste into a landfill.

E-Waste

Electronic waste, or e-waste, has become a much more significant problem in modern-day society than it used to be. E-waste can contribute to pollution itself, but more significant are the resources that go into making it.

“[Electronics] take a lot of energy to manufacture,” Babbitt said. “They rely on a lot of valuable and scarce materials that are mined around the world.”

Discarding e-waste can be as simple as taking the electronics to the nearest recycling hub.

“Electronics aren’t as likely to cause pollution when they’re discarded properly. You’re just losing these valuable resources and energy put into making it,” Babbitt explained. “[But] if electronics are managed informally, then they can lead to a lot of pollution.”

Informal forms of waste-removal can include unethical recycling practitioners or just tossing it into landfills, making access to important resources almost impossible.

It is important to talk about all these different forms of pollutants, especially since the majority of them go unmentioned. Although some cause less harm than others, each pollutant has a negative impact on the environment — from astronomers not being able to extract important data, to immense amounts of methane gas being released into the atmosphere. **R**

AT YOUR LEISURE AYL MAKING PAPER



Paper makes up about 70 percent of the U.S.'s office waste. To combat that, here are some steps to making your own paper from used ones!

Materials

- Large container to hold water (plastic storage box recommended)
- Sponge (alt: cleaning cloth, towel, anything that can soak up moisture)
- Blender, potato masher or mortar and pestle (caution: do not use blender for food afterwards; devote blender only for paper)
- Couching/cloth sheets (old tablecloths, bed-sheets, t-shirts, etc.)
- Mold and deckle

Note

This guide assumes you will be using a blender, a sponge and a mold and deckle. If you are using alternative tools, the steps are the same, but will require adjustments when needed.

Step 1: Prep your paper



Take any used paper and rip it into small pieces. Note: stronger paper makes stronger recycled paper.

Step 2: Soften paper

Put the paper into the container and pour water until it completely covers the paper. Leave for at least 12 hours. Note: leaving it for longer will allow the paper to soften, recommended to leave for more than 12 hours if you want to use an alternative tool to a blender, such as a potato masher.



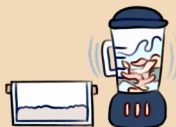
Step 3: Make the pulp



Add about two handfuls of soaked paper into your blender before pouring water into it. Blend until no hard pieces are left within the pulp.

Step 3.5: Blend pulp

Place pulp into separate container and continue to blend more pulp from paper until satisfied.



Step 4: Mix pulp

Put water into another container, filling it to the half-way mark of the container. Take a handful of pulp and stir it into the water. Keep stirring until no large chunks are found.



Step 5: Mold pulp

Grabbing your mold and deckle, align deckle onto the mold. Stir water with pulp until pulp is floating. Then, dip mold and deckle into the water. Move the mold and deckle with a shaking motion, preferably at the bottom of the container, before lifting it from the water.



Step 6: Remove deckle

Remove deckle carefully from the mold. You can lay the mold on one arm while detaching the decker. Allow a moment for remaining water to drip out.



Step 7: Dry pulp

Putting aside your mold, lay out a cloth sheet. Grabbing the mold, place it pulp-side down onto the sheet. Press down firmly. Use sponge to soak up excess water across the paper.



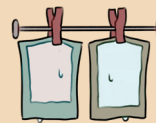
Step 8: Remove mold

Slowly lift up mold; we recommend pressing down on the mold before lifting it up, with one hand on the cloth. Place cloth with paper onto a flat surface where it can dry. Place them to the side until you are satisfied with the amount of paper you make.



Step 9: Start drying

You can use clothespin on a drying rack, but this can easily damage the paper, but will be dry overnight. You can also set the paper onto a table in the sun but note the alternative will take longer.



Step 10: Ta-da!

Once dry, remove the paper from cloth using your index finger to open a gap between cloth and paper. Once edge is made, you can lift paper off! If you do not edge the paper, there might be a chance that the paper would rip, but if it is dry, that will be unlikely.



Ritchie looks happy with his new stack of paper! What will he make next? **R**



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SUSTAINABILITY ON CAMPUS

by *Anjali Shiyamsaran* | photography by *Jack Connolly* | design by *Kris Dinh*

The current world population of over 7.8 billion people means more than 7.8 billion human bodies require food, warmth, shelter and education.

In the future, this can mean a higher human population than the earth can sustain.

However, environmental efforts on campus can help to achieve sustainability, a goal toward which RIT aims many of its own efforts.

SUSTAINABILITY AND THE HUMAN RACE

Environmental sustainability is the way that humans conserve resources today so future generations can thrive. The resources that humans depend on for survival are finite, and therefore must be used wisely to last in the long term.

As consumerism and the modern economic system continue to barrel towards polluting emissions and consumption of resources, the current trajectory of human sustainability seems less than ideal.

Assistant director for Campus Sustainability at RIT, Neha Harshita Sood, spoke of the impact sustainability has on the human race.

“[With] environmental sustainability, and sustainability in general, it’s important to make sure that human beings have what they need to survive,” she said.

The benefits that humans reap from sustainability don’t solely revolve around caring for the planet. A planet with no air pollution means people have clean air to breathe. A planet in which plastic does not pollute oceans means higher-quality fish for people to eat.

“A healthy planet means healthy people,” Sood stated.

CAMPUS SUSTAINABILITY COMMITMENTS

Sustainability research at RIT focuses on its commitments to supporting students’ growth without further harming the planet.

“The greenest building is the one you don’t build,” Sood said. “But being an educational institution, we do need infrastructure.”

Many of RIT’s sustainability goals lay in its Climate Action Plan, which commits to being carbon neutral by 2030 and fossil fuel free by 2045. The plan also seeks to make sure that new buildings on campus don’t add more to its carbon footprint, offset carbon emissions wherever possible, use solar and wind ener-



gy and renewable sources and reduce consumption of water among other strategies for climate resilience.

RIT BEEKEEPING

Many clubs at RIT focus their efforts on promoting sustainability. The RIT Beekeeping Club seeks to do so by educating people on the importance of bees and other pollinators.

Fourth year International and Global Studies student, Emma Eagen, is the current president of the club as of 2022.

“Bees are a great example of how interconnected we are in terms of the environment and us as people,” Eagen said.

The club maintains the honeybee hives on campus as well as those at the Rochester Science Center and Museum by engaging in sustainable practices. For example, they make candles and reusable wax wraps by melting off beeswax caps.

It is important to note that honeybees are however, less effective at pollination than wild bees, and in many cases, push wild bees out of an area. Thus, the entire bee community must be protected in order to achieve high quality pollination.

“One-third of the crops grown in the U.S. are pollinated by bees,” Eagen added. “It’d be a much more colorless world without bees ... and it would be a much less tasty world when it comes to bees due to those crops.”

Eagen also discussed the importance of learning more about the process of food production.

“Talking about how those crops are pollinated by bees, talking about the energy that goes into actually growing the food that we’re eating ... it’d be cool if the campus pushed a little bit more of being thoughtful about where the food that we’re eating is coming from,” Eagen explained.

FOOD WASTE AND FASHION

To help combat food waste, RIT Sustainability partners with Dining Services to work on providing students with healthy, locally sourced meals that also support the local economy.

An inventory of all of RIT’s current dining ingredients revealed beef and chicken as Dining Services’ worst carbon emissions contributors.

As a result, expanding the availability of vegan, plant-based and vegetarian options can lower carbon footprint.

“We’re looking into all kinds of projects associated with education around food choices and diets,” Sood said.

RIT has now made a commitment to com-

posting food waste as well.



Starting this year, a new law went into effect in New York State where producers of large amounts of food waste must compost and donate excess food to area distribution centers. As a result, Dining Services plans to divert extra food from landfills to such centers.

In the future, RIT plans to have an onsite composting operation to which food scraps and napkins, along with other compostable waste from Dining Services — pre-consumer and post-consumer alike — will be sent.

“Anything that’s left over on your plate after you’re done eating, that’s considered post-consumer,” Sood explained. “That wasn’t being composted before ... but now it will be. That’s definitely a big win.”

Certain wellness courses offer to cover sustainability topics, such as “Maple Syrup and Our Environment,” which teaches students about the maple sugaring industry and the threat it faces from climate change.



RIT Sustainability will partner with the Center for Leadership and Civic Engagement for an event called the Coffee Crawl as well. The event seeks to educate people about the amount of water and energy that coffee beans use to grow, while encouraging coffee drinkers to think more about where the beans were grown, who grew them and how those coffee growers were treated.

Fashion and clothing are another aspect of sustainability that hits closer to home than many expect.

RIT recently joined the Fair Labor Association, meaning that all clothing such as uniforms for RIT staff, trademark licensing and athletic apparel must abide by fair labor practices.

In 2012, unsafe working conditions led to the deaths of 52 people after a garment facto-

ry burned down in Bangladesh — a country in which more than 150 fire and safety incidents between 2012 to 2019 have been linked to its garment industry.

“For all we know, they could have been making clothes that came to a university in the United States,” Sood said.

With its additional effects on greenhouse gas emissions, clothing can have as much of an impact on the environment as campus facilities do.

GREENHOUSE FACILITY

Andre Hudson, department head of the Thomas H. Gosnell School of Life Sciences, discussed the greenhouse facility on campus and its impact on sustainability.

“What we have is a form of a sunroom,” he said. “One of the things it affords us is it exposes students to plants, biology or applied sciences, etc.”



Greenhouses magnify sunlight to protect plants against freezing temperatures. When it comes to food production, greenhouses provide a key sustainability effort.

“In literature, we refer to this as seven plus two equals nine,” Hudson stated.

Currently, about eight billion humans exist. The United Nations predicts that the population will increase by another billion, totaling about nine billion people in the world by 2050.

The expected increase in the human population begs more questions for students to explore.

“How do we prevent plant pathogens from destroying 80 percent, 90 percent of crops on a yearly basis?” Hudson said. “How do we genetically engineer plants to withstand drought with respect to climate change?”

COMMUNITY GARDEN

The Community Garden on campus also focuses on sustainable agriculture and is run by a small group of volunteers.

On Fridays from 3:00 to 5:00 p.m., the Garden runs a workshop series during which anyone can visit, get their hands dirty and learn how to grow and harvest crops.

Sood pointed out the way many people remain out of touch with how food is grown.

“Picking a fresh cherry tomato from a plant in the community garden and popping it in your mouth, it’s like eating candy,” she said. “It’s so delicious. It’s so good for you.”

Compared to the ones grown in the Community Garden, vegetables that may have been shipped to the campus over the course of days likely arrive with lowered nutritional values or contain pesticides and chemicals to maintain their freshness.

“The value of teaching students, faculty and staff how to grow your own food is priceless,” Sood stated.

The Community Garden incorporates food justice as well, diverting any extra vegetables to the FoodShare program and into the hands of people in need. Oftentimes, food pantries and food justice organizations face difficulties when delivering high quality food to people.

“In Rochester, for example, we have a food desert,” Sood said. “People don’t necessarily know where their next meal is coming from, like chronic food insecurity.”

On the other hand, food swamps indicate neighborhoods inundated with low-quality processed food that may be high in sugar, low in fiber or protein and possibly linked to an increase in diabetes and heart issues.

Sood also denounced the myth that high quality food cannot grow in Rochester due to its cold weather.

“Western New York, this area, has a lot of agricultural land,” she said. “We have some of the best soils anywhere.”

Although humans’ carbon footprint from food systems remains high, farming and gardening hold potential for a climate solution. Increasing carbon sequestration in soil can raise its productivity, reducing the need for fertilizer and helping to offset carbon emissions.

For the first time, the campus plans to con-



struct a flower garden to help attract more pollinators such as bees, butterflies and birds. Along with this aspiration comes the hope of students cutting flowers to give to others.

STUDENT RESEARCH EFFORTS

In addition to campus facilities, students conduct different research efforts for campus sustainability that span across a variety of topics.

“A lot of learning happens at every level at RIT that helps us achieve sustainability goals, here and beyond,” Sood said.

Many students of the Golisano Institute for Sustainability, for example, conduct research within the realm of batteries and electronic waste.

Environmental Sciences students research conservation and plastic pollution in both land and aquatic environments.

Although it may not seem directly related to sustainability at first, antibiotic research is another impactful research topic on campus.

“A lot of times, sustainability is equated to environmental issues but it’s also human health-related issues,” Dr. Hudson stated.

Antibiotic research can lead to the research of novel antibiotics in order to solve pharmaceutical problems of the future. Through learning how to sustain and augment current health practices, such research contains the potential to prevent future disease outbreaks.

“Picking a fresh cherry tomato from a plant in the community garden and popping it in your mouth, it’s like eating candy.”

WHAT STUDENTS CAN DO

“We are change makers at RIT and our culture is about trying to create a better place ... a world that we all want to live in,” Sood said.

Many student groups dedicate their efforts towards campus sustainability and beyond, including Engineers for a Sustainable World, RIT Vegan Club, Electric Vehicle Team and Student Government Sustainability Committee.

Sustainability and environmental change happens at every level, including as an individual, community and world. Every action has an impact on the environment, whether positive or negative.

Sood discussed education as yet another key component to sustainability and how the conversation of sustainability at RIT has evolved over time.

“As a higher-ed institution, it is our responsibility to not only educate students about a changing world, but also ourselves,” Sood said.

As far as the future of sustainability efforts, there will never be a shortage of work to do, both on and off campus.

“We’re all part of a system,” Sood continued. “No system is perfect.”

Students can further contribute to campus sustainability by joining student organizations and continuing to educate themselves on opportunities for sustainability.

The Goodbye, Goodbuy initiative serves as another example of a student-run program on campus. On average, 35 tons of waste used to accumulate at the end of the year as students moved out. By collecting and selling these goods in the fall, the team prevents usable items from ending up in landfills.

*“We’re all part of a system
... No system is perfect.”*

“I would love for every student that graduates from RIT to have heard of and learned about the sustainable development goals or our climate action plan, or leave here with an understanding of how they can help create a better place in this world,” Sood explained.

A JAR OF HONEY

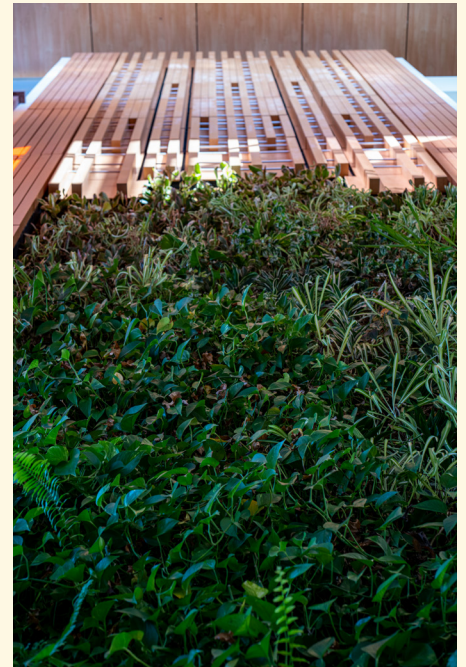
Sustainability efforts can fit into the lives and passions of all students, regardless of their majors, passions, hobbies and careers.

“More recently, we started feeling like it was a lost cause or that there isn’t anything we can do, but there is,” Sood said.

Though the urgent need for sustainability may seem daunting, dedicating small efforts to sustainability can make a large difference.

On a similar note, bees put in hundreds of hours of work before they are able to fill a single jar of honey.

“In her lifetime, a single bee will make one-twelfth a teaspoon of honey,” Eagen said. “A jar of honey is such a cool symbol of how small, persistent efforts add up, and I think as people we forget that pretty easily.” **R**



RED LINES, GREEN SPACES

by *River Starliper* | design by *Sneha Yalgi*

America is obsessed with violence; our news is filled with murder and corruption, people killed without reason or retribution. What happens when that violence is perpetuated through poison; when toxins contaminating the environment are not an accidental tragedy, but a targeted attack?

POISON FOR WHOM?

Systemic racism has a long history in the United States, and is defined as policy and practice that permeates an entire society and supports a system of unfair disadvantages based on race.

M. Ann Howard — an RIT professor of environmental studies, policy and sustainable communities — broke down the term.

“Because communities of color [have] less political strength, less economic strength, they are more vulnerable to structural racism: institutional racism that discounts the importance of the adverse impacts,” she explained.

Environmental racism, specifically, is based primarily on the historical and continuing practice of placing environmental hazards closer to marginalized communities, as opposed to their upper-class, typically white, counterparts.

“Environmental racism is manifested in many many different ways, it’s not just in exposure to pollution and poor health,” Howard said. “But all of this is rooted in ... a feeling that people of color are not worthy of participating, that the harms they have to endure are not worth paying attention to.”

Placement of pollutant sources in communities of color, displacement of indigenous peoples to make way for national parks, and the lack of trees in low-income areas are all examples of environmental racism — creating a problem with deep impacts that are often ignored by the people in charge.

FORWARD DEVELOPMENT, BACKWARDS IMPACT

In a warmer and more volatile world, scientists and city planners work hand in hand to institute green spaces and new legislation that can mitigate the effects of climate change.

One such scientist, recent RIT environmental science master’s graduate Joshua Greene, examined the relationships between environmental infrastructure and the socioeconomic status of surrounding communities.

“I wanted to look at ... how we have negatively impacted certain parts of our society due to where we place our green spaces as well as where we place other things such as factories and our major roads,” Greene said.

While at face value, urban greenspaces may appear to be beneficial to communities, those benefits come at a price. “Green gentrification” is the phenomenon of people being priced out of their homes as a result of skyrocketing property values due to the addition of new “green” features.

However, the potential to rectify existing urban environmental struggles with greener solutions creates a situation in which everyone can potentially benefit from these spaces, but many also risk losing their homes.

Still, we know that the technology to create a greener future is out there, and it is being used more favorably towards white and upper-class communities.

So what’s the obstacle to creating equitable urban ecosystem services? According to Greene, it all boils down to one thing: zoning.

“In a city, that would require a lot of work to get a lot of people on board ... city council, mayors; they’re the ones who write all the laws, they’re the ones who decide what comes and what goes,” Greene explained.

If decisions on environmental infrastructure are left up to policy makers, what can average people do to make a change?

“Build relationships in your own community, understand who your neighbors are, what their issues are, what they’re feeling and just guerilla tactics: start a community garden in your area,” Greene encouraged.

Creation of “green spaces” does not have to happen on a large scale — community actions like planting trees are just some of the ways in which we can work together towards a sustainable future.

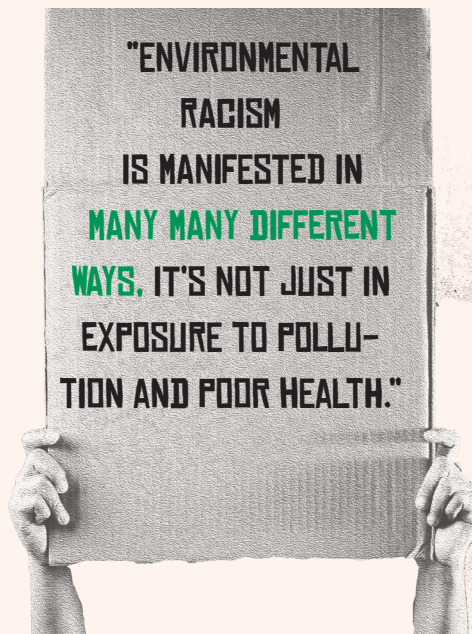
But would city officials actually pay attention to small movements? Greene, as one such official, weighed in: “I like to imagine that we are listening. I know that I am listening.”

SUSTAINABLE ACTIVISM

Community action and local activism is the key to combating environmental racism, but it is not achieved easily, nor does it occur overnight.

Richard Newman, a RIT professor in the department of history who has previously written on both environmental and racial justice issues, described the mechanics required to make such a social change.

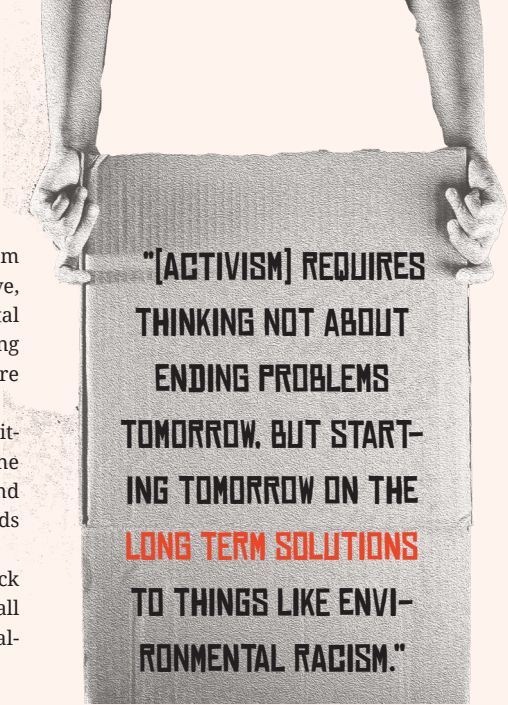
“You need lots of different groups of people to come together, to win political power, to create not just short-term change, but sustainable, long-term change,” Newman explained.



The fight against environmental racism in America is an uphill battle. People have, throughout history, instituted great societal changes — but this was not done by making the correct Tweet, or posting a black square on Instagram.

“Any change that has occurred in the United State or around the world has been the result, mostly, of long term activism ... And I think people have to really get their minds set on that,” Newman said.

In an America plagued by racism, Black activists are bombarded by struggle on all sides, and environmental issues cannot always take priority.




**“[ACTIVISM] REQUIRES
THINKING NOT ABOUT
ENDING PROBLEMS
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TO THINGS LIKE ENVI-
RONMENTAL RACISM.”**

Activism fatigue is real, and it is difficult to inspire the kind of immediate dramatic action that would end environmental racism overnight.

Though it does not need to happen overnight. “[Activism] requires thinking not about ending problems tomorrow, but starting tomorrow on the long term solutions to things like environmental racism,” said Newman.

So plant those trees, talk to your neighbors and hold your city officials accountable for the decisions they make.

Combating environmental racism starts in your own backyard: with organizing the community towards the end goal of coming together globally to build a better tomorrow — for everyone. 



To Meat Or Not To Meat?

by Taylor Moe | illustration by Maggie Wehler | design by Kris Dinh

Meat, despite previous conceptions, is not necessary to a person's diet. Excessive meat consumption can actually have negative effects on the human body, as well as the planet. However, with the increasing number of meat alternatives and sustainable food options available, these effects may be reduced.

SAVE SOME FOR LATER

The concept of sustainability surrounds the preservation of the present for the future. For something to be sustainable, it has to meet the needs of the current society, while refraining from causing problems for a future society. A growing example of this is sustainable food, which normally consists of non-meat products.

Sustainable food is any food product that has minimal to no negative repercussions for the environment while also providing consumers with healthy meal options. The majority of sustainable foods are plant-based prod-

ucts because they use less natural resources and produce fewer greenhouse gasses (GHGs) than livestock.

However, there is more than just one component that contributes to the sustainability of a resource. These components are the product's production, the product itself, the type of packaging used, the method of product distribution and the disposal of product remnants. To produce a sustainable food option, each step in this process should produce minimal GHGs, reducing its negative impact on the environment.

Food production is currently the cause of 30 percent of GHGs, with livestock agriculture producing nearly half of those emissions. Livestock influences this GHG increase through the production of large amounts of methane. However, by producing more plant-based foods, the largest cause of GHGs in food production can be eliminated, thus decreasing the overall pollution caused by food production.

Liz Ruder, an associate professor in RIT's

Institute of Health Sciences and Technology, commented on the environmental importance of sustainable foods and the actions that can be taken by different groups.

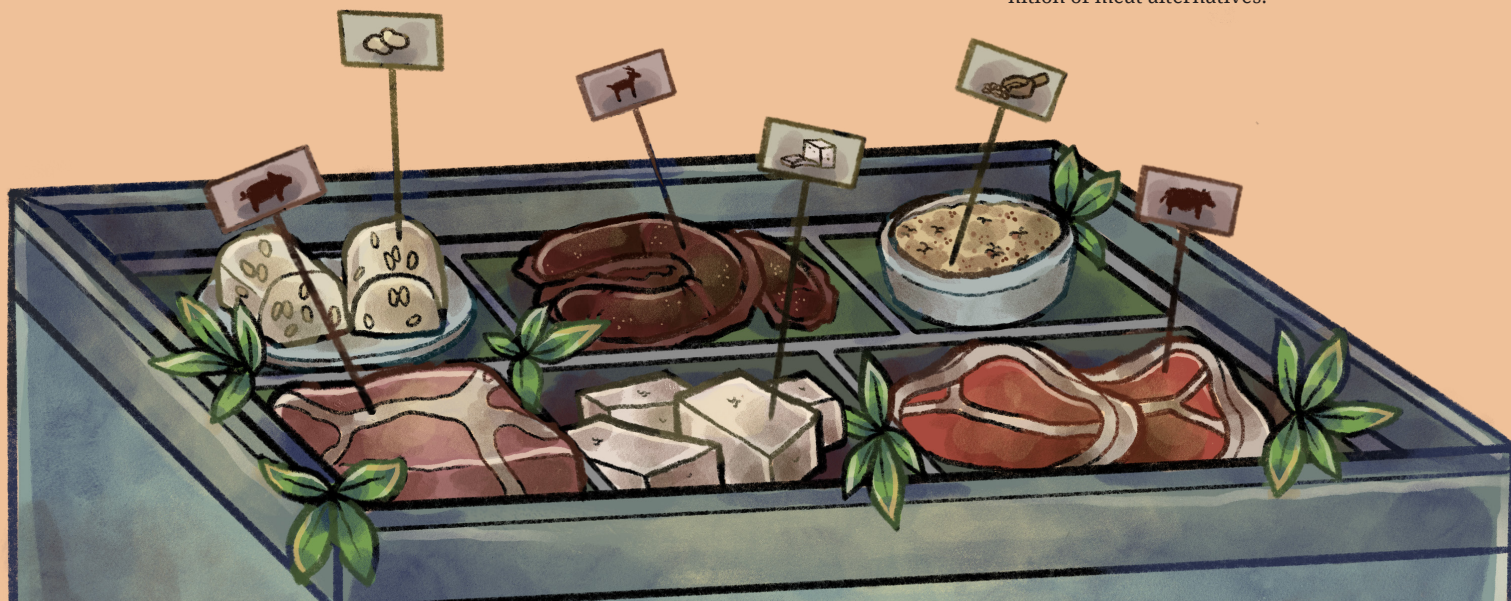
"It's apparent that we're in a climate crisis right now," Ruder said. "I think it's important to examine sustainability on a wide scale and then also in our individual eating patterns so that we can make food choices that can perhaps mitigate some climate change."

By choosing to eat sustainable foods, both the environment and the consumer will benefit.

TO MEAT OR NOT TO MEAT?

Meat alternatives are more than just meat imposters: they can be any form of food that contains protein. Protein is one of the main nutrients people gain when consuming meat. However, meat is not the only source of protein available.

Master of Science and RIT's Registered Dietician, Marisa Bellanca, provided her own definition of meat alternatives.



“ Anything that provides a substantial amount of protein that doesn't come from an animal is considered a meat alternative. ”



“Anything that provides a substantial amount of protein that doesn’t come from an animal is considered a meat alternative,” Bellanca explained. “Tofu, tempeh even quinoa can be considered a protein source that is a plant-based alternative.”

A positive attribute of meat alternatives is their lack of saturated fats and their emphasis on unsaturated fats. Compared to meat, non-meat products normally contain less saturated fats, which are considered to be unhealthy because they can increase the consumer’s risk of heart disease. However, they do normally contain unsaturated fats, which can improve the consumer’s blood cholesterol levels.

“There’s a couple [of] different kinds of fats that our body needs to function ... if your diet is more emphasized in unsaturated fats that typically come from plant proteins and plant products, then your HCLs, your healthy cholesterol, will rise and it will lower your risk of heart disease,” Bellanca explained.

Meat alternatives may not always be able to fully replace meat products. There are some plant-based foods that do not have the correct type of protein in them, thus denying the consumer an important nutrient. They lack what are called complete proteins, which contain all the amino acids needed to function.

“Sometimes plant-based foods don’t have all of [the amino acids], but meat, because it comes from an animal, it has all of those essential amino acids,” Bellanca said.

However, there are many examples of plant-based products that can fulfill the body’s need for complete proteins: buckwheat, quinoa, and soy. Regardless, diets centered around plant-based products tend to be healthier than others. However, Ruder explained that the health of a diet is mostly based on the contents, rather than the type.

“**Committing to that on your Meatless Monday can mean a big difference in your nutrients and the way you get your nutrients.**”

“When planned well, [plant-based diets] have such a beautiful variety of foods and tend to be higher in fruits and vegetables, which bring in more vitamins, minerals [and] fiber,” Ruder said. “It’s all about what the diet looks like rather than just the label of what it is.”

Eating meat alternatives or plant-based products does not have to be a strict commitment; there are ways to balance the consumption of meat and non-meat products in a healthy manner. A low commitment option

that can be molded to any preference is the act of eating non-meat products for one day each week. Bellanca explained more about the benefits of this option she calls “Meatless Monday.”

“It’s kind of an encouragement to try plant-based proteins and have them in your diet,” Bellanca said. “Committing to that on your Meatless Monday can mean a big difference in your nutrients and the way you get your nutrients.”

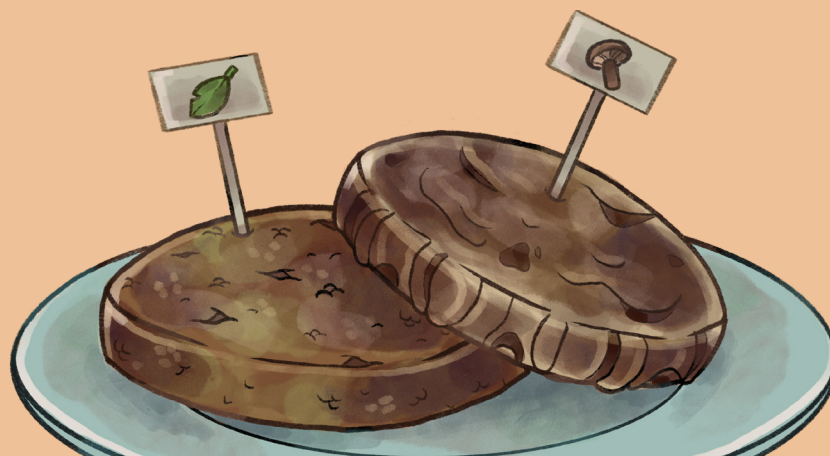
WHAT DID I EAT?

RIT is continuing to move towards a more inclusive dining experience by adding meat alternatives and plant-based products to their dining locations. Some examples include the grain bowl station at Gracie’s, as well as various meat substitutes and vegetarian entrees, which are offered at several dining locations.

Additionally, RIT provides students with a meal tracking website called NetNutrition. This website provides a way to track daily consumption and view the nutrition facts of foods from any on-campus dining location.

“I am confident that there are healthy choices available. I’m also really impressed with the services through NetNutrition, where students can go online and look things up,” Ruder commented. “I do feel like RIT provides good options to students.”

Using available resources, students are encouraged to leave their comfort zone, try new foods, and explore healthy eating. Remember: to meat or not to meat? That is the question. **R**



SUPERFUND

The Waste Left Behind

by *Tommy Delp* | photography by *Travis LaCoss* | illustration by *Nusrah Chowdhury* | design by *Grace Bukowski*

In 1978, Love Canal was a working-class community near Niagara Falls, N. Y. By 1981, the neighborhood was abandoned, and remedial work had begun to contain the toxic sludge buried beneath.

Throughout the U.S., there are thousands of sites contaminated with hazardous wastes. Ranging from manufacturing facilities to landfills, these sites pose a tangible threat to public health and the environment.

Signed into law on Dec. 11, 1980, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), informally known as Superfund, was created to give the Environmental Protection Agency (EPA) the broad authority it needed to directly respond to the risks posed by these locations.

The program, in all its successes and failures, provides an excellent case study for environmental response and legislation at the national level.

THE BATTLE OF LOVE CANAL

For over 30 years, the Hooker Chemical Company (HCC) stored the byproducts of the dyes, perfumes and cleaning fluids that they manufactured in an abandoned canal. In 1953, they sold Love Canal to the local school board for one dollar.

While a thriving community developed around the now hidden waste dump, many strange problems plagued the neighborhood.

For one, black slime often leaked into the basements and backyards closest to the canal. More worryingly though, birth defects, cancers and miscarriages affected a large number of Love Canal residents.

In 1978, a local housewife, Lois Gibbs, read a newspaper article about the chemicals buried near her home. She quickly organized the community and pushed for action.

By 1980, Love Canal was making national news, and the Federal government agreed to evacuate the neighborhood and buy all the homes.

In the aftermath of the fiasco, the government created the Superfund legislation. If another

emergency were to occur, there would be money and manpower to remedy the situation.

EXAMINING THE NPL

There are over 1,800 Superfund sites across the country as of 2021, with over 1,300 on the National Priorities List (NPL). The NPL is used primarily as an information and management tool by the EPA to determine the order in which it addresses locations.

22 percent of the U.S. population lives within three miles of a site as of 2020. There are four within a 20 mile radius of RIT. How does Superfund help these communities?

The original bill's various tenets offered a well-rounded approach. It started by establishing regulations on how hazardous waste and its disposal sites should be cared for.

It also made it easier for the Federal government, through the EPA, to go after polluters that they named Potentially Responsible Parties (PRPs). Those PRPs would have to do the cleanup work themselves or be held responsible for the government's costs.

This strict joint and several liability meant that wrongdoers would be held fully accountable no matter how much they contributed or whether or not they acted with intent.

If a PRP can't be found, the site is considered orphaned and the cleanup costs are entirely covered by the program.

The titular "fund" in Superfund was mainly made up of a tax placed on chemical and petroleum companies, along with money provided by the Federal government.

This money is necessary; Superfund projects are long-term investments. For the most part, cleaning up a site is never as simple as just removing the toxic materials.

The waste often seeps into the ground and becomes an uncontrollable part of the environment. Once a cleanup is completed, most sites are monitored for leakage by air, soil, surface water or groundwater indefinitely.

The ultimate goal of Superfund is to return these sites back to productive use, whether as

providers of clean energy, additional green spaces or various other applications. Direct community involvement is often central to developing these solutions.

A HALF-LIFE LEGACY

The program has gone through many changes since Love Canal. A majority of the strong policies that once kept the program in shape have either been repealed or appealed over time.

The NPL has rapidly grown over the last four decades, and while the 413 sites cleaned up and removed do indicate some sign of progress, many other factors state otherwise.

The chemical and petroleum tax that funded most early sites expired in 1995. By 2003, the fund was bankrupt, and all orphan sites since then have been paid in full by taxpayers.

A 2009 U.S. Supreme Court case also stripped Superfund of its strict joint and several liability. Without it, PRPs now only pay for a share of the cleanup costs and not the entire amount.

This lack of funding has led to Superfund being more of a bureaucratic hurdle than a functioning public system. Even those in support of the program have criticized its slow cleanup process.

In 2020, there were 38 sites ready for construction but left without funding, up from only three in 2015 — the largest backup of pending work since 2005.

Some also believe that the program is a prime example of government overreach. They often ask why individual communities should be a federal concern. This criticism doesn't take into account that, according to the EPA, the populations most at risk are often minority and lower income, therefore unable to fix the issues themselves.

At the same time, Superfund was never meant to be a 'big picture' program. Clearing the NPL will not solve climate change, but that doesn't mean these communities don't deserve help. No one should have to live in a neighborhood literally oozing with waste.


Even if the Superfund of today does have

its flaws, it's still important. The original program's roots in protest, speedy path through legislation and multi-pronged approach to combating a national issue still offers a partial framework for addressing current environmental concerns.

Recent events have even offered some hope for the successful continuation of the program. The Infrastructure Investment and Jobs Act,

signed into law on Nov. 15, 2021, allocated an additional one billion dollars to Superfund. It also reinstated Superfund's original chemical tax.

In 1988, Love Canal was renamed Black Creek Village, with the area around the canal deemed suitable for rehabilitation. While the EPA stresses that the monitoring systems they have in place keep the commu-

nity safe, some people — Lois Gibbs included — still believe the neighborhood should remain empty. After all, nothing was ever removed from the canal. To this day, over 20,000 tons of chemicals remain buried below. 



WOTS

Word on the Street

photography by Nithil Harris | design by Sneha Yalgi

Who, or what, is the most responsible for climate change?

Gillian Kostek
third year
Interior Design

“Maybe the government and all of the companies that they give money to that keeps increasing the global footprint for climate change.”



London Emmerich
second year
Game Design and Development

“Big corporations. They’re the ones who control a lot of things, not just with emissions, but a lot of people end up working for them so they control a lot of output.”



Nathan Trumble
second year
Computing Security

“Whoever invented the steam engine probably. Get right down to the root, you know?”



Maddie Tlachac
second year
Environmental Sustainability, Health and Safety

“Climate change is an issue affecting many people. I kind of want to say large corporations in general.”



Opinions expressed are solely of the students and do not reflect the views of REPORTER. **R**

RINGS

compiled by Erin Brache
illustration by Emily O'Shea
design by JamieLynn Gallagher

RIT's only digital confessional
Text or call (585)-672-4840

"DON'T WORRY, BABE. I GOT THIS.
CAN SHE GET A PAC-MAN SLIDER
WITH SOME DIG DUG FRIES?"

Saturday, January 22, 2021 9:30pm



"DO YOU THINK THE
BEETLES EVER KISSED 🥺"

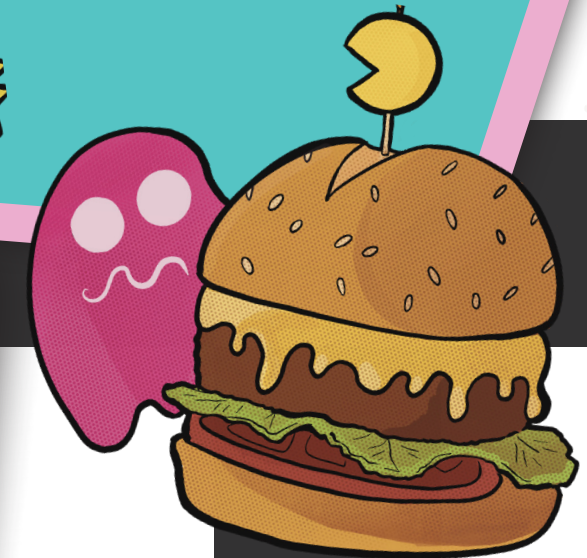
Thursday, January 20, 2021, 5:41pm

"RUBBER CHICKENS AND
FINGER SCISSORING"

Monday, December 13, 2021, 11:12am

"PEOPLE GET REALLY MAD
WHEN YOU IMPLY
OLAF IS HOMOPHOBIC"

Tuesday, January 11, 2021, 2:27pm




"RINGS SUBMISSION-
GETTING FINGERED BY THE
FLASH WOULD BE INSANE"

Saturday, January 15, 9:52am

"TO THE PERSON WHO KEEPS
POOPING ON THE FLOOR OF THE
GIBSON 3A MEN'S BATHROOM:
PLEASE STOP"

Monday, January 17, 2021, 11:36pm

Disclaimer: All calls and texts
may be subject to editing and
truncation. Statements do not
reflect the views of REPORTER. 

National Day on Writing: Nonfiction

Pretentiousness

by River Starliper | design by Grace Bukowski

I. Introduction

Walking to class, you pass by someone who makes you do a double take: dressed like the

TV stereotype of an Academic, probably reading as they walk, maybe poetry, or a science textbook, or a classic novel bound in pristine hardcover. “How pretentious,” you think, and then you move on with your day. You probably don’t even know them, and may never consciously think of them again. Because that feeling you get when you look at them, the inability to look away, and the dismissal of their person in the face of a supposed pretentiousness has a name; there’s something dark that wells up inside of you, but you are both too proud and ashamed to admit it. Hatred.

II. Hatred of the Other

The Academic is seen as an external force, something different from yourself entirely. Here, I use the term “Other” to refer both to the in-group and out-group dynamics of stigma and prejudice, as well as the more simplistically abstract idea of a force different from oneself. Humans, as a general rule, are keenly aware of our own identity and the manner in which it differs from the identities of others. When a collection of people share a facet of that identity, they may form their own social group, inclusive of those who possess that facet and exclusive of those who do not. Academics, for example, may band together and can be considered a social class in and of themselves. While it would be ideal, in my opinion, if these social groups could all coexist harmoniously (and some of them do!) it is also true that we

observe a certain competition between them, especially amongst groups with similar identifying features (for example, discourse between different racial or gender groups). This doesn’t mean that we are predisposed to hate these other groups, to hate the Other. But it does mean that, through a growing awareness of the differences that set our “group” apart from another, that hatred may grow inside of us. There is not, despite what some may tell you, an objective and natural hierarchy to these groups; an argument can always be made as to how the “lesser” group actually has it better than their “superiors” (the grass is always greener). But we cling to these group identities as facets of the Self, and in doing so, we come face to face with our own narcissism manifested as an unshakable belief that our group is the true superior (Crocker 1989). And when that belief is threatened, we lash out against those who may in actuality be quite similar to

ourselves, but for whatever reason could not gain entrance to the group, and therefore are not part of the Self (Jones 2002). We do this out of fear, and through that fear, hatred blooms. As Ursula K. Le Guin discusses in her blog post “89b. About Anger,” we react to perceived threats by wielding anger as our weapon, but even when that threat is gone, the weapon — the anger — remains. While she does not go on to discuss hatred in detail, I think that hatred works similarly. But not the same. Where anger is the weapon, hatred is the sheath. When the anger finally dissipates, when you achieve some measure of personal growth and lay your sword to rest in a valley of lilies, the sheath remains, empty but ever present. And even if you get rid of that too, you still, from time to time, find your hand twitching to the side of your belt where you knew it once rested. Just as a once terrible knight can move to a faraway land, casting aside his brutal past to seek a tamer existence, so too can we lay down our anger and hatred in search of what it means to be kinder. But we — the knight, and you and me — will still sometimes look down to see blood on our hands.



III. Hatred of the Self

With discussion of the idealised television Academic also comes discussion of *The Bully*. *The Bully* is the external factor seducing our heroine into a pit of self-loathing; defeat of *The Bully* will unquestionably free the innocent Academic from her tower, and all will be set right with the world. Perhaps the most overt example of *The Bully* in film is the 1989 come-



dy Heathers. The Bullies in Heathers are, well, the Heathers themselves, color-coded icons of what it means to be popular (and ruthlessly bitchy) in an American high school. Veronica Sawyer (Ryder) is a picture-perfect Academic — she plays croquet, she appreciates a good p t , she writes poetry with a monocle perched on her eye, and she ... is a Heather? Throughout the movie, Veronica rages against the Heathers, even going so far as to poison their top dog with a cup of drain cleaner. But in the end, it isn't the Heathers who face a gnawing regret: Veronica herself finds that she is just as much of a villain as they are. How can she hate the Heathers while still calling herself one of them and benefiting from the system they have created? There are two answers for this; one, she remains oblivious to her similarities with the Heathers and truly views herself as innocent, or two: she knows, and her hatred towards the Heathers is a manifestation of her hatred towards herself. But not everyone is a Heather, and not everyone is a Veronica; not everyone is an Academic, or a Bully. Most of us are just ... people. People who hate ourselves just as much as a Heather, a Veronica, an Academic, a Bully. And this hatred is not just externally constructed. We hate against the Other; we rage against what we do not understand and what we fear; we do this because when we stare into the face of the greatest evil imaginable, our own reflection stares back. In the analytical essay "Anthropology and the Savage Slot" Michel-Rolph Trouillot discusses how anthropology has historically viewed certain populations as "savages,"

and considered this "savagery" to be a separate division of humanity, a chaotic force to balance the more "cultured" societies. If this were, in actuality, the truth of the world, then the job of the anthropologist is to go out and study the savages, to define the chasm between "us" and "them."

But in the end, the hypothetical anthropologist finds that his "savage" subject has escaped. He still needs a photograph. "It's pouring rain out there, and the mosquitoes are starting to bite. In desperation, the baffled anthropologist ... takes a picture of himself," (Trouillot 2003).

IV. Our Nature

I don't think there will ever be an end to the debate over whether or not Lord of the Flies is an adequate representation of how humans really behave. If a group of humans were to be stranded on a remote island and left completely alone, what would happen? Would they share resources equally, work collectively to forage and farm, and construct communal structures? Or would they dissolve into chaos, hoarding resources for the individual, create a trend of killing and cannibalism, and ultimately destroy themselves? We don't actually need to debate over what would happen if an event like the one inciting Lord of the Flies were to occur in real life: because it did, and the results were nothing like what Golding had predicted (Bregman 2020). In 1965, six students at a Catholic boarding school decided to make their escape by "borrowing" an old fishing boat, and ended up marooned on an island for over a year. The first time I heard of this, I steeled myself for at least one of the boys to

have wound up dead, or for some other gruesome acts to have occurred. But that isn't what happened. Shockingly unharmed (one with a fully healed leg fracture, having been taken care of by the others), all six boys were rescued. What happened in the meantime? Well, they shared resources equally, worked collectively to forage and farm, and built communal structures (including a badminton court!). Children grow up hearing the fable of the frog and the scorpion. The scorpion, unable to swim, approaches a frog and asks if it may ride across the river on the frog's back. The frog is good-natured, but hesitant, though accepts once reminded that the scorpion too would die if it were to sting the frog while traversing the waters (Anderson 2014). "It is my nature," says the scorpion, having still stung the kind frog in the middle of the river, drowning them both. "It is my nature," says the man in the desert somewhere, having shot and killed over oil. "That is not my nature," says another, horrified at what the first two have done. "I am nothing like that, and therefore better, and therefore my nature must be different from yours entirely." Let me ask you this: when humans first evolved as a species, did we have any notion of individual property? Did we fight and kill each other over food and territory? Or did we hunt together, forage together, and share the bounty among us? Both are accurate, to some degree. If I were to have been born then, though, I think I would have liked the second much better. It may very well be in our nature to hate. But it is also in our nature to see this hate, to recognize it, to sit with it and to understand it. It is in our nature to condemn hate, or at the very least subconsciously shun the parts of ourselves that facilitate it.

V. Conclusions

You get home from class, and hang your coat by the door. You set out some food for the cat, and put the kettle on to boil. Walking to your room to change, you catch a glimpse of yourself in the bathroom mirror. You stare, through that thin sliver of light, into your own eyes. "How pretentious," you think, but in seeing that reflection, you feel the hatred begin to dissipate. **R**



R

REPORTER