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Featuring:

- STEM Papers from Capstone: Industrial Chemistry
- Humanities Papers from Capstone: Existentialism and the Absurd
- Posters from Capstone Neuroscience



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A Letter from the Editorial Team

Welcome to the second issue of our BISV Science Research Journal! We are incredibly excited to see the support received from our fellow Bobcats and BISV faculty in publishing more papers to our journal. We have accepted submissions from the BISV student body as before, but we've also had the pleasure of accepting capstone projects from our seniors, especially those from Mr. Meyerowitz's Existentialism and Absurdism class. We'd like to extend special thanks to Mr. Meyerowitz and his students for allowing us to publish their work. Congratulations to our seniors on their fantastic capstone work; the editorial team wishes them luck in all their future endeavors!

Our co-editors-in-chief will be graduating this year along with the rest of our seniors, but as for our rising high school students, we hope we can continue to showcase more of your original research in multiple fields, and at the same time introduce you to worlds of research beyond your textbooks. It's been an incredibly fun start to the paper this year, and the editorial team hopes to rejoin you in the 2023-2024 school year!

Always looking forward,

Dr. Karen Allendoerfer - BISV Science Research Journal Club Advisor

Amith Vasantha - Co-Editor-in-Chief

Shravan Kannan - Co-Editor-in-Chief

Jeonghyun An - Senior Editor

Ellie Xi - Senior Editor

Grace Li - Senior Editor

Varan Battu - Senior Editor

Angela Wang - Senior Editor

Kedaar Rentachintala - Senior Editor

Student Publications - STEM

Chemistry of Cancer Treatments

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Introduction

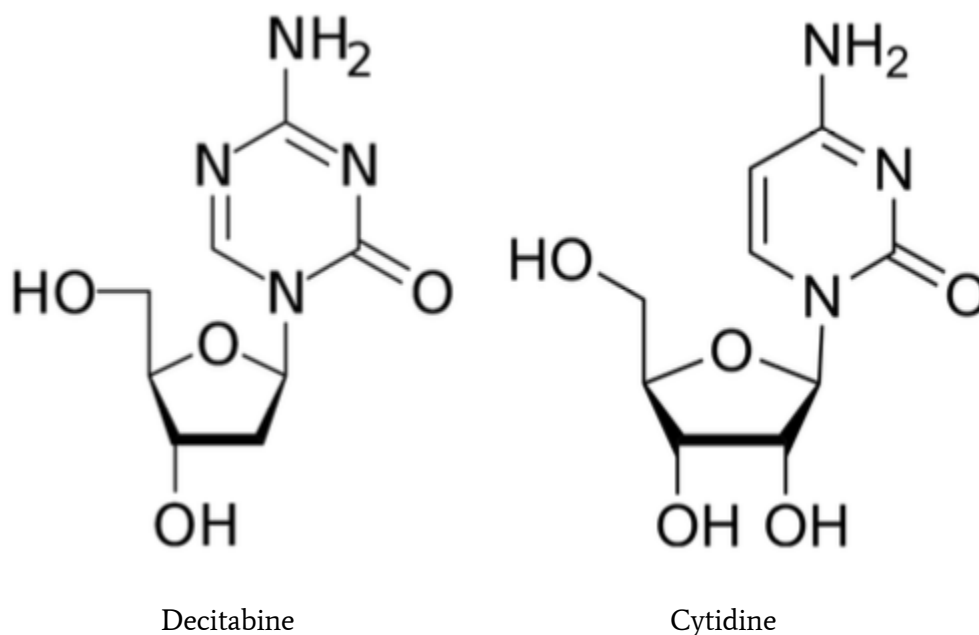
Cancer is a disease that has plagued humanity since the beginning of human history, from the earliest hints in Ancient Egypt (1500—1600 BCE) to the first documented case 2700 years ago.¹ Over the years, many physicians and philosophers attempted to explain and cure this disease, with Hippocrates from ancient Greece being perhaps the most famous. However, no such cure was discovered, with French physician Ambroise Paré (1510—1590) claiming it to be “incurable.”¹

By the mid-19th century, scientists had figured out the true nature of cancer—a malignant mutation (or transformation, as it was called back then) of normal cells. Around this time, advancement in anesthesiology and radiation therapy allowed physicians to treat cancer directly for the first time, and research into chemotherapy began to give results shortly after the conclusion of WWII.

Since then, many drugs to combat cancer have been developed, and have become widespread in hospitals for this very purpose. In this paper, we will analyze three such compounds: decitabine, RG108, and AMG510. A short description and history for each compound is given, along with a brief summary of methods used to synthesize these compounds along with their biochemistry inside of the human body.

Decitabine

Decitabine (4-amino-1-[(2R,4S,5R)-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]-1,3,5-triazin-2-one) has the chemical formula $C_8H_{12}N_4O_4$. It is an analog of the compound cytidine ($C_9H_{13}N_3O_5$), which consists of a cytosine molecule attached to a ribose ring.²



History

Decitabine was first synthesized in 1964 by Pliml and Šorm,^{3,4} and its anti-leukemic properties were discovered four years later by Šorm and Vesely.⁵ It was first formulated for therapeutic use in the early 1980s, and underwent three development stages (1984–1990, 1993–1997, 2000–2005) before it was approved by the FDA for treatment of myelodysplastic syndromes (MDS) and chronic myelomonocytic leukemia (CMML) in 2006.⁶ Many synthesis methods have been developed over the years as well, and two of these methods will be briefly summarized following subsection.

Synthesis

Piskala and Šorm (1964)

This is the method that Piskala and Šorm⁴ used to first synthesize decitabine in 1964.

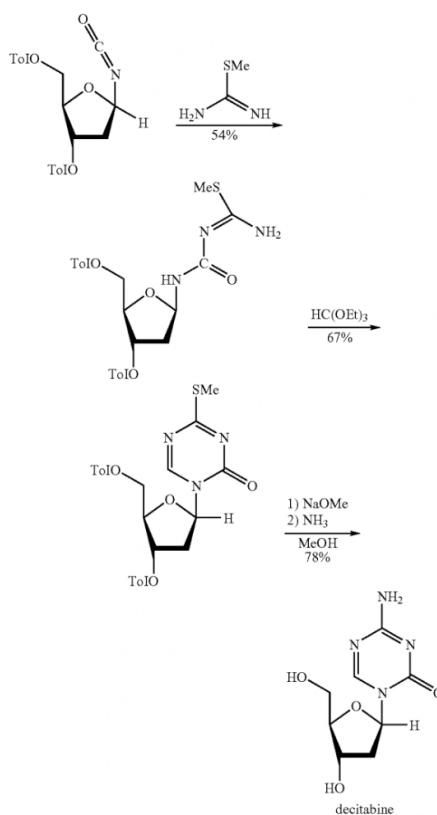


Figure 2: Piskala and Šorm (1964)

The process begins with an isocyanate (cyanate ion attached to an organic molecule via its nitrogen atom) reacting with an S-alkylisothiurea (urea derivative with oxygen replaced by sulfur attached to an alkyl group). This intermediate is then reacted with an orthoester (3 alkoxy groups attached to a carbon atom) to form the ring of the cytosine molecule, and then treated with ammonia to remove the S-alkyl group and replace it with an amine group. The overall yield for this process is around 30%.

Henschke et al. (2009)

This is the most recently developed synthesis method for decitabine, giving a higher purity and yield compared to previous methods.⁷ This synthesis method begins with a derivative of 2-deoxy-D-ribofuranose reacted with silyl 5-azacytosine. This reaction is done at a temperature of around -40°C in dichloromethane (DCM) and trimethylsilyl trifluoromethanesulfonate (TMSOTf), yielding a decitabine derivative with p-chlorobenzoyl groups attached to the ribose molecule. These are then removed from the molecule with a solution of 29% sodium methoxide in methanol at 25°C, yielding crude decitabine with a purity of 93.6%.

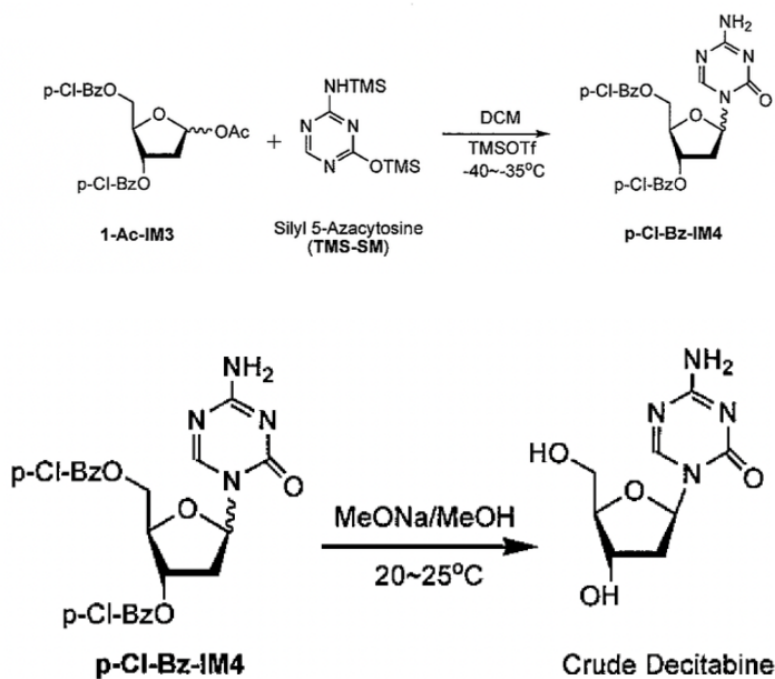


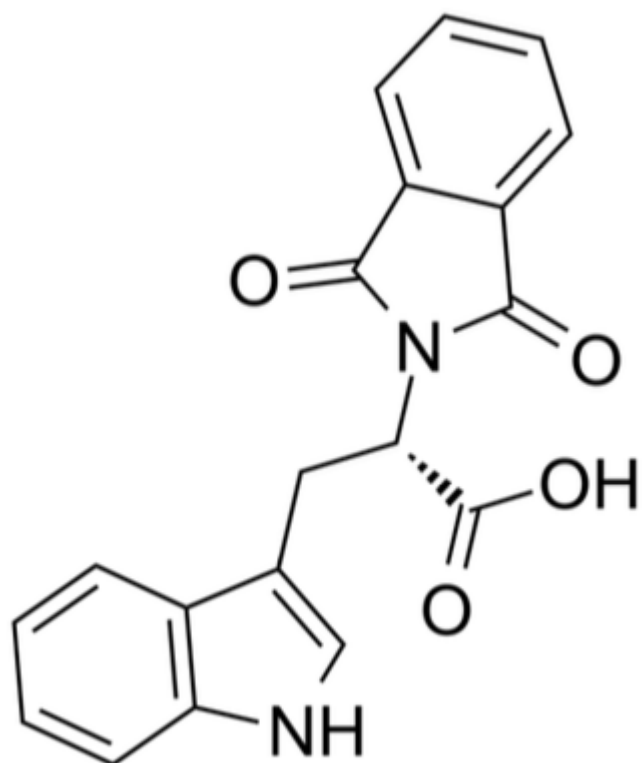
Figure 3: Henschke et al. (2009)

RG108

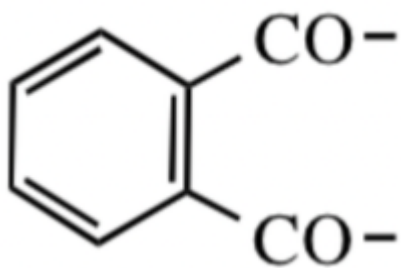
RG108, also known as N-Phthaloyl-L-Tryptophan, has the chemical formula $C_{19}H_{14}N_2O_4$. As the name suggests, it consists of a phthaloyl group (phthalic acid derivative with both OH groups removed) bonded to the α -amino group of the amino acid tryptophan.⁸

History

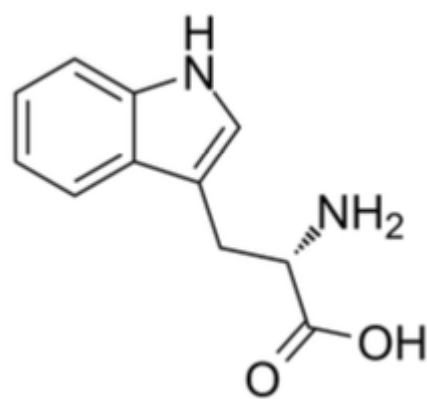
RG108 is one of the first molecules identified as a non-nucleoside inhibitor of DMNT,⁹ by Brueckner et al. (2005).¹⁰ However, there have been many recent efforts to find analogs of RG108 that have proven to be much more potent so far.¹¹



RG108



Phthaloyl



L-Tryptophan

Synthesis

This is a summary of the method outlined by Brueckner et al. (2005).¹⁰ It begins with the synthesis of methyl 2-[(succinimidooxy)carbonyl]benzoate, which is a derivative of phthalic acid and forms the phthaloyl group in the final product. This is done by reacting 2-(methoxycarbonyl)benzoic acid and N-hydroxysuccinimide, crystallizing then drying the product for a yield of 90%.

This intermediate product contains an activated ester bond, which is broken to bond with tryptophan in the following step. Tryptophan is added under basic conditions (Na_2CO_3 in water or acetonitrile). 2 M hydrochloric acid is then added, and the product is extracted with ethyl acetate, which is then evaporated. This process has an extremely high yield rate of almost 100%.

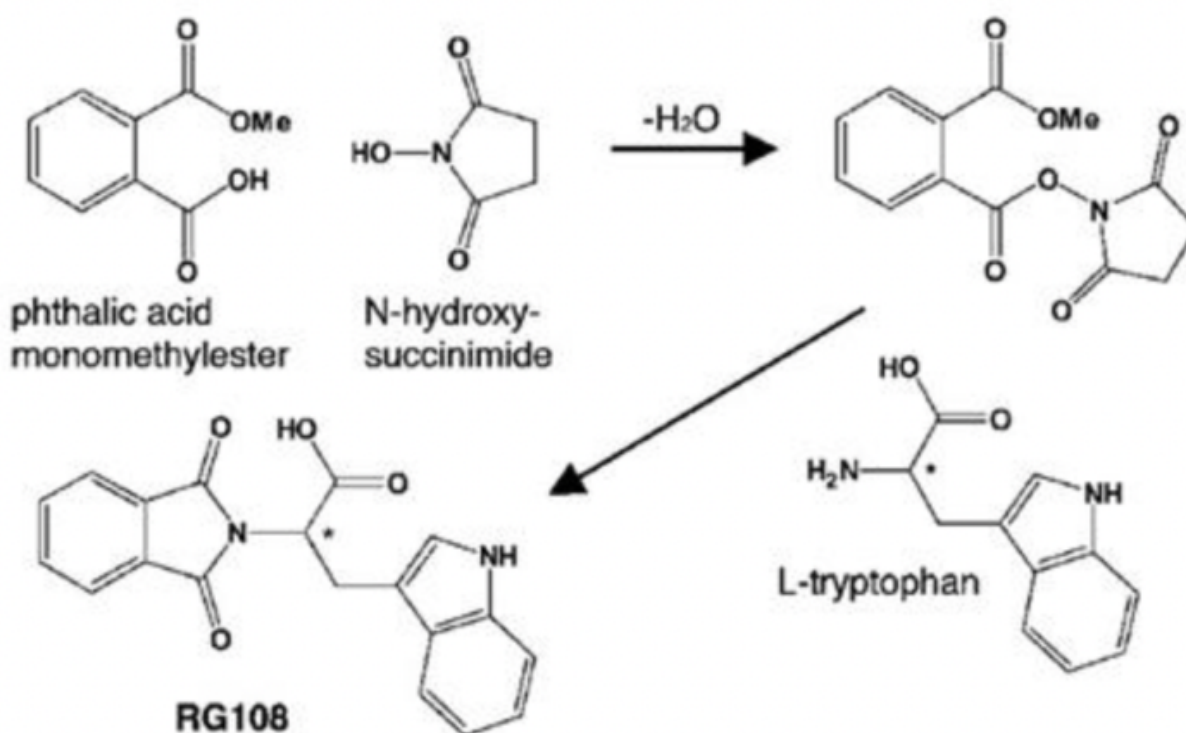


Figure 6: Synthesis of RG108

DNMT Inhibitors and Cancer

DNA Methyltransferases

DNMTs (DNA Methyltransferases) play a major role in the epigenome, which makes use of methyl groups and acetyl groups to activate and repress gene expression in cells and tissues. This role involves transferring methyl groups from the donor S-adenosyl-L-methionine to the 5' cytosine residue of DNA.¹² The DNMT family is made up of 4 members: DNMT1, DNMT3A, DNMT3B, and

DNMT3L. The last of the four, DNMT3L, does not have any enzymatic activity.¹³ DNMT1 works for maintenance, and DNMT3A and DNMT3B work as de novo methyltransferases necessary for establishing and maintaining genomic methylation. While this organization of functions may be convenient for cell functioning, there is room for overlap between both types of DNMTs.^{14,15} DNMT1 and DNMT3A/DNMT3B are responsible for organism viability at the embryo stage. This is because deactivating DNMT1 can lead to early lethality at embryonic day (E) 9.5^{16,17,18} and deactivating DNMT3B causes the death of embryos at E14.5–18.5 in mice.¹⁹ DNMT3A knockout mice die at the age of 4 weeks, despite appearing normal when born.

DNMTs are also involved in maintaining genomic integrity. This is important because if this function is disrupted, chromosome instability and tumor progression will take place. DNMTs are necessary for transcriptional silencing of many gene types, like genes on the inactive X chromosome, imprinted genes, and transposable elements. This silencing is crucial for chromosome stability. Targeted deletion experiments have shown that all 3 DNMTs are involved in genome stabilization, especially repetitive genetic sequences.^{19,20,21} Knocking out DNMT1 in mice and doing a double knockout of DNMT3A and DNMT3B in mice leads to recombination of telomeres. Of these three, DNMT3B is necessary for stabilizing pericentromeric satellite repeats. Deficiency of it leads to expansion and rearrangements of pericentromeric repeats. Also, cells without DNMT1 or hypomorphic DNMT1 mutations result in microsatellite instability, increase in chromosomal translocation frequency, and increase in sensitivity to genotoxic agents. This can promote the development of cancer.^{22,23,24,25,26,27}

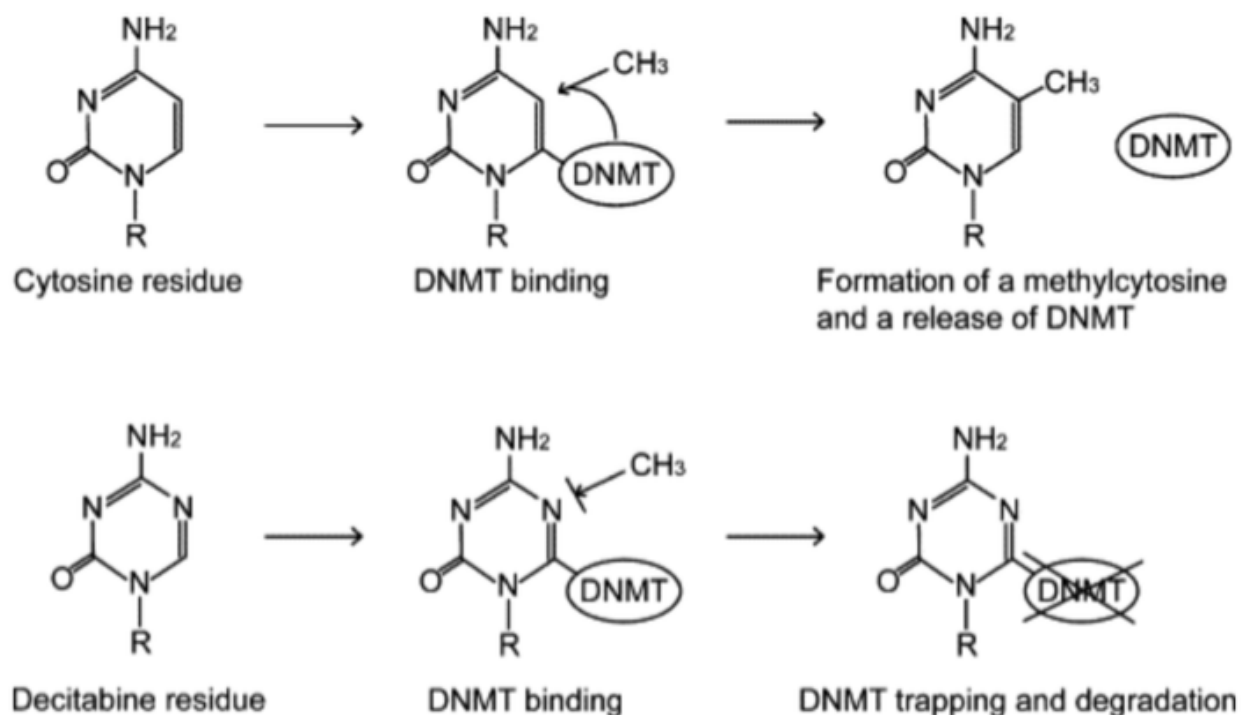


Figure 7: Comparison between DNMT and DNMT Inhibitor Function

Decitabine

Hypermethylation of DNA and Epigenetic Silencing

Aberrant DNA methylation is one of the major hallmarks of cancer, in addition to global hypomethylation and localized hypermethylation.²⁸ Increased methylation patterns can affect regulatory regions present within CpG islands, suppressing gene expression of tumor suppressor genes. This is what allows cancers to evolve to take advantage of the epigenome to inactivate critical genes without making DNA mutations or deletions.^{6,29}

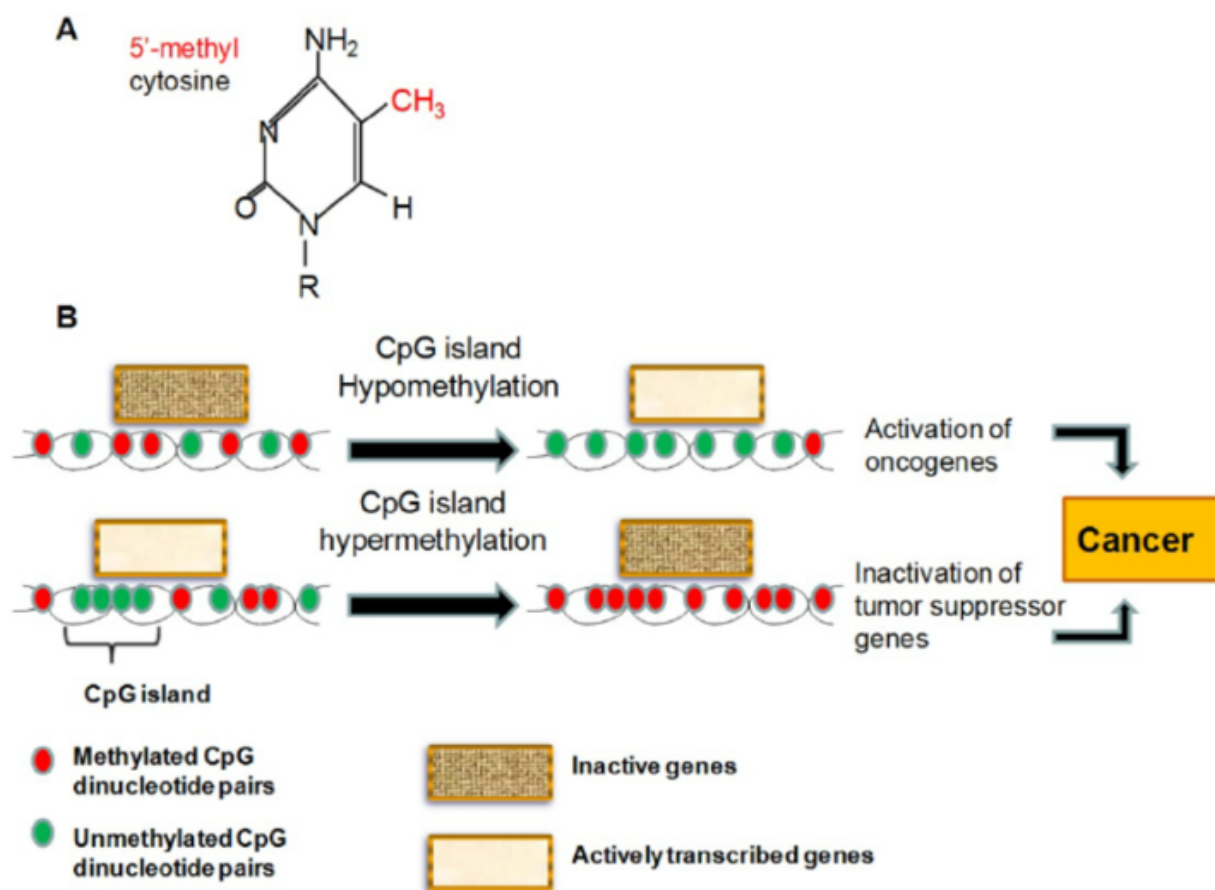


Figure 8: Schematic of Hypomethylation and Hypermethylation of CpG Islands

Decitabine Function

Decitabine works as a hypomethylating agent to reduce the effects of cancer in two ways: reactivation of silenced genes at lower doses and cytotoxicity at higher doses. Decitabine works by phosphorylating itself to decitabine triphosphate. This is then incorporated into DNA, depleting DNA methyltransferase and inducing replication- dependent DNA hypomethylation. Decitabine can

also produce DNA adducts at higher doses by covalently binding DNMTs into DNA. At lower doses, decitabine doesn't prevent cells from progressing from the G1 phase to the S phase.³⁰

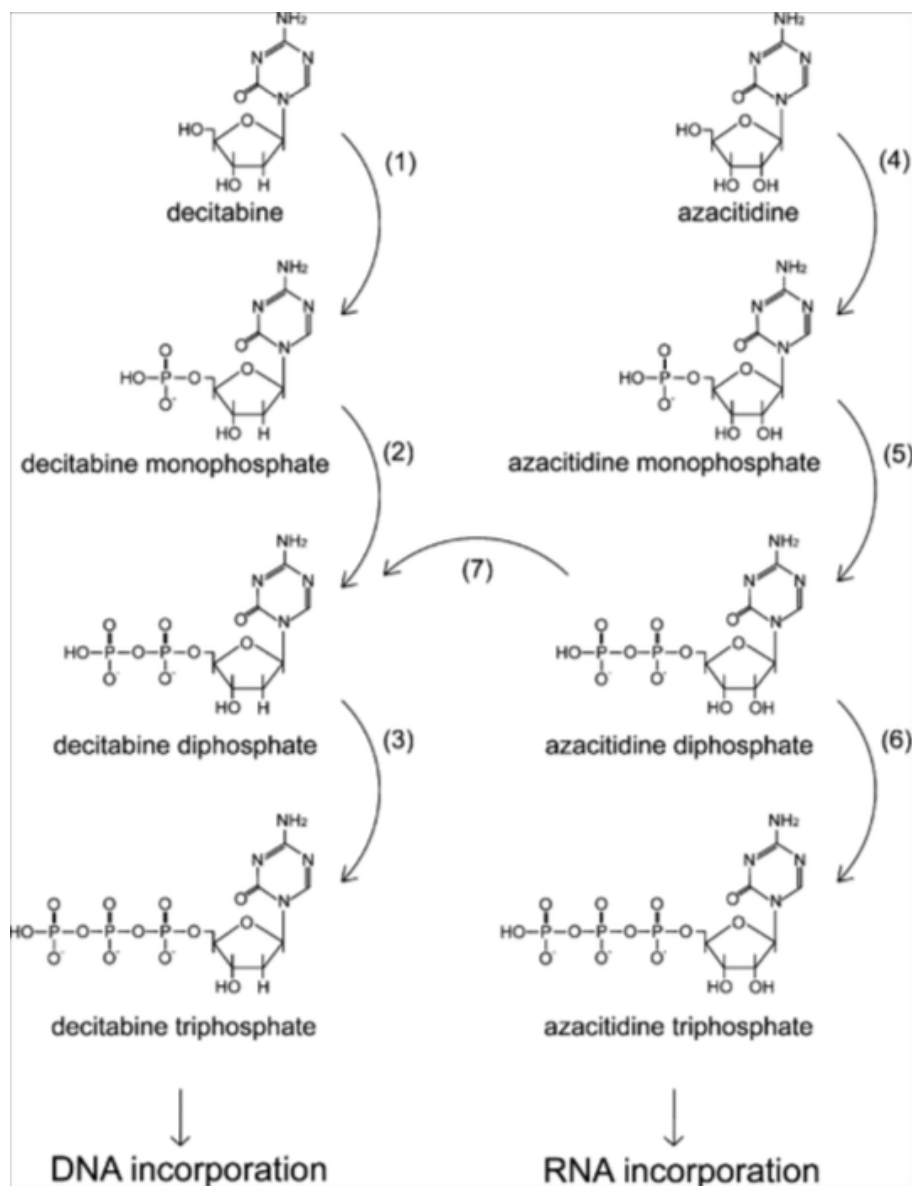


Figure 9: Incorporation Process of Decitabine into DNA and RNA

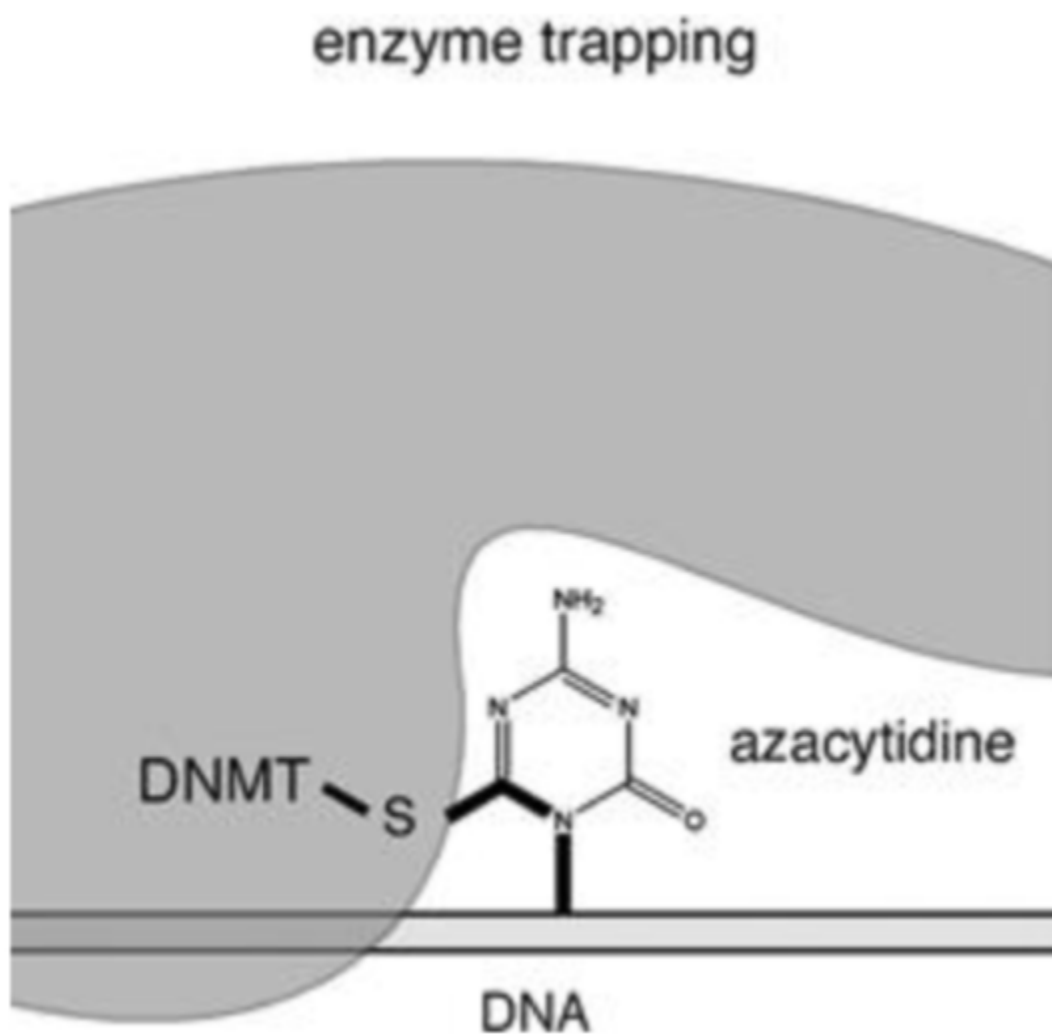


Figure 10: How Decitabine Impairs DNMT Function

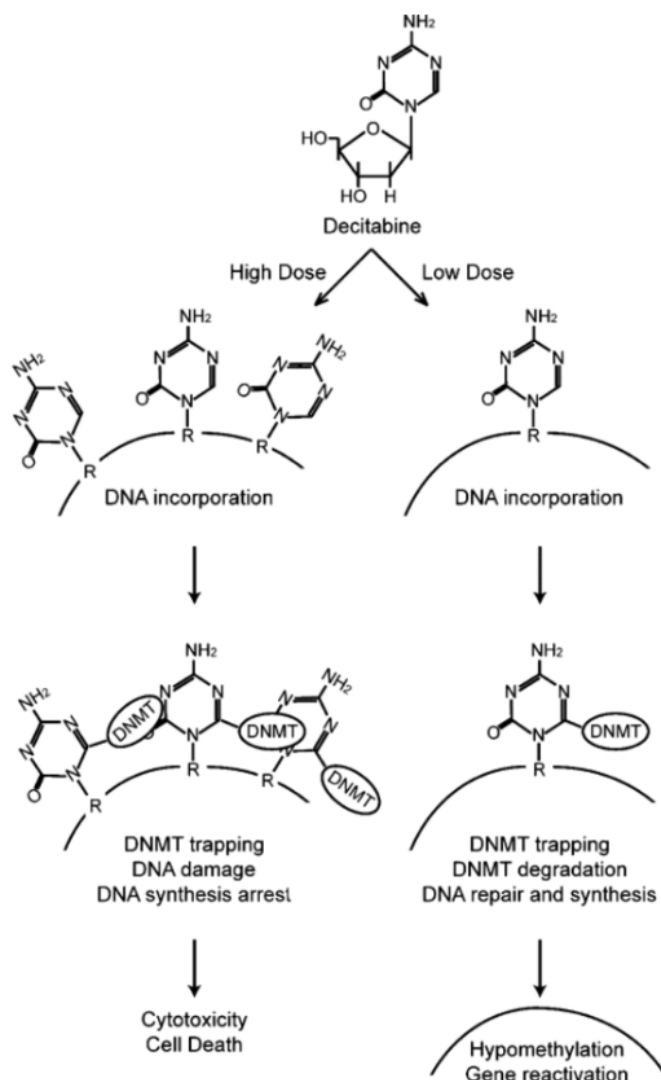


Figure 11: Decitabine Function at Low and High Doses

Hypomethylation and Histone Deacetylation

In addition to hypermethylation, decitabine can also induce hypomethylation in vivo and in vitro, activating genes originally silenced by cells. Under normal conditions in a cell, a feedback loop occurs between DNA methylation and histone methylation, resulting in the reactivation of a self-reinforcing silencing loop. Decitabine interrupts this silencing loop by inducing hypomethylation and reversing instructions given to histone proteins by cells near tumor suppressor loci.

RG108

RG108 works as a non-nucleoside catalytic DNMT inhibitor that works to decrease methylation of genomic DNA without any toxicity.³¹ This inhibitor works to block SAM cofactor binding. It also blocks the cell cycle in the G2/M phase by increasing hMLH1 expression and inhibiting DNMT3B expression.^{32,33}

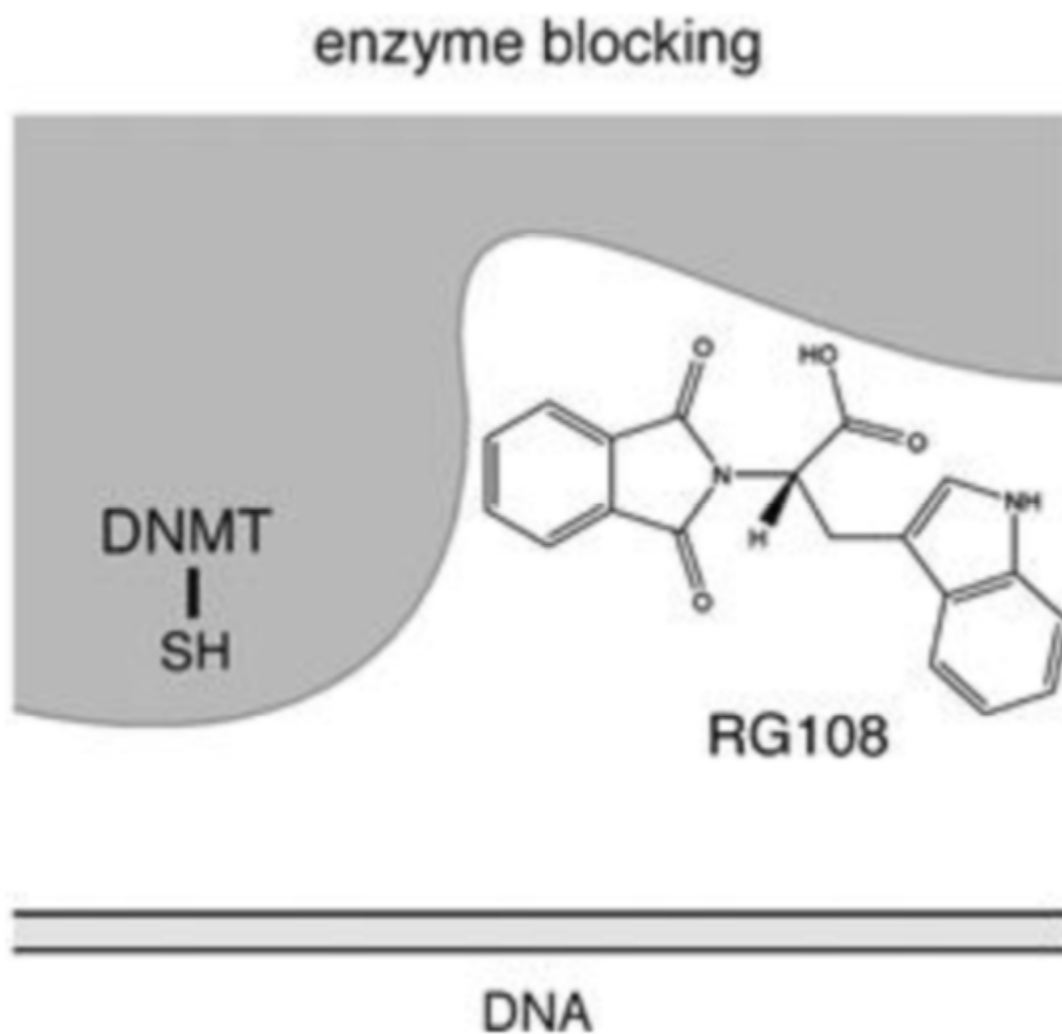


Figure 12: How RG108 Impairs DNMT Function^{32,33}

AMG510

AMG510, otherwise known as Sotorasib, has the chemical formula $C_{30}H_{30}F_2N_6O_3$. It is an acrylamide derivative.³⁴

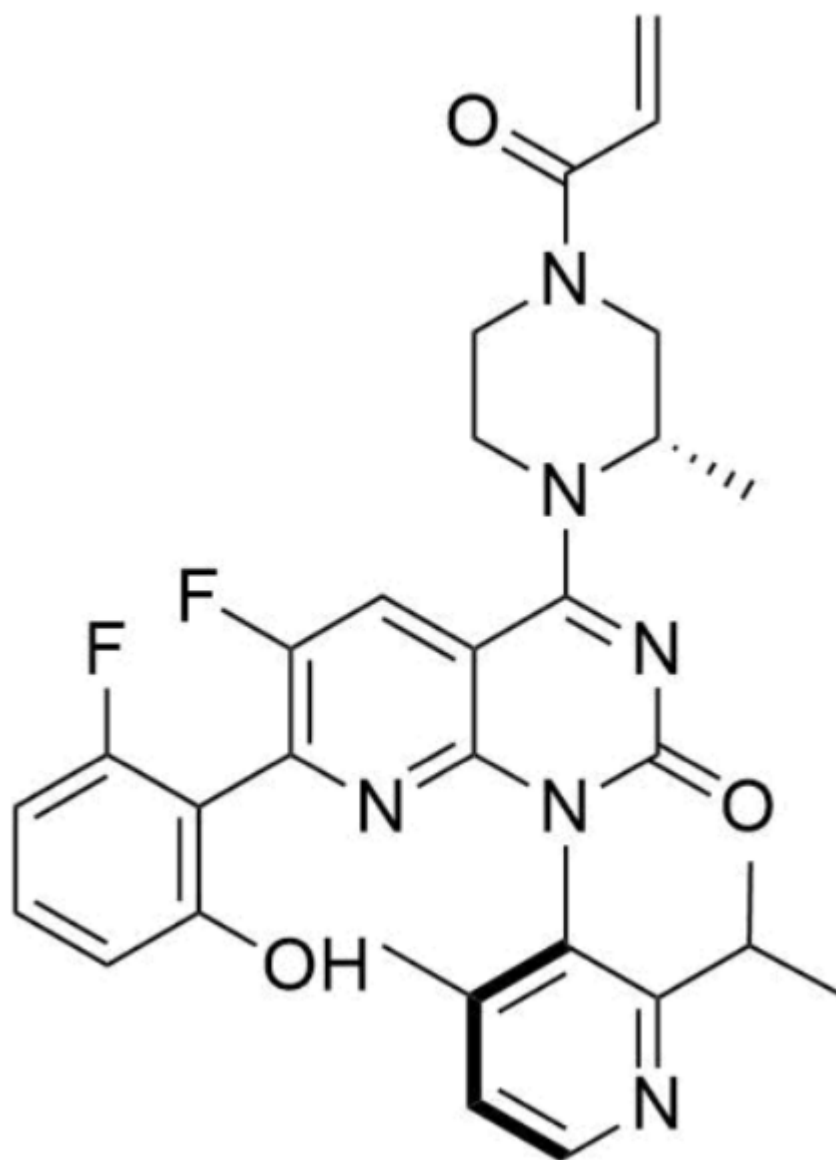


Figure 13: AMG510 (Sotorasib)

History

AMG510 was discovered very recently by Lanman et al. (2020).³⁵ It was the first molecule that serves as a KRAS-G12C inhibitor to advance to the clinic, having been approved by the FDA in May 2021 under the brand name Lumakras (Lumykras).³⁶ It is undergoing a Phase 2 study as of January 2023.³⁷

Synthesis

This is a brief overview of the method used by Lanman et al. (2020).³⁵ The process is extremely lengthy and was split into seven steps by the original discoverers. This paper will do the same, but only briefly summarizing the important aspects of each step.

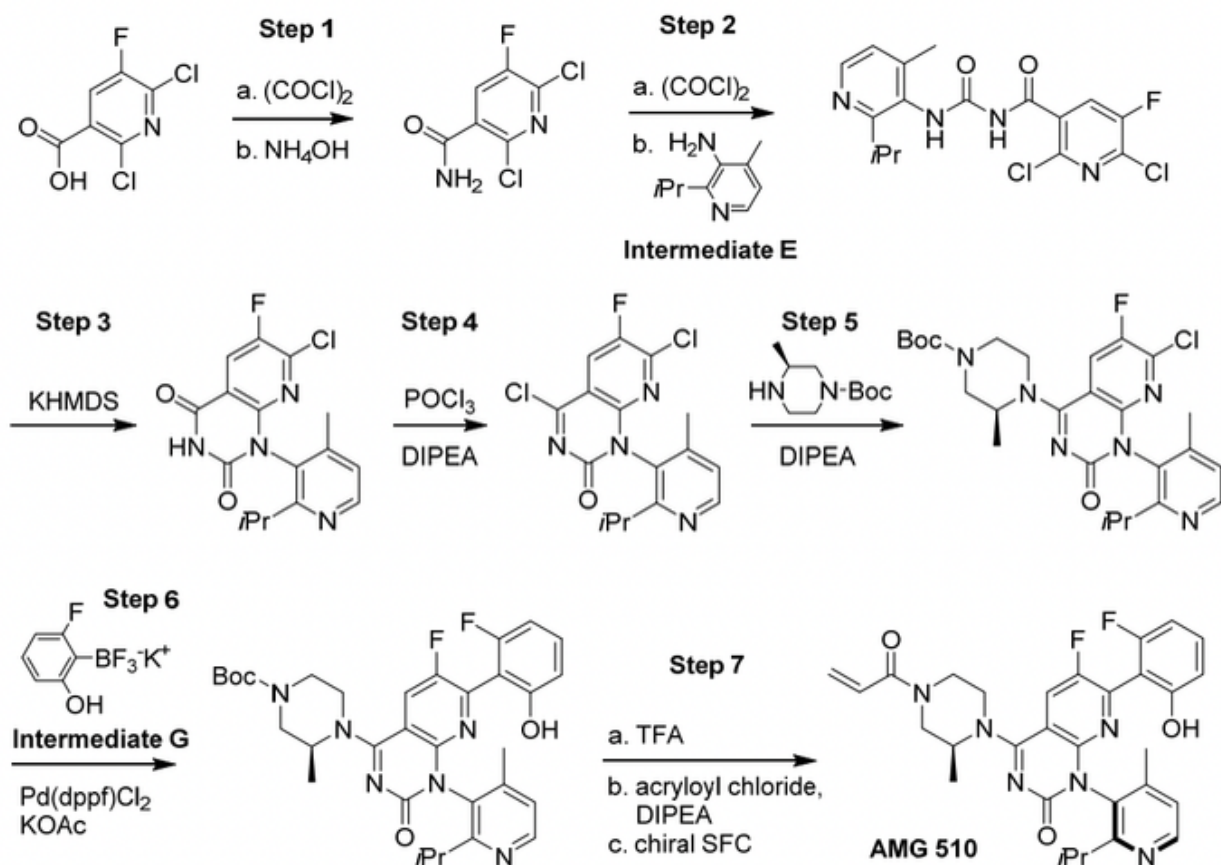


Figure 14: Synthesis of AMG510

The process begins with the synthesis of 2,6- dichloro-5-fluoronicotinamide. This is done by mixing a solution of oxalyl chloride in dichloromethane (DCM), dimethylformamide, and 2,6-dichloro-5-fluoronicotinic acid. This reaction essentially replaces the OH group on the acid with an NH₂ group. The mixture is stirred at room temperature for 16 hours, before dioxane and ammonium hydroxide are slowly added at 0°C. Finally, the mixture is washed with heptane, which is then evaporated to provide 2,6-dichloro-5-fluoronicotinamide.

In the next step, 2,6-dichloro-5- fluoronicotinamide is joined with another molecule, 2-isopropyl-4-methylpyridin-3-amine. The two reagents are mixed along with oxalyl chloride and an

ammonium chloride solution at a temperature of 0°C. There are many impurities left after this reaction goes to completion, but the product is not further purified.

After this, bonds in the previous product are re-arranged to start forming the clustered rings in the final product. This is done with potassium bis(trimethylsilyl)amide (KHMDs) and an ammonium chloride solution in an ice bath.

The next step involves replacing a carbonyl group on the outer part of the molecule (see Fig. (14)) with a single-bonded chlorine atom. This is done by adding a mixture of phosphorus oxychloride and N, N-diisopropylethylamine (DIPEA) at a temperature of 80°C. Once again, this process leaves behind many impurities that was not cleaned up at this time.

(S)-4-Boc-2-methyl piperazine is then added. This molecule attaches itself to the previous product at the location of the chlorine atom, which suggests why the previous step was necessary—providing a site for this molecule to attach onto. This reaction is done in the presence of DIPEA and a sodium bicarbonate solution at room temperature.

Now, the last major building block of the final product is added. (2-fluoro-6-hydroxyphenyl) potassium trifluoroborate attaches itself at the location of the other chlorine atom, but this process requires many more catalysts; namely, potassium acetate, DCM, and a palladium catalyst (in an organometallic form) were added along with water at a temperature of 90°C. This mixture is then diluted with a solution of sodium bicarbonate for extraction.

In the final step of the synthesis process, trifluoroacetic acid was added to replace the tert-butoxycarbonyl (BOC) group. This reaction, like many other reactions in this process, requires DCM, DIPEA, and a solution of sodium bicarbonate as catalysts. A solution of acryloyl chloride is added before the mixture is dried over anhydrous sodium sulfate to give the final product.

This process has an overall yield rate of 10-15%.

AMG510 and Cancer

Genetic Background

As discussed earlier, AMG510 was synthesized to target the G12C variant of KRAS in the clinic in an attempt to cure cancers like non-small cell lung cancer. The KRAS gene encodes the instructions for making the KRAS protein, which plays a crucial role within the RAS/MAPK signal transduction pathway. KRAS works as a GTPase, an enzyme that converts the molecule GTP (guanosine triphosphate) into GDP (guanosine diphosphate) and inorganic phosphate.³⁸ Although this role of molecular metabolism might sound insignificant at first, it is the major step of the RAS/MAPK pathway.³⁹ This metabolic activation starts a signaling transduction cascade that instructs cells to differentiate into new cells and mature overall. Mutations in the KRAS protein can result in the reduced metabolic capability of GTP into GDP. This can result in the permanent activation of the KRAS protein, resulting in the activation of Raf, ERK/MAPK, and C-Myc. These three proteins are responsible for cell proliferation and apoptosis. Such mutations are responsible for 95% of pancreatic cancers, 55% of thyroid cancers, 35% of colorectal cancers, and 35% of lung cancers. The widespread impact of KRAS mutations makes the discovery of AMG510 crucial to find new cancer treatments.

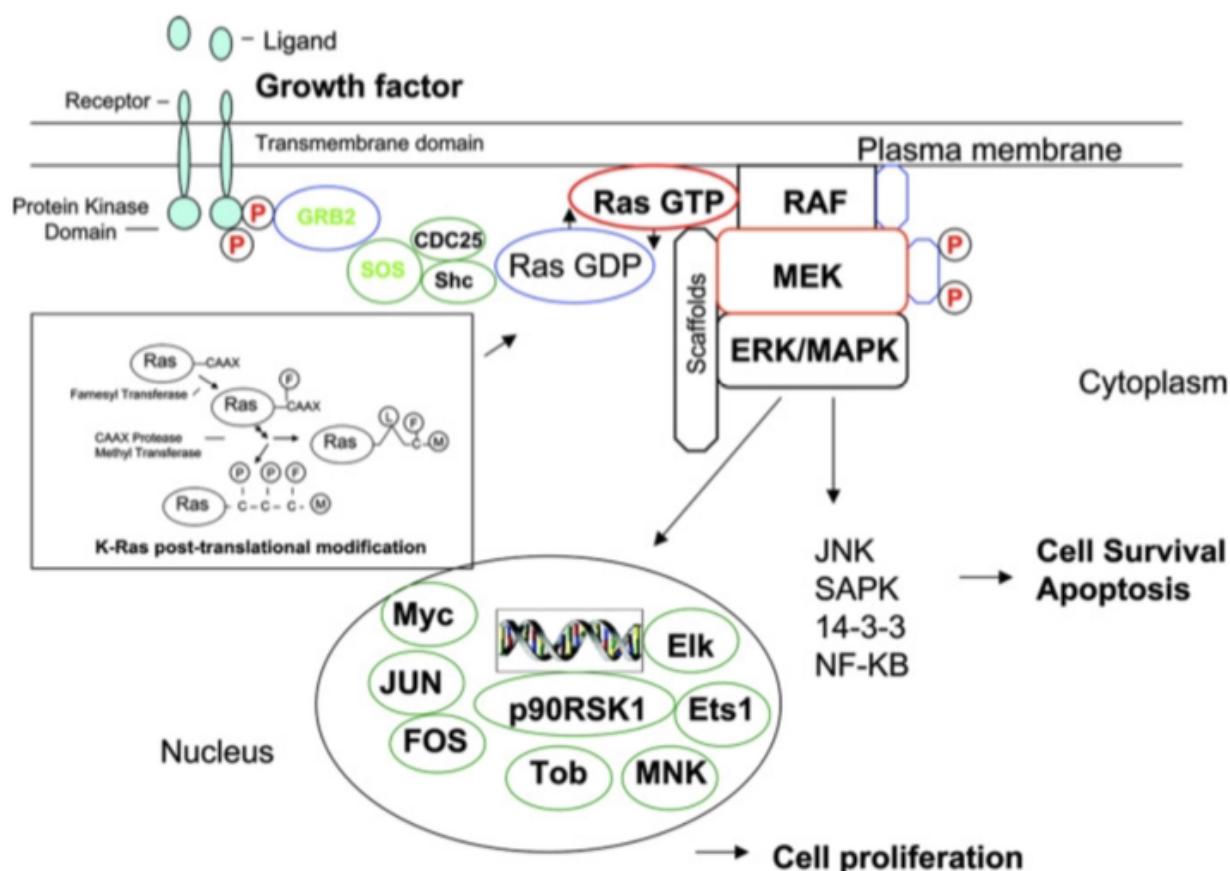


Figure 15: Schematic of KRAS Function in relation to RAS/MAPK-ERK Pathway

AMG510 Function

A specific variant of KRAS, called KRAS G12C, impairs KRAS protein function by preventing the hydrolysis of GTP to GDP. AMG510 works by binding to the GDP-bound KRAS through covalent bonds between cysteine-12 and the acrylamide warhead. Non-covalent bonds are formed between isopropylpyrimidine substituent and a cryptic pocket that includes histidine (H95), tyrosine (Y96), and glutamine (Q99). The cryptic Switch-II pocket is only present in the KRAS-G12C variant, resulting in complete inactivation of KRAS.⁴⁰ This holds in the protein in its inactive form, preventing the RAS/MAPK pathway from progressing. This leads to a major slowdown in cell proliferation in cancers.

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Chemistry in the Veterinary Industry

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Abstract

Chemistry plays a vital role in the field of veterinary medicine, as it allows for the development of effective diagnostic tools, medicines, pharmaceuticals, and preventative measures. In this presentation, we will explore the use of chemistry in the veterinary industry and how our furry (and scaly) friends' lives depend on chemical engineers' work. We will look at anesthetics, cancer treatments, flea and tick medications, and more.

Introduction

Chemistry plays a vital role in the field of veterinary medicine, as it allows for the development of effective diagnostic tools, medicines, and preventative measures to maintain the health of animals.

One area where chemistry is fundamental is in the development of pharmaceuticals for veterinary use. Many of the drugs and compounds used to treat animals, such as painkillers and antibiotics, are chemically synthesized, and understanding chemistry is important to design and produce these medications. Furthermore, chemistry is used to create diagnostic tests, such as blood panels and parasite screens, which are incredibly critical tools for identifying and treating a wide range of health problems in animals.

Chemistry is also used in the production of animal feed and in the development of preventative measures, such as vaccines and pest control products. These applications rely on an understanding of the chemical properties and interactions of various nutrients and substances, as well as their potential impacts on animal health.



Regardless of application method, be it through injection, supplements and additives, or chemical gases, veterinary drugs are primarily charged with reducing pain and inflammation, curing diseases, assisting childbirth, or otherwise improving quality of life.

Overall, the veterinary applications of chemistry are diverse and critical to the field of veterinary medicine. From the development of pharmaceuticals and diagnostic tests to the production of animal feed and preventative measures, chemistry plays a key role in maintaining the health and well-being of animals.

Legalization

An underlooked aspect of the veterinary industry is the pathway to legalization. Without regulation and approval, the complex chemistry of our veterinary drugs is wasted. On the road to complete commercialization or even practical use, pharmaceutical scientists must seek approval from the FDA (Food and Drug Administration).

For General Approval, or the complete verification of the strength, quality, and purity of the drug from batch to batch, the pharmaceutical company will submit a New Animal Drug Application (NADA) to the Center for Veterinary Medicine (CVM) for review. The NADA must include data from preclinical studies, as well as information on the drug's chemical properties, manufacturing process, and proposed labeling. The FDA will then review the NADA and inspect the facilities where the drug will be manufactured to ensure that it meets current good manufacturing practices. Only after this step-by-step process can veterinary drugs be marketed for use on animals.

However, not every drug is eligible for General Approval. For drugs catered to minor species or that have not met the “reasonable expectation of effectiveness” by the FDA, scientists must seek Conditional Approval instead. Although these drugs may have been determined to be safe or practical, more data is required to authorize their mass production. Until the producers have collected sufficient data, they must renew their Conditional Approval annually for upwards of five years.

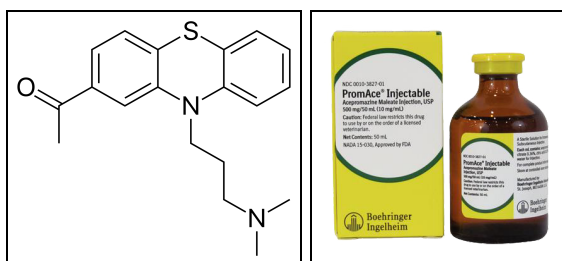
The third and final method for commercial legalization is through a process called Indexing. While not completely authorized by the FDA, the eligible veterinary drug is cleared for legal marketing status. Similar to Conditional Approval, indexed drugs have displayed relative safety and effectiveness and are largely targeted to minor species. Under the Minor Use and Minor Species (MUMS) Animal Health Act, pharmaceutical scientists will be able to treat niche consumer markets, bypassing the costs of the extended drug approval process.

In all facets of medical chemistry, scientists must undergo strict federal regulations for the sake of public safety and liability.

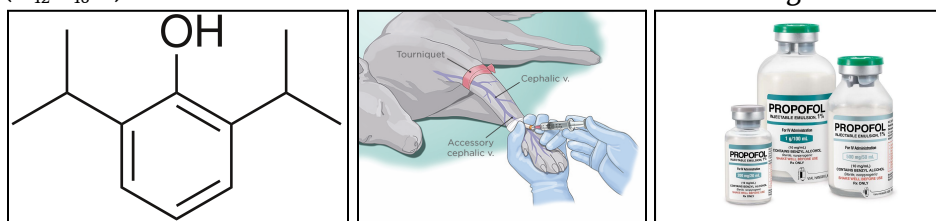
Anesthesia and Euthanasia (Dogs, Cats, Fish)

Anesthetics are chemicals used in surgical procedures where the animal must be numb, unaware, or unconscious to prevent exposure to pain. This makes surgeries and routine treatments less stressful for the animal. Furthermore, it protects the vet from injury or aggression. Anesthetics work by disrupting the electrical signals that are transmitted between neurons in the body. Anesthetics can be regional, as in only affecting a certain region or general where the whole body is affected.

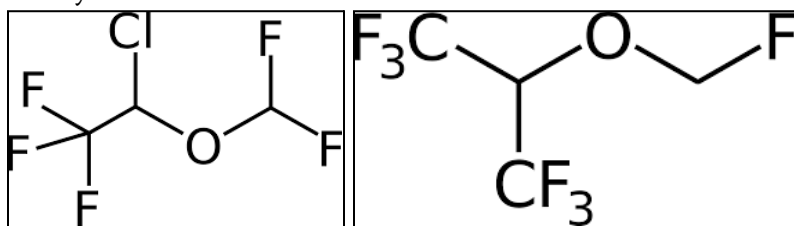
There are various types of anesthesia used in the veterinary industry that reduce stress and pain. The first is pre-anesthetics. These are mild calming agents used to make an animal easier to handle. The animal is still conscious while under the effect of pre-anesthetics. The most common one used for dogs is acepromazine ($C_{19}H_{22}N_2OS$).



Induction anesthetics are more effective. These drugs are given through an injection or IV into the animal. Not only are these anesthetics fast acting, but they are also quickly reversed. Propofol ($C_{12}H_{18}O$) is the most common induction anesthetic used for dogs and cats.



Inhalation anesthetics are a third kind. This is the most effective form of anesthesia. Isoflurane ($C_3H_2ClF_5O$) and sevoflurane ($C_4H_3F_7O$) are the most common inhaled anesthetics. A mask is placed over the animal, or it is intubated. This can be stressful, so an induction anesthetic is usually administered first.



In terms of risk, 1 in 1000 dogs and cats pass away during anesthesia as it inadvertently can lead to a drop in oxygen levels. If the veterinarian is not careful, an allergic reaction occurs, or the body adversely responds to the drug, the animal may not survive.

Euthanasia is a form of assisted death where a veterinarian intentionally induces death in animals. This is usually done when an animal faces a terminal illness or has a sharp decline in quality. Pentobarbital is a common euthanasia drug used to kill animals painlessly. How this compound works is that it binds to nerves and leads to cardiac arrest. Since the animal is unconscious, it does not feel a thing.

Anesthesia and euthanasia can also be applied to fish, just like it is used in dogs and cats. Fish sometimes need to be anesthetized to be treated as well. But unlike dogs and cats, they cannot be injected or masked up, or intubated. Instead, anesthetic is added to water and the fish "breathe" it in. Anesthesia works the exact same way as it does in mammals. The most common anesthetics used for fish are Eugenol (found in clove oil), or MS222.

The fish inhale these compounds when added to the water. Within a few minutes, the fish will fall asleep. To get the fish out of anesthesia, you simply move it into clean water and wait for it to

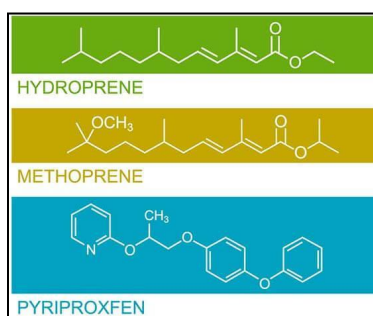
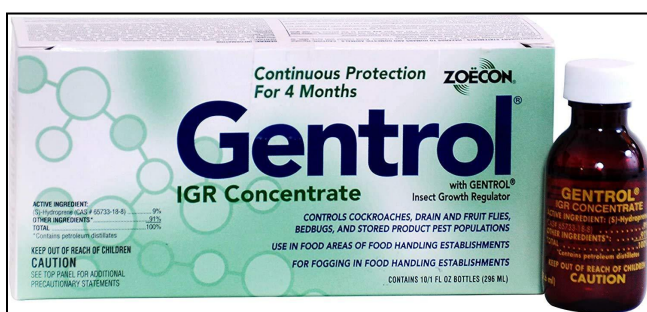
wake up. Fish can be euthanized by increasing the dosage of the compounds above and prolonging their exposure to them.

Fleas and Ticks

Fleas and ticks are common external parasites that can cause a variety of health problems in animals. Flea infestations can cause itching, skin irritation, and allergic reactions, while tick bites can transmit diseases such as Lyme disease, anaplasmosis, and Rocky Mountain spotted fever. These diseases can be serious and even life-threatening, so it is important to take steps to prevent and control infestations.

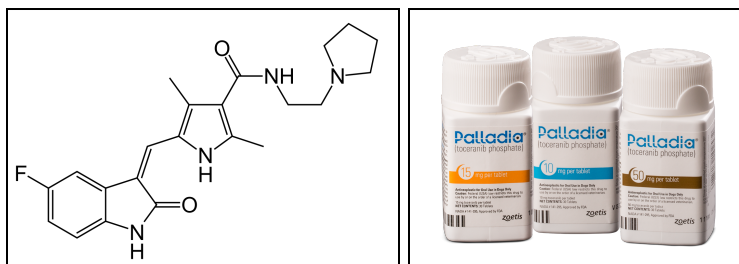
One of the most common medical treatments for these parasitic pests is topical products, also known as spot-on chemicals. When applied to small, isolated areas on the pet's flesh, these chemicals can target the oil glands and effectively deter fleas and ticks. Specifically, the active ingredients in medicines like Frontline Tritak, Frontline Plus, Advantage, and Revolution deposit chemicals into the sebaceous glands and stimulate an external oil coating. When fleas and ticks contact the pesticide coating, their nervous systems are attacked, which inhibits their feeding habits.

Many of these topical ointments also contain an insect growth regulator (IGR), a potent insecticide that disrupts the parasitic life cycle and prevents further reproduction. Although many pests are capable of developing genetic resistance, IGR will target the eggs and juvenile fleas or ticks to prevent new infestations. $C_{17}H_{30}O_2$, $C_{19}H_{34}O_3$, $C_{20}H_{19}NO_3$ are the chemical formulas for common anti-tick compounds.



Cancer Drugs

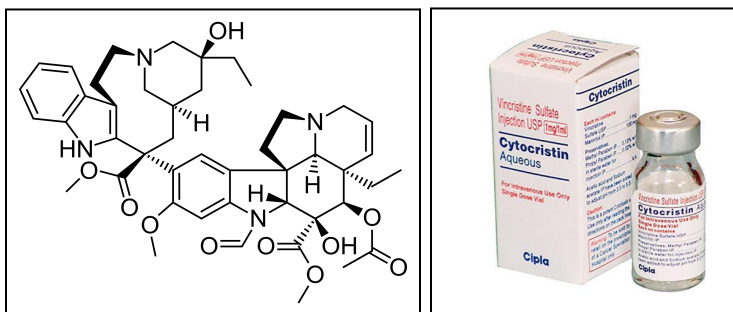
Animals, just like humans, can suffer from cancer which, simply put, is an abnormal growth of cells. Cancer, as we all know, is uncontrolled cell growth caused by genomic damage and errors. Most dogs develop cancers after the age of 10. The purpose of cancer drugs is, in some way or another, to limit the spread (metastasis) of cancer and inhibit the replication of cancerous cells. The most common cancer dogs and cats suffer from is lymphoma. Palladia, which is used in dogs and treats mast cell tumors, was approved by the FDA in 2009.



Tanovea, which is used in dogs, treats lymphoma.



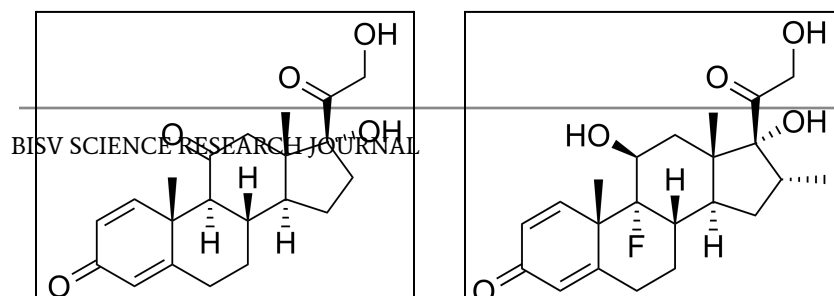
Vincristine is a common drug used to treat lymphocytic cancer in cats.



Common Side Effects

Drugs often have detrimental side effects that impact the quality of life for the animal. The common side effects of drugs are very similar to the side effects humans feel when taking the human equivalent medications. Vomiting and diarrhea can be caused by oral medications such as antibiotics that impact the gut microbiome. The antibiotics are absorbed into the gastrointestinal tract.

Stomach ulcers are also a persistent problem for animals that take steroidal hormones for disease. Examples of steroids include prednisone and dexamethasone. These ulcers can lead to intense vomiting or diarrhea. This side effect is then treated with medications that reduce stomach acid production.



Skin irritation can also be a recurrent problem. Flea and tick medications like Frontline Plus are a major cause of this. Allergic reactions to skin medication can lead to hives, itching, and irritation. This symptom is often treated with a bath in mild and soapy water.

Overuse of medicines can cause liver and kidney damage. The liver and kidneys can be damaged by the breaking down, processing, and excretion of medication. This can cause external symptoms like thirst, vomiting, and digestive problems.

Lethargy is another symptom. Sedatives and anti-anxiety medications are often to blame for this side effect. Lethargy can also be an unexpected side effect of opioids, morphine, and butorphanol. This side effect is characterized by unsteady movement, weakness, and seizures. Specifically, herding dogs are genetically sensitive to macrocyclic lactones, a class of parasiticide, and can experience severe lethargic symptoms.



Conclusion

In short, chemicals are widely prevalent in the veterinary industry for cats, dogs, and fish. From diagnostics to treatment, chemistry is used to ensure the health and well-being of all animals. These pharmaceutical drugs are developed for anesthesia, euthanasia, cancer, fleas and ticks, and more.

However, veterinary drugs often have side effects, just like how drugs can have side effects in humans. While these chemicals can be employed for life-changing procedures, they must be utilized with both mindfulness and moderation.

Overall, the integration of chemistry in the veterinary field has greatly benefited both animals and their owners. Chemistry is highly relevant in the pet medical industry, and further studying it can lead to advances in animal healthcare.

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VOCs and Cancer

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Introduction

Volatile organic compounds have been known and used by humans for thousands of years due to their distinctive, noticeable odor. In the time of the ancient Greeks, physicians often used the smell of these compounds to diagnose patients, a practice which has persisted into the modern era, where it is used to identify diseases such as diabetes, PKU, and Parkinson's disease.^[1]

However, not all of these compounds are benign and useful to humans. In fact, most volatile organic compounds can pose serious health risks at high levels of exposure, a reality that is rapidly approaching due to the myriad of industrial processes that release them into the atmosphere every day. Even at lower concentrations, these compounds can still be extremely hazardous to humans in the absence of immediate medical attention.

This paper aims to provide a brief introduction to volatile organic compounds and their potential health effects, with a focus on two of the most common compounds: benzene and naphthalene. The paper is structured as follows: Section II provides an overview of the chemistry of volatile organic compounds, with much more detail on the sources and exposure of benzene and naphthalene. Section III provides a brief summary of the health effects of these two compounds, particularly in the development of cancer.

VOCs

Chemistry of VOCs

Volatile organic compounds (VOCs) are a class of organic compounds that have low boiling points and therefore easily evaporate at normal temperatures. As a general rule, all organic compounds with a vapor pressure greater than 10 Pa at room temperature are considered volatile, although some compounds with lower vapor pressures can be classified as VOCs as well.^[2] This is usually due to weak intermolecular forces (IMFs) that cannot hold the molecules together in the solid state.

Name	Formula	b.p. (°C)	P _{vap} ^o (Pa)
Butadiene	C ₄ H ₆	-4.4	145000
Benzene	C ₆ H ₆	80.1	10300
Toluene	C ₇ H ₈	110.6	3800
Xylene	C ₈ H ₁₀	138.3	1180

Table 1: Some well-known VOCs and their respective boiling points and vapor pressures at room temperature.

Notice that all of these compounds are hydrocarbons; they contain only carbon (C) and hydrogen (H) atoms. As such, they can only form nonpolar bonds, and the IMFs present between these substances is limited to dispersion forces, the weakest type of IMFs. Some other VOCs such as formaldehyde do contain polar C-O bonds and therefore exhibit dipole-dipole interactions, but they generally have much weaker dispersion forces due to the small size of their electron clouds and, by extension, lower polarizability.

Benzene

Basic Information

Benzene is a hydrocarbon with the chemical formula C_6H_6 . It is a highly flammable, colorless liquid with a sweet odor.^[4] It forms the basis of aromatic hydrocarbons, a class of molecules defined to contain at least one benzene ring in their structure.

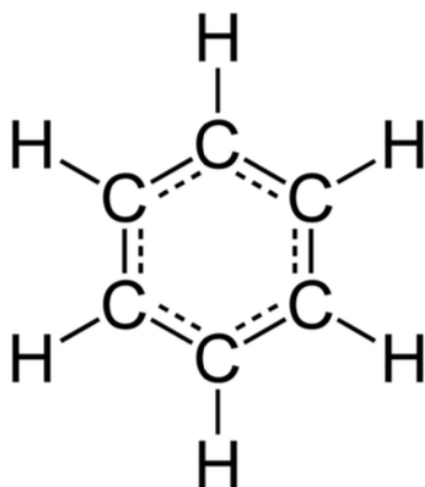


Figure 1: Chemical structure of benzene

The bond order between the carbon atoms is 1.5. As briefly mentioned in the previous section, benzene is highly volatile due to its weak IMFs. At a temperature of $20^{\circ}C$, it has a vapor pressure of 10300 Pa.³

Uses and Sources

Benzene occurs naturally in crude oil at a concentration ranging from 0.01% to 1%.⁵ It can also be present in gas emissions from volcanoes and forest fires. It is also widely produced in industries as an intermediary chemical in the production of styrene, cyclohexane, and cumene, among others. It is also used in the manufacture of some pesticides and drugs.^[4]

Exposure

Exposure to benzene mostly comes from cigarettes. The average smoker is exposed to around 1.8 mg of the substance every day,^[4,6] which accounts for about half of the benzene exposure across the entire population and all different sources.

Another major source comes from vehicle and industrial emissions. As mentioned earlier, many industrial processes use benzene as an intermediary, and crude oil and gasoline often contain non-negligible levels of benzene. Other sources include household products such as glues, paints, and detergents emitting benzene vapors that are breathed in. Trace amounts of benzene can also be found in food and drinking water.^[4]

Naphthalene

Basic Information

Naphthalene is a hydrocarbon with the chemical formula $C_{10}H_8$. It consists of two benzene rings bonded together, and is the simplest polycyclic (more than one ring) aromatic hydrocarbon. At room temperature, it is a flammable, white crystalline solid with a strong odor.

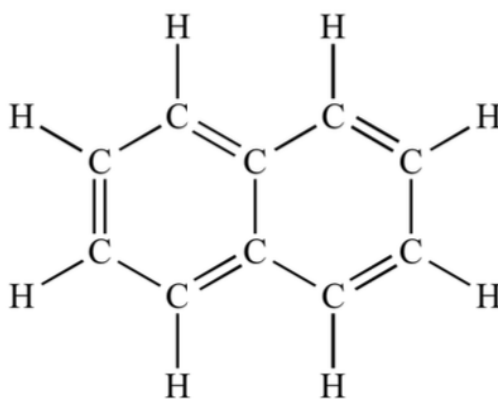


Figure 2: Chemical structure of naphthalene

Similarly to benzene, naphthalene consists of only C and H atoms, making the molecule nonpolar and only allowing for dispersion forces as IMFs. However, due to its larger electron cloud and, by extension, higher polarizability, it has a high boiling point than most other VOCs, including benzene. Compared to other VOCs, naphthalene also has a relatively low vapor pressure of 12 Pa at room temperature, but it still sublimates rapidly.^[7]

Uses and Sources

Similarly to benzene, naphthalene can also be found in crude oil, and is also used in the production of other products such as resins and dyes.^[8] However, it is also a main component in some insecticides, particularly mothballs.



Figure 3: Naphthalene mothballs.

Naphthalene vapor is highly toxic and carcinogenic, which is why it was used as a main ingredient in older insecticides. Its adverse effects in humans will be discussed in Section III-C.

Exposure

Exposure to naphthalene comes mostly from mothballs. Small children may be at risk of eating mothballs, as they look very similar to candy. Additionally, naphthalene vapors from these mothballs can be inhaled and enter the body through the respiratory tract.^[8,9] Compared to benzene, average naphthalene exposure is much lower and much more uncommon.

VOCs and Cancer

Cancer Background

Cancer is an uncontrollable growth of cells that can occur anywhere in the body. It can also spread out to other parts of the body as well.^[10] Cancer, as a whole, exhibits a variety of hallmarks that differentiate it from other cells. These hallmarks include the following: sustaining proliferative signaling, evading growth suppressors, activating invasion and metastasis, enabling replicative immortality, inducing angiogenesis, and resisting cell death.^[11] Two of these hallmarks are crucial to understanding why VOCs are causing cancer after being metabolized by our body: resisting cell death and evading growth suppressors.

When cancer cells are involved in evading cell death, they usually target two pathways involved in the cell death system. The first pathway is the extrinsic pathway and the second pathway is the intrinsic pathway.^[12] These two pathways can be seen in the diagram below.

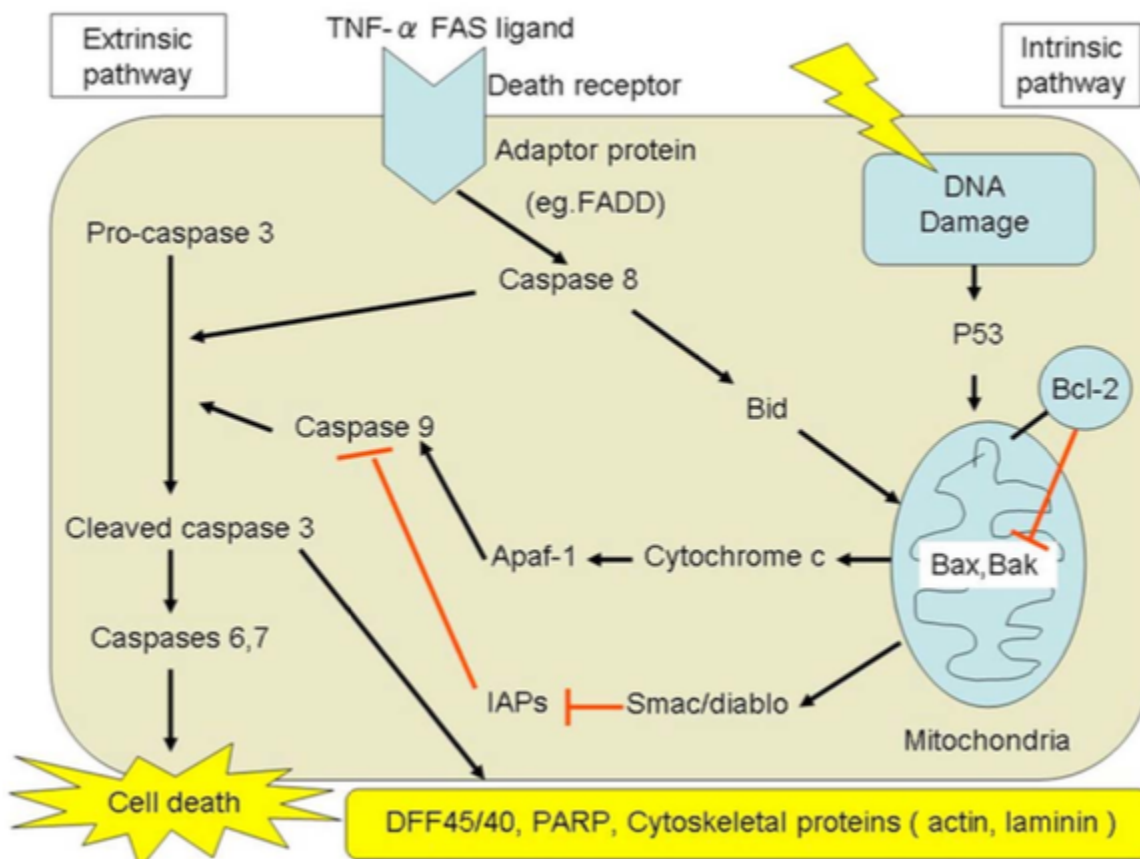


Figure 4: This diagram describes the pathway by which apoptosis normally occurs.

In this diagram, the extrinsic and intrinsic pathways are supposedly targeted by DNA damage within the cell and by external signals from other cells. Proteins that are involved in stopping apoptosis are usually inhibited by normal cells by inducing conformational changes through competitive inhibition in order to allow cell death to occur. In addition, multiple caspases and pro-caspases are involved in cleaving protein subunits off of certain proteins in order to activate them when necessary. These signal transduction pathways and caspase cascades play an important role in cell death. This machinery of cells is manipulated by cancer to its advantage in order to survive longer.

Another important aspect that is used by cancer cells is evading growth suppressors. These growth suppressors are usually conferred through genes, such as the p53 gene for instance. Cancer cells exhibit this hallmark by making use of either genetic mutations or epigenetics. Genetic mutations occur since cancer cells divide with mutations in cells. Epigenetics involves addition and removal of methyl or acetyl groups in DNA in order to alter the expression of DNA.^[14] In normal cells, genes that allow cancer to progress are methylated to prevent proteins from adhering to the DNA sequence. However, cancer cells remove these methyl groups in order to allow gene expression

to take place and proteins to adhere to the DNA sequence. This allows cancer cells to progress and target the proteins further.

Benzene and Cancer

As discussed earlier, benzene can enter our system through multiple ways: some of which include absorption by the skin and entry through the respiratory tract. However, once benzene enters the system, it can cause cancer across multiple organs, such as the liver, lung, and bone marrow.^[15] Once after benzene is inhaled through smoking cigarettes or absorbed through the skin, it directly enters the bloodstream as part of oxygenated blood. Through the arteries, it makes its way to these organs as well as the liver for detoxification and the lung for purification.

In the liver, benzene is broken down into benzene oxide, which spontaneously degrades itself into phenol. This phenol is degraded by cytochromes in the liver into hydroquinone. Although this native process sounds normal for the liver and the body, it is indirectly harming the human body in the process. This is because hydroquinone, a well-known toxin formed by the liver from benzene breakdown, actually is not as volatile compared to the benzene it originated from. This characteristic is present in hydroquinone because it is soluble in water, has very low vapor pressure, and a higher vapor density.^[16] Another reason why hydroquinone is poisonous is because it can degrade into 1,4 benzoquinone just in the presence of moisture and ambient oxygen levels. Since the blood arteries carry an abundant supply of oxygen and moisture and oxygen is present in higher quantities in the lung, this degradation is inevitable. This degradation leads to chromosomal instability and DNA instability in the liver, lung, and bone marrow through error-prone DNA repair and mitochondrial DNA mutations. This instability can lead to toxicity for the individual and potentially acute myeloid leukemia (AML), liver cancer, and lung cancer as mutations can easily occur in the presence of free radicals that are generated by the degradation of hydroquinone into 1,4 benzoquinone. Specifically, AML has a higher chance of occurring because genetic lesions are generated in hemopoietic cells, a form of stem cells that can differentiate into many different types of blood cells.^[17]

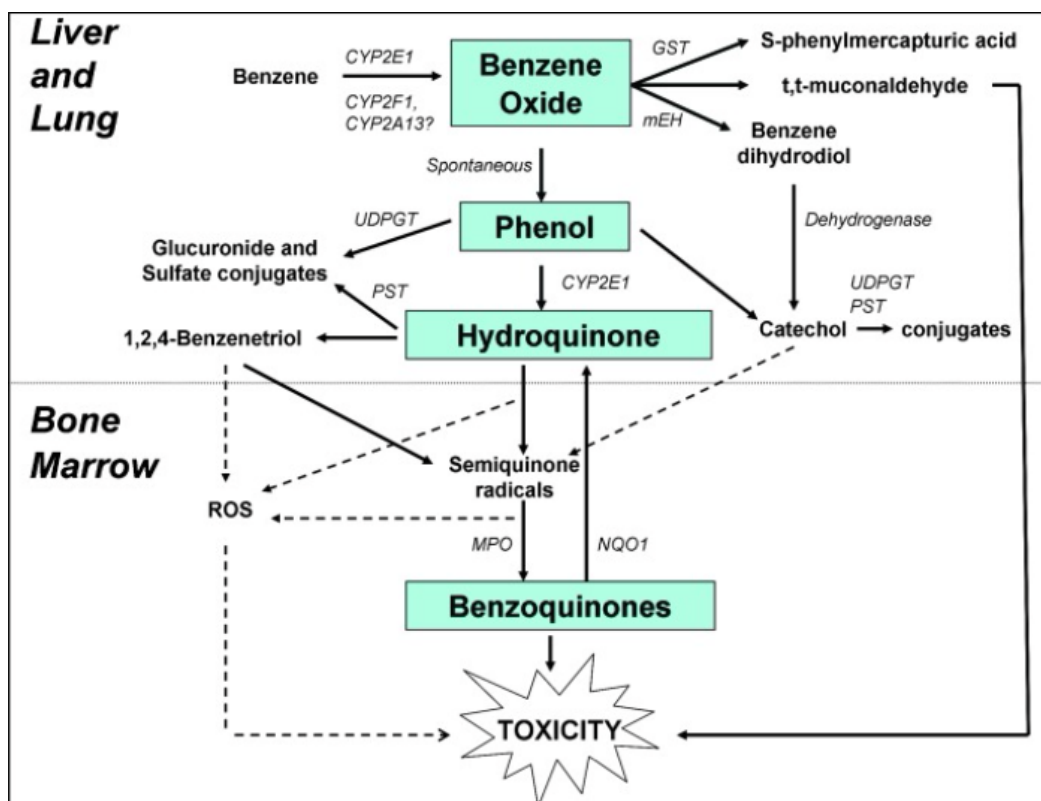


Figure 5: This diagram summarizes how benzene can cause cancer and toxicity to the human body overall.

Naphthalene and Cancer

Similar to benzene, naphthalene is also involved in causing cancer thanks to the metabolism processes in our body it takes advantage of. Naphthalene has multiple ways of entering our system similar to benzene, such as skin absorption and inhalation. However, the cancer it causes is more localized to the liver and bladder, in contrast to spreading out into the lung and bone marrow. Once after entry into our body system, naphthalene enters the bloodstream through oxygenated blood in the arteries. However, through the body's strategy of eliminating toxins, the blood in our body goes to the liver and bladder.

Naphthalene enters the liver and the bladder thanks to the process of filtration that occurs in our body, where all toxins first make their way to the liver using the blood as a medium. Here, the toxins are filtered by liver cells and broken down into metabolites that eventually make their way to the kidneys for further filtration. These metabolites include the following: 1-Naphtol and 1,4 naphthoquinone.^[18] The latter of the two compounds is involved in causing liver and bladder damage. This liver and bladder damage can also intensify into liver and bladder cancer if exposure to this compound is not reduced and preferably stopped in earlier stages.

Although it may seem astonishing that the normal metabolization process can cause cancer, it actually is due to one of the end products of this process over the process itself. This byproduct is called 1,4 naphthoquinone. As mentioned earlier, cancer also exhibits the hallmark of cells being unable to undergo cell death, so 1,4 naphthoquinone contributes to stopping the cell death cycle. This byproduct inhibits the molecule called Caspase-3, which is involved in removing the subunits out of other procaspases and initiating apoptosis.^[18] As mentioned earlier about apoptosis pathways, naphthalene is harming liver and cancer cells by preventing them from dying when their functioning is impaired from an intrinsic manner. As seen in Figure 4, the intrinsic method of apoptosis is completely stopped by 1,4 naphthoquinone because caspase 3 is disrupted. Instead of allowing pro-apoptotic factors to function normally, anti-apoptotic factors are expressed in overdrive by 1,4 naphthoquinone due to the inhibition and destruction of caspase 3 by conformational changes and allosteric inhibition. This leads to the formation of liver and bladder cancer in all of the liver and bladder cells that absorb the byproducts of naphthalene.

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Student Publications - Humanities

China and Hollywood's Action Genre

Amber Wu

In 1923, China established the "Film Censorship Committee of the Jiangsu Provincial Education Association" which kickstarted many rules that films made in China had to follow. In the 1980s, these rules extended to foreign films as Chinese government officials decided which movies were appropriate for Chinese audiences. As China became increasingly influential in the political and economic realm, America realized it could not ignore China's censoring tendencies. As a result, the American film industry now fears angering China and rarely produces films that put China in an ugly light. Joseph Heller references a similar corrupt relationship in *Catch-22*, in which the military operates under an authoritarian-type government and soldiers must censor their speech to appease their commanders, just like how film studios must censor theirs because of the Chinese government. Jean Baudrillard also points out the phenomenon of creating simulations from simulations in *Simulacra and Simulations*, which is what China does through Hollywood, and Albert Camus defines what truly makes art, art and an artist, an artist in *The Rebel*, contradicting what the Chinese government forces directors and actors to do. The Chinese government uses its political and economic power to unfairly influence the American film industry, specifically within the action film genre, to push an artificial image of itself onto the American and Chinese people, discouraging honest art and free speech.

Due to its rising economic dominance, the Chinese government is able to control foreign film industries, including the one in America. In an interview between Wall Street Journal reporter Erich Schwartzel and NPR representatives, Schwartzel breaks down how the Chinese economy includes unique quotas that keep Hollywood under its thumb, "The primary deal...that started to allow ten films a year onto Chinese screens, and that hummed along for a while until 2012 when there was a significant expansion of that deal...that would allow 34 foreign films onto Chinese screens a year, and that previous 13% of ticket sales that had gone back to the studios grew to 25%." China's policy change that expanded significantly the number of foreign films allowed in their theaters makes it so that all studios and directors are vying for that coveted position so they can take advantage of China's substantial movie-watching audience. Because China has increased the possible financial gain for studios and has opened its audience to a significant amount of foreign films each year, studios are motivated to squash down any topics deemed taboo by the Chinese government to gain financial capital. In "Hollywood movies and China: Analysis of Hollywood globalization and relationship management in China's cinema market," Xu Song analyzes why Hollywood cannot exert control over the Chinese film industry, "Globalization has led to Hollywood's domination in most film markets worldwide, but Hollywood has not yet claimed its domination, box-office-wise, in China's cinema market. In recent years, China has been able to limit and control Hollywood movies' share of China's annual total box office to around 40% through specific protectionist regulations and policies." China's strategic use of import quotas has made Hollywood unable to break from its influence. Other countries do not have significant control over American media because America could, in turn, hurt them through Hollywood's domination of their film market. They are dependent on Hollywood.

However, China has made it, so Hollywood depends on them—not the other way around. By creating policies in which only a select number of films are allowed to reach China's huge market and making it so that China can pull away from Hollywood anytime, China forces Hollywood to bend under its will, and film directors and studios suffer as they're forced to choose between artistry and financial profit.

The Chinese government modifies the content of American action films after they are released to create false perceptions of itself and confirm China's broadcasted values and policies. Nancy Loo and Tom Palmer report on China's modification of the action film *Fight Club* and the government's reasoning for doing so, "American audiences got to experience a truly explosive ending back when the movie was released in 1999...as the cult classic is now streaming in China...Instead of explosions, the ending is a plain slate of text ...that reads: 'Through the clue provided by Tyler, the police rapidly figured out the whole plan and arrested all criminals, successfully preventing the bomb from exploding.'" The Chinese government wants to promote the apparent moral nature of Chinese authorities and legal and political systems. Using the popular *Fight Club*, a false image is constructed to signal to the Chinese population that rebellion is terrible, the Chinese government is good, and all is well. This eliminates *Fight Club*'s intended message and falsely inflates China's image. Analyzing a similar situation, Carla Jaeger reports on China's censoring of homosexual scenes in the film *Fantastic Beasts*, "The lines 'because I was in love with you' and 'the summer Gellert and I fell in love; were deleted by Warner Bros., meaning they won't be seen or heard by Chinese audiences. Those moments...were the first time the Harry Potter franchise explicitly referenced Dumbledore's sexuality." In this case, China continues its long history of homophobia and LGBTQ+ existence denial by refusing to allow any of these communities to show up on their screens. This is significant because whole communities and movements are squashed and looked down upon as China uses its power to shift American action films' stories. The LGBTQ+ community is being denied representation, and American studios may start to cut down on LGBTQ+ representation in the future as their biggest customer disapproves of it.

The Chinese government censors American film directors and actors based on what they say daily, discouraging them from even sharing their personal views outside of film. Not only does the government monitor the content of entering films, but they also care about the presentations of those involved in making them and whether their views contradict the Chinese government's. In "Directed by Hollywood, Edited by China: How China's Censorship and Influence Affect Films Worldwide" Sean O'Connor and Nicholas Armstrong report on the importance of actors also complying with the standards set by the Chinese government, "While promoting *Maleficent*, lead actress Angelina Jolie made a comment that implied Taiwan's independence from China...to correct this public relations misstep, the actress and her family shared a birthday cake with a crowd in Shanghai" Even extremely famous actresses such as Angelina Jolie must limit what they say to preserve the financial health of their movies. While Jolie may have seriously believed in Taiwan's independence, she must tamp this down in fear of Disney losing the money they invested into *Maleficent*. China can alter the views of even non-Chinese citizens simply by dangling a monetary reward in front of them. Albert Camus casts a critical view upon this situation through *The Rebel*, "Art is the activity that exalts and denies simultaneously...no artist can get along without reality. Rebellion can be observed here in its pure state and original complexities." Camus' perspective criticizes Jolie's and studios such as Disney and Warner Bros' actions. The nature of art is rooted in rebellion, and through art, artists express original thoughts on issues and concepts. China directly blocks the creation of this art, so Camus would refuse

to label any films modified by China or made to appease China as truly being art and any actor and director who changes their beliefs according to China as a true artist. It's horrifying that China does not just have power over what a film looks like and everyone involved in the production. Due to Hollywood's influence, famous actors and directors hold much social power. The Chinese government can manipulate that and spread its values outside China through public figures.

The Chinese government awards studios who comply with their policies with better premier times and running times, forcing the American film industry to comply if they hope to tap into China's lucrative market. In "Made In Hollywood, Censored By Beijing," free speech organization PEN America analyzes China's hold on the distribution process of Hollywood films, "Conversations about Beijing's censorship appear to be so mainstreamed into the studio process that they are evaluated as a matter of standard practice when studios evaluate their China-distribution business strategy for a film. One producer who has worked with big studios says, 'There are consultants who listen to story pitches, early screenings . . . processes to raise any possible red flags.'" The fact that it is common practice for media executives, marketing directors, and studio departments to have 'China-specific' sections indicates how deeply China has infiltrated its views into every level of the film creation process. The normalization of pre-screens done to see if anything may stand out to the Chinese government again results in films not being made to be acclaimed artistically but rather financially. In the novel *Catch-22*, Joseph Heller describes the terms of Yossarian's escape offer, "Colonel Korn taunted ... 'You see, Yossarian, we're going to put you on easy street... We're going to glorify you and send you home a hero...A whole new world of luxury awaits you once you become our pal. Isn't it lovely?'" Like America's film studios, if Yossarian compromises his values, he'll be rewarded with money and an escape. However, Heller begs the question of whether this is worth it. Is Yossarian truly escaping if he has to lie for the rest of his life? Similarly, are movie studios being rewarded by China when it comes to the cost of their free speech? As studios hire employees to analyze China's every view and regulation to ensure their movie complies, the Hollywood environment starts looking eerily similar to that of *Catch-22*s.

The Chinese government has a list of taboo topics that the American film industry cannot touch, lest they want to be censored and lose profit. Reporters from *The Diplomat* present why China banned the topic of time travel, "China's State Administration for Radio, Film and Television said TV dramas involving characters traveling back in time 'lack positive thoughts and meaning.' It adds that the guidelines worry that such shows: 'casually make up myths, have monstrous and weird plots, use absurd tactics, and even promote feudalism, superstition, fatalism, and reincarnation.'" China wants to promote obedience and uniformity above all. Because time travel implies the changing of history and, therefore, rebellion, the Chinese government outlines all time travel content as perverse, forcing directors, studios, and actors to squash their interests and visions to confirm this image. This is similar to author Jean Baudrillard's interpretation of the world in *Simulacra and Simulations*, "Disneyland is presented as imaginary to make us believe that the rest is real, whereas all of Los Angeles and the America that surrounds it are no longer real, but belong to the hyperreal order and the order of simulation." By publicly banning and shaming topics such as time travel because the Chinese government views it as dangerous, it attempts to outline Hollywood movies as the 'imaginary' and its promoted image as the 'real,' but it is, in fact, still a simulation. Artists continue to be forced to make art to promote the untrue and are unable ever to be themselves.

The Chinese government utilizes its political and economic power to unduly influence the American film industry, particularly the action film genre, to project a distorted picture of itself on

the world, inhibiting free expression. The American government could promote and sponsor free speech-defending organizations such as Pen America that hold educational panels and fund free speech initiatives. As a result, the American public would be more educated about free speech initiatives and less vulnerable to the Chinese government's manipulation tactics. Movie studios and directors would also get more financial, moral, and public support to try and resist China's control. However, free speech organizations can only do so much and may not be powerful enough to advocate against China. As the Chinese government's support for minority populations such as the LGBTQ+ community dwindles as they can control all significant media, it is all the more important for free speech to prevail to save these communities from further ostracization and discrimination.

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The Balance of the Patriot Act

Aayushi Ahlawat

Four planes, nearly 3,000 deaths, and millions left stunned at the spectacle. The September 11 attacks are imprinted in the minds of Americans and international citizens alike as they left massive destruction of property, grieving families, and fear instilled in the hearts of civilians. As the U.S. declared counterterrorism measures and sought those responsible for the attack, Congress passed the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, more commonly referred to as the USA PATRIOT Act. The act expanded the powers established by the Foreign Intelligence Surveillance Act (FISA) of 1978, providing greater surveillance access to the FBI and breaking down legislative barriers separating foreign intelligence surveillance from that employed in criminal investigations. Though justified as necessary for national security, the Patriot Act's enforcement raised controversy as it heightened access to surveillance, permitted delayed notification of searches, and targeted Muslim American communities for observation while making lawsuits against its provisions difficult to win. By referencing several journal articles and news sources citing the impact of the Act, I aim to analyze the extent to which the USA PATRIOT Act encroached on citizens' privacy and expanded federal powers under the pretense of security. I also hope to determine methods by which a balance can be reached between guarding national security and protecting civilian rights post-crisis.

The Patriot Act's legislative role was to expand provisions established by FISA decades prior; its extensions dismantled the separation of surveillance between the Justice Department's criminal cases and the FBI's foreign intelligence investigations. As clinical professor of law, Alison Siegler, states, "Section 218 of the Patriot Act enlarged the universe of criminal cases," where FISA could be applied by declaring that, "foreign intelligence no longer must be the primary purpose of the surveillance, only 'a significant purpose,'" (Siegler, 1). This broadened the scope where more invasive surveillance techniques could be applied, permitting roving wiretaps and observation for domestic cases rather than the intended foreign intelligence investigations. In an Oversight Hearing for the Act in 2005, Attorney General Gonzales justified the use of "multi-point or roving wiretaps" by saying that, "investigators had to return to the FISA Court for a new surveillance order and risk missing key conversations." Senator Feinstein then voiced concern for the broad authority of the tap and its range; this was answered with the justification that probable cause must be established and approved by a federal court. A parallel was seen between the Patriot Act's enforcement and the realization of Bentham's Panopticon since the actual enforcement of the Act's provisions proved more controversial than their advertised intent of preventing further instances of terrorism. This was similarly seen in Bentham's Panopticon, where the theoretical design, aiming for social reform, resulted in the oppression of inmates when implemented in Cuba. In theory, the Panopticon was an efficient and self-sustaining mechanism to provide inmates a chance to improve and reassess their values under the constant threat of surveillance; as Foucault says, "Visibility is a trap," (Foucault, 1). The methods in which it was implemented, however, proved that the impression of constant surveillance can easily be manipulated by individuals with malice. In the 1920s, the Presidio Modelo, translated as "model prison," was constructed in Cuba in the Panoptic design, though it oppressed the inhabitants rather than allowing for their rehabilitation. The health of prisoners declined in cramped quarters while they were overworked in a labor camp and silenced by the illusion of constant surveillance. In

contrast to Bentham's benevolent intentions, the construction of the Panoptic prison led to the destruction of hundreds of lives as the system was left unmonitored and its power abused. Similarly, certain provisions of the Patriot Act, like mass collection of telephone metadata and conducting hidden surveillance of Muslim American communities, proved to be more controversial than their advertised intent of protecting national security. These examples demonstrate the stark contrast between the theoretical and implemented consequences of authoritative systems like the Patriot Act and Panopticon.

A potential solution posed by Foucault is to design the system where "the exercise of power may be supervised by society as a whole," (Foucault, 5) reducing the likelihood of mistreatment. As applied to the Patriot Act, however, certain provisions created barriers to legal actions that individuals could take if they felt that their privacy had been breached; Siegler explains how the FISA Court of Review dismissed claims that certain FISA provisions didn't align with Fourth Amendment requirements, the Court stating that, "[FISA] procedures, 'certainly come close,'" (Siegler, 3). Furthermore, objections were discouraged by public opinion as the sensitive timing of the legislation, following the largest terrorist attack in U.S. history, presented dissenters as unpatriotic. This mirrors the arguments made against defectors in Joseph Heller's *Catch-22*, as soldiers refusing to fly were labeled as cowards or enemies of their country. The respective historical contexts and values placed on social conformity severely reduced arguments against the Patriot Act, thereby removing oversight for surveillance systems comparable to the Panopticon.

Librarians also found themselves trapped in a *Catch-22*-like dilemma as Section 505 of the Act permitted the distribution of National Security Letters (NSLs), allowing the government to subpoena materials without needing to present them before a judge and placing librarians under gag orders that banned the discussion of the warrants, making it more difficult to argue against such cases in court. Despite these constraints, librarians nationwide performed acts of civil disobedience to warn patrons of the federal requests for records, as described by academic librarian Emily Drabinski, "Librarians in Santa Cruz posted signs warning patrons that the Patriot Act 'prohibits library workers from informing you if federal agents have obtained records about you,'" and that the "American Library Association [had] collated a number of brochures and signs to distribute from New York City to Nampa, Idaho, and provides a hotline librarians can call if they receive Section 215 subpoenas or NSLs," (Drabinski, 2). By organizing together, librarians were able to fight such provisions and later gained the right to legal counsel upon receiving NSLs under the reauthorization language of the Act. This demonstrates how public oversight is necessary to prevent authorities from infringing on civil liberties, though success is not guaranteed and the fear of legal consequences must be overcome for action to be taken.

Further breaches in public trust and privacy were made against Muslim American communities when the FBI sent undercover agents into mosques to record conversations and gather intelligence on those considered "more devout." An article by the American Civil Liberties Union describes the case of Sheik Yassir Fazaga, Ali Uddin Malik, and Yasser Abdelrahim as they sued the FBI for targeting mosques in Orange County, California, and sending infamous informant, Craig Monteilh, to gain the community's trust before pressuring members into conversations concerning "jihad," an "internal or external struggle facing an individual or community," (Rafei), commonly understood in the context of extremist ideas. By utilizing the "state secrets" argument, claiming that information was withheld to protect national interests, the FBI was able to win the case in the federal district court, once again demonstrating the heavy influence of the "national security" argument

frequently used in cases infringing on citizen rights following 9/11. Despite this decision, the Ninth Circuit Court of Appeals sided with the plaintiffs, citing religious discrimination claims supported by Congress under FISA. The Supreme Court then unanimously sided with the FBI, though considered the racial discrimination arguments and returned the case to the Ninth Circuit Court for a final consensus. Though the argument stating a breach of free religious practice was not entirely successful, the case raised awareness of the FBI's surveillance means, eliciting public concern about the bureau's justifications for such intrusive observation. In such cases, public awareness can act as a potent protection since once a seed of doubt or caution has been planted, individuals are more aware of the possibilities for surveillance and more likely to speak against such breaches of privacy.

Some sources of popular media have also brought attention to federal observation and searches of mosques post 9/11, including Hasan Minhaj's comedy performance, "The King's Jester," and Marvel's Disney+ series, "Ms. Marvel." In his Brooklyn show, Minhaj describes his personal experiences with the Patriot Act, recounting his interactions with Craig Monteilh when the FBI informant "converted" to Islam in his local mosque and prompted Minhaj and his friends to discuss radicalization. With the surveillance story revealed and his suspicions confirmed, Minhaj chose to title his political news and comedy show, "The Patriot Act," as a personal jab against the FBI. The show title serves as a constant reminder to viewers for the intrusive enforcement of the act, no matter its justifications for "national security," while the explanation for its significance voices the story of multiple Muslim Americans whose trust was invaded in a religious and cultural setting designed for their safety. Similar, though more subtle, awareness is raised by scenes in "Ms. Marvel," where federal agents enter and search the title character's religious community, requesting information on certain members and determining them as "threats." Brief dialogue is then made concerning frequent intrusions of agents without specified warrants, hinting at the events following the September 11 attacks and referencing the instances of religious discrimination without turning the scene into political discourse. Such comparisons demonstrate how the Patriot Act provisions left a lasting legacy in the hearts of Muslim American communities nationwide, yet the representation in media raises awareness of the issue and serves as a reminder, or perhaps forewarning, for citizens so that similar instances may be checked in the future.

Other statutes that impacted individuals from certain cultural backgrounds were Sections 411 and 412 of the Patriot Act, which expanded federal authority concerning the detention and deportation of aliens considered to be involved in terrorist-related activities. As explained by a journal article from *Stanford Law Review*, the provisions broadened the range of non-citizens who may be deported. For "designated" organizations, those previously determined by the Secretary of State and Attorney General as being connected to terrorist activities, individuals giving any type of support may be deported, even if they only intended to aid the "lawful humanitarian or social efforts of an organization with both lawful and unlawful activities," (Sinnar, 5). Furthermore, the provisions apply retroactively so that any involvement with a designated organization prior to the enforcement of the legislation may also be punished. The key change enforced by Section 412, and the effect challenged by Sinnar in the journal article, is the mandatory detention of immigrants on the basis of terrorism; in contrast, previous legislation allowed for the release or detention of non-citizens after deportation proceedings. By referencing prior immigration proceedings and Supreme Court rulings, Sinnar argues that Section 412 defies a previously established Supreme Court decision that, "aliens in deportation proceedings are entitled to due process," (Sinnar, 11) and the certifications permitting mandatory detentions are therefore unconstitutional. Though this argument has limitations in its applications, as

acknowledged by Sinnar, the substantive due process claim can be utilized in specific instances where the immigrant can be proven as posing “neither danger nor a risk of flight,” (Sinnar, 36) and therefore cannot justifiably be detained. The author also argues that the Attorney General's power to detain non-dangerous immigrants in such cases is excessive and potentially dangerous, once again demonstrating how oversight and balance between civil liberties and national interests is necessary.

Though the Patriot Act was reformed under the Obama Administration, with the USA FREEDOM Act taking its place and establishing protections for public surveillance and data gathering, it may be argued that problematic surveillance still persists. In a digital age, large corporations and search engines still track search histories and sell data to ad companies for profit. Some may consider this an invasion of privacy while others enjoy the interest-targeted advertisements; in either case, forms of surveillance have become integrated in daily lives and are often overlooked. Surveillance cameras are security features in countless houses across the country, inducing hesitancy for trespassers by creating more obstacles for entry. In this case, as seen with the Panopticon, surveillance has become a weapon. Security, whether personal or national, has been a consistent justification, though proper enforcement and oversight are essential for such measures to protect without encroaching. As Safia Samee Ali and Halimah Abdullah write in their NBC article, a balance is required between guarding civil liberties while ensuring national security. Their message is supported by the neutral tone of the article as well as referencing figures from both sides of the argument: Nathan Sales, who helped draft the Patriot Act, and Senator Russ Feingold, the only Senator to vote against the legislation when it was first proposed. While Sales argues in favor of the Act, stating that it was necessary to ensure coordination between foreign intelligence agencies and domestic law enforcement, Feingold supported the civil liberties argument and considered the act “hastily written.” Quoting professor of law and ethics, Peter Swire, the article emphasizes the importance of establishing safeguards on federal surveillance in order to achieve a balance between national security without encroaching on rights. When referring to the USA Freedom Act, Swire says that the, “2015 law has helped rebalance our feelings about civil liberties and stronger government,” (Ali and Abdullah) showing how legislative and executive oversight allowed for the greater protection of individual privacy and limited the bulk collection of data.

As seen above, specific USA Patriot Act provisions expanded the surveillance powers of the government and violated the civil liberties of the citizens it was intended to protect, all while providing the vague and repetitive justification of “national security.” I concede that the government was also deeply shocked by the September 11 attacks and responded quickly to international threats, even strengthening airport security to visibly improve safety. Yet, the oversight necessary to safeguard citizens was absent in the original Act and continued to be lacking until over a decade later. The balance between national interests and individual safety can only be guaranteed with oversight, as Foucault argues, by an external, democratic body such as the American people and their Congressional representatives. This can only be achieved if the issues are spoken against, either in court or through multiple mediums: news, popular culture, blogs, personal accounts, and education in schools. Legislative representatives should listen to their constituents and observe the political atmosphere, recognizing the overstepping of federal authority and acting to protect the interests of the American public. Even if the recognition of injustice may subside for the time being, it will act as a warning for future instances and encourage individuals to action if the need arises again.

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#WhatsHappeningInMyanmar: the Burmese Junta's Methods of Control

Noelani Aung

Works like *Catch-22* have shed light on the innate desire of humans to achieve freedom and express individual will, despite a larger power that tries to prevent that. In a similar way, the Burmese people have been fighting for democracy ever since the country's military took over power in February of 2021. As a result of this coup, many schools and businesses were shut down, gunfights became a normal occurrence in people's lives, and many have been struggling to obtain food and take care of their loved ones. The plight of the Burmese people struggling to survive and opposing an authoritarian power has been largely ignored by the international community, only revealing the strength of the junta within the country. Although Burmese civilians have protested both peacefully and violently against the coup, the junta remains in power because of its economic strength, foreign support, and censorship rules.

One of the ways that the junta is able to hold onto power is through a state-centered economy. The Burmese junta mainly relies on its oil and gas companies, mainly the Myanmar Oil and Gas Enterprise (MOGE) to fund its activities. MOGE is one of the largest junta-owned monopolies, bringing in \$1.62B in profit in 6 months alone. In addition to funding the junta, MOGE supplies its aviation fuel, which the junta uses to carry out airstrikes against Burmese civilians. This only demonstrates how dangerous the junta's supply of fuel is. According to an article from *The Guardian*, US oil companies are the ones working in Myanmar—therefore working with the junta itself. The article states, "Schlumberger Logelco (Yangon Branch), the Panama-based subsidiary of the US-listed world's largest offshore drilling company, earned revenues of \$51.7m in the year to September 2021 in Myanmar," revealing the enormous profits that US companies receive while working with the junta in the country. Because of these profits, many US oil companies are unwilling to pull out operations from the country, despite the number of human rights violations and deaths that happen as a result of the junta's fuel supply. Bhone Tayza is one of the many victims of these brutal airstrikes. After a helicopter fired heavy artillery at his school, his mother found him "barely alive in a pool of blood, next to the bodies of other children," where he pleaded, "Mom, please just kill me." Because of this robust oil supply, the junta is able to carry out attacks like these, injuring and killing innocent children, and leaving their families mourning their losses. The oil industry is so successful in Myanmar that oil company owners are unwilling to lose out on profit, and civilians are too powerless to oppose them, which is just like Milo's corporation in the novel *Catch-22*. Throughout the book, Milo is depicted as a profit-seeking businessman who cares very little about the people around him, even bombing his own men and employing twelve year-old prostitutes. As long as the war continues, Milo's corporation will earn a profit. Similarly, even after knowing the perilous situation in the country, foreign oil companies remain in the country solely because of this immense profit. Oil and gas companies in Myanmar provide most of the funding to the Burmese junta, and due to this, the junta is able to harass its civilians into succumbing to its rule.

Another way that the junta maintains its power is through foreign allies. One of the Burmese junta's main allies is Russia, with which it has maintained relations since the 1900s. According to a report by the International Crisis Group, although their relationship was mostly militaristic, it has

strengthened recently because “Following the Myanmar military’s coup and Russia’s invasion of Ukraine, both countries have become more heavily sanctioned and diplomatically isolated, increasing the importance of their relations with each other.” In exchange for Russia supplying helicopters, jet planes, and training for its soldiers, the junta purchases Russian oil, and gives the country a stake in matters related to its relations with other Asian countries. As a result, Russia has protected Myanmar from sanctions by the United Nations Security Council, allowing the junta to continue its widespread human rights violations. Without arms and diplomatic protections from Russia, the Burmese junta would have faced the consequences for its horrifying actions long ago. Even ASEAN, whose purpose is to preserve stability and promote progress in Southeast Asia, is powerless when it comes to punishing the Burmese junta. As an organization with many member states, it is “constrained by its consensus decision-making and the primacy of state sovereignty.” Although ASEAN has talked to the chairman of the junta, Min Aung Hlaing, many times, it was mainly accommodating the junta, and not setting strict rules and punishments. Because these talks were unable to impact the junta’s actions, ASEAN lost a lot of credibility, leading to even more accommodation and less action done against the junta. One of the pitfalls of peace organizations like the United Nations and ASEAN is that they are unable to involve themselves in a specific country’s affairs. ASEAN is therefore unable to dish out specific punishments for the junta, solidifying the junta’s impunity. The junta should not be able to continue these actions that subject its civilians to terror every single day. Frederick Douglass in his speech “The Meaning of July Fourth for the Negro” provides an erotesis, “Must I argue that a system thus marked with blood, and stained with pollution, is wrong?” In the same way, Burmese civilians are laying down their lives and fighting a system that uses brutal oppression, while the rest of the world looks away, unwilling to help. The junta’s support system, coupled with the disinterest of international organizations, allows it to continue this cycle of oppression.

Strict censorship rules is another way that the junta controls its population. According to a press release by the United Nations, the junta employed internet shutdowns and increased surveillance on its civilians in order to make sure that its people were following its orders and supporting its rule. Many social media websites and applications were blocked as well, preventing people from reporting massacres and deaths across the country. These measures not only prevent people from knowing what’s happening on the ground, but also serve as a matter of life-or-death for many civilians. Without knowing the events that are happening in a specific area, civilians residing in that area are caught by surprise when the junta attacks their village, leaving them very little time to collect their belongings and flee. However, this is not the first time that a military dictatorship in Myanmar has imposed these censorship rules—according to an article written by Jalal Alamgir, during Ne Win’s rule from the 1960s to 1980s, there were strict rules regarding internet usage. It was illegal to possess a computer that could access the internet, the only newspapers that could be printed had to be written by the junta, and foreign reporters were not allowed in the country. The Burmese dictatorship in the aftermath of the 2021 coup adopted these methods while modernizing them, in order to shut down its opposition. Despite the fact that these rules came with strict punishments, the resistance movement grows stronger by the day. During the beginning of the coup, many people protested peacefully against the new regime, but were faced with strict consequences and no change in actions on behalf of the junta. As a result, many Ethnic Armed Organizations (EAO’s) were responsible for actively fighting against the junta in their respective regions, working alongside the People’s Defense Force (PDF), who are a broader resistance organization. Many children have joined these EAO’s and supported the PDF as well. Thoreau would have supported the

resistance movement according to his essay “Civil Disobedience,” encouraging people to disobey unjust laws by asking, “Unjust laws exist: shall we be content to obey them, or shall we endeavor to amend them, and obey them until we have succeeded, or shall we transgress them at once?” Since Burmese civilians feel that their individual liberties are threatened and they are forced to follow the cruel and unjust rule of the junta, Thoreau encourages them to fight for what they believe is right. However, Thoreau would disagree with the methods that EAO’s and the PDF are using, since he emphasizes the civil part of civil disobedience, and taking up arms is the complete opposite of that. Peaceful protests were unable to change anything regarding the junta’s actions and rule, meaning that the only option for regular Burmese civilians is violence.

Despite both the violent and nonviolent methods that Burmese civilians have utilized to oppose the Burmese junta, the junta is able to hold onto power because of its funding, allies, and censorship rules. While not much has happened regarding opposing junta from abroad, many activists have come up with solutions. In order to limit the supply of the junta’s aviation fuel, activists have been calling on several foreign nations to sanction Myanmar’s aviation fuel to prevent future airstrikes. Only the European Union has sanctioned aviation fuel so far, but there has been more and more support for other countries such as the US, UK, and Australia to sanction it. Besides fuel sanctions, activists are also pushing for financial sanctions and bilateral arms embargoes that only affect the junta and not ordinary Burmese people. Another solution is excluding the junta from participating in summits such as ASEAN. This deprives the junta from international legitimacy—something it has been seeking since the beginning of the coup. In addition, exclusion signals to the junta that involvement in world affairs is not possible until it makes significant improvements in decreasing the amount of violence happening in the country. Even though it may take time for world leaders to recognize the situation and implement these actions, they should put the needs of those who are suffering first and foremost.

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Profit and Patriarchy: The Fearless Girl?

Meha Gaba

Before a woman can become an investment banker, she must first answer to Wall Street's male dominated culture and tradition. Simone de Beauvoir claims in *The Second Sex* that woman is always defined in relation to man. "Not regarded as an autonomous being," Beauvoir points out in the twentieth century, a woman cannot operate freely for herself (Beauvoir). I find this to be quite true in today's society as well, especially in the finance industry of Wall Street, New York. That is why I ask the question: to what extent and for what reasons have women in Wall Street been limited in the roles they can assume in the financial industry by men in the field?

The Fearless Girl sculpture in New York City represents a young girl breaking the glass ceiling, standing tall against a bull, representing a patriarchal system set against her. It is situated in Wall Street due to the fact that the financial industry is specifically notorious for being male-dominated. It offers hope and strength for women in the industry to continue their fight for equity within the industry. A Hyperallergic article explains the legal debate between State Street and Kristen Visbal, the artist behind the Fearless Girl Statue. It claims that State Street, a prominent New York financial corporation, under the guise of disputing the copyright of the statue, is legally "bullying" Visbal and her artwork (Gatson). It is made clear that State Street did not commission the artwork, as was popularly believed, and was only in favor of it as a marketing tactic. State Street is now behind the legal battle for ownership of the statue's copyright so it can move the statue elsewhere. It is now up to the city of New York to make this statue a permanent artwork in order to ensure it stays in its current location in front of State Street's building.

The artwork I made parodies this situation, in which a female-commissioned artwork seeks to fight for and represent women, but is ultimately controlled and blocked by the male-dominated corporation which seeks profit and patriarchy. Vanessa Perez-Rosario's "On Beauty and Protest" mentions the #MeToo movement, which sparked a viral trend in 2018 where women in the workplace began sharing inappropriate sexual encounters when they were taken advantage of and disbelieved by men. It explains the 2017 women's march which was orchestrated when Donald J Trump, who has been accused of sexual harassment, was inaugurated president. This provides context for the time at which the Fearless Girl statue was commissioned, and explains why State Street, the corporation, was not initially opposed to the statue (to not lose face with the public at a particularly tenuous time), and in fact took credit for commissioning it. My artwork demonstrates the irony behind a women-empowerment statue being held to the fist of the patriarchy. State Street management, made up of a majority male Board of Directors, is blocking the fearless girl from fighting the patriarchy (or bull) in my version of the artwork (State Street). The black and white represents the dominance and clarity of the problem, while the clip art style is meant to reflect that the problem is quite simple, contrary to what is popularly believed. The red represents the irony in the language titling the work, as the problem is truly blocking women even a chance at success, or battling the bull.

Lauren Simmons, 24, became the first female full time trader in the New York Stock Exchange. In an interview with Forbes, she claims a company actually promoting diversity rather than feeding those buzzwords into their marketing campaigns will "have diversity at the top" of their management structure (Gassam). This relates to the argument being made by my artwork, that a

company like State Street, if truly preaching diversity, would not move the Fearless girl statue, would have more people of color and women at the top of their company. State Street is a corporation clearly led by a male-dominated management structure, explaining their intentions cannot be pure in removing the statue from their vicinity. State Street paid \$5 million in a lawsuit settlement in 2017 as “women in senior leadership ‘received lower base salaries, bonus pay, and total compensation since at least December 2010,’” as proved by the US Department of Labor (Hahn). Corporations like State Street contribute to and promote the overall patriarchy we see in Wall Street, proved by the glaring wage gap.

So why did the gender pay gap arise in the first place, and how did it get so bad in Wall Street? In creating female characters without real identities in his novel *Catch-22*, Heller demonstrates the clear patriarchal nature of the air force and the world surrounding it. Nately's whore, one of the prominent women in the book, exists in relation to Nately, a male military officer, and the many prostitutes involved in the book are never mentioned for who they are, but what they look like. This, in addition to the previously mentioned work of Beauvoir, explains the underlying patriarchy that manifests in the gender pay gap in the finance industry, that women are not valued for what they can potentially do, but for what they look like. The study “Understanding the Gender Pay Gap: What's Competition Got to do with it?” focuses on the biological ability to compete and whether that differs between women and men. It finds that there is no real biological difference in competition for resources among the two genders, explaining that the gender pay gap is not due to biology, but can be explained through the social conditioning and treatment of women in workplaces instead. A study by Roth Marie Louise explains that although women have made progress in the occupational pay gap, they “disproportionately hold lower-paying jobs.” Also, the article shows how sex segregation works over time, especially in the financial industry, “as men's and women's different experiences lead them to change functions, to change firms, or to leave the securities industry” totally (Louise). It also mentions the token woman (which explains the existence of women like Simmons), implemented in the workforce to create some guise of diversity, but how these women are often severely limited in their roles.

So what can be done about Wall Street's clear patriarchal infrastructure? The Wall Street Journal Partners published an article focusing on closing the gender pay gap with real time data monitoring. Using ADP's AWS solutions, companies can monitor salary data for different demographic groups at organizational levels (Closing). A lot of the time, closing the pay gap is a

clearly identified problem, but companies lack the tools to solve it. This technology can streamline the process. Limitations of this include inherent biases that prevent people at the top from truly believing in the problem, such as in the case of State Street, the corporation. For this reason, companies may not be willing to invest in the cost of the technology, or may wrongfully implement it to promote their own whims, perhaps increasing the pay gap. At the end of the day, this problem needs to be recognized prolifically in order to create real change. This is why artworks like Visbal's are so important. The conversation must continue and not become a media trend that explodes and recedes. The #MeToo movement and others like it need to continue in demonstrating the reality of the patriarchy that governs so many aspects of our world, including Wall Street occupations.

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A 21st Century Panopticon: Internet Regulation and Censorship Evasion in Russia

Justin Lim

Since its humble beginnings as an information-sharing network between researchers and universities in the 1960s and 70s, the Internet has greatly matured, coming to facilitate mass social movements – as seen with the Arab Spring in the early 2010s, in which protesters organized with the Internet’s help – and enable citizens to access almost all the world’s information and discussion, from genuine knowledge and academic research to deliberate misinformation and conspiracy theories, beyond what their governments decide to teach them. Consequently, authoritarian governments seek to regulate citizens’ access to this tool – as seen with China’s Great Firewall – or completely cut off their citizens from it – as in North Korea, where citizens may only access Kwangmyong (광명), a moderated intranet entirely disconnected from the global Internet, while only top government officials may access the global Internet. The Internet may enable social movements, but it simultaneously provides institutions tools for social control and surveillance far beyond what Jeremy Bentham could have ever imagined when he first envisioned the Panopticon in 1786, with governments as now the central watchtower and their citizens the prison’s population surveyed through not iron bars but rather through their Internet activity, the incentive for self-regulation of individualistic and dissenting behavior or thought now presented through the knowledge that one’s Internet traffic can be subject to government monitoring which serves as an analogue of the watchtower’s gaze (Foucault, 1975). Among the countries that have sought to regulate Internet access is Russia, which has a long history of political censorship, from that under rulers like Alexander III in Imperial Russia in the 19th century to the gulag system under Joseph Stalin in the 20th century Soviet Union. In the 21st century, through a variety of actions over roughly the past decade, Russia’s government has made great efforts in further political censorship on the Internet, begging the following question: to what extent have Russian citizens been able to circumvent the efforts by the Russian government to control and limit citizens’ access to the Internet? Though the Russian government has made numerous efforts in this regard, Russian citizens have found workarounds and Internet tools that allow them to access restricted information and express forbidden political dissent over the Internet.

Russian Internet surveillance and control serves to restrict the ability of citizens to organize mass social movements or protests as was the case in the past. Until 2011, Russian citizens could access the Internet with few restrictions or fear of surveillance. However, citizens’ backlash in response to the results of Russia’s 2011 legislative election prompted a drastic change in the government’s attitude towards the Internet (Duffy, 2015). United Russia, the political party of Vladimir Putin, retained its electoral majority in this election. However, both citizens and outside researchers – who statistically analyzed the election results – contested United Russia’s successes. Russian citizens, believing that much electoral fraud occurred that enabled United Russia’s achievements, took to large protests in major cities such as Moscow and St. Petersburg in what is now known as the “Snow Revolution” against the election’s results and Vladimir Putin. The shift in Moscow’s perception of the Internet following this event, in which the Internet facilitated the protests and social unrest, is visible in Russia’s actions at the United Nations General Assembly, where, since

2011, it has consistently advocated for greater “Internet sovereignty” – the concept that governments should have more control over the Internet within their borders (Morgus, 2019).

Because of social media’s use in the protests of 2011 to 2012 in Russia and its high potential for influencing the minds of citizens on a large scale, Russia’s government has taken action to control social media within its borders. In doing so, Russia’s government seeks to stifle political dissent, in particular that of figures like Alexei Navalny, one of the most prominent Russian political opponents of Vladimir Putin in the past decade. In 2014, Navalny published a page on Facebook that informed his supporters of an upcoming political rally (Dliman, 2020). However, Roskomnadzor – the primary agency of the Russian government focusing on the regulation and censorship of the Internet – successfully pressured Facebook to delete Navalny’s page. Though Navalny may have had a large political following in Russia – as evidenced by the fact that Roskomnadzor’s removal of the Facebook page “generated more attention and new pages promoting the rally” – Russia’s direct actions against social media companies, which, as Dliman describes, generally include threats of fines and blockages, do hinder the ability of political opponents to amass support on social media sites which are where their voices on the Internet may reach the most potential followers. Overall, however, Russia’s government has encountered mixed success in regulating foreign social media companies within their borders; in 2018, for example, Roskomnadzor was only able to remove statements by Navalny – which included accusations of corruption in the Russian government – on Instagram, while Navalny’s messages remained on YouTube as YouTube refused to follow directives to remove the statements. However, in addition to threatening foreign social media companies with fines and bans, a method which has proven to be unreliable and sometimes ineffective, Russia’s government has not refrained from taking more direct action to control narratives and stifle political dissent.

Throughout the 2010s, Russia’s government has passed numerous laws which have greatly expanded the surveillance and regulatory capacities of Roskomnadzor and various other government agencies. Among the first of these laws was the Blacklist Bill, passed in July of 2012 after the numerous protests by citizens in response to the 2011 legislative election’s results (Duffy, 2015). Russia’s government did not hesitate to take advantage of the Blacklist Bill’s expansion of content censorship on the Internet: “In the first two weeks after the bill was passed, more than 180 websites were banned; by February 2013... the number of websites banned under the Blacklist Bill reached 4,000.” Russia’s government additionally used the bill in 2014 to block websites promoting political dissent: including those of, once again, popular dissident Navalny along with websites that protested Russia’s invasion and occupation of the Crimean Peninsula in Ukraine in 2014. Similar laws passed include: the February 2014 “Lugovoi Law” which expanded Roskomnadzor’s ability to block websites deemed to be “extremist” by the Russian government; the May 2014 “Bloggers Law” which required bloggers with a certain number (3,000) of page views to submit to government registration and content regulation; the June 2014 “Law against Retweets” which codified the Russian government’s ability to imprison individuals that promote or share material deemed to be “extreme” on the Internet; and various other laws that expanded data retention, allowing data about Russian citizens’ Internet traffic to be stored on Russian servers for inspection by the government rather than on those of foreign social media companies like Twitter. Many of these laws provide the justification of taking action against political extremism, criminal activity, and content harmful to childrens’ health and development. However, in practice, they have merely expanded the Russian government’s ability to regulate content overall and especially content about topics deemed to be “divisive,” namely political freedoms, the rights of LGBT people, and the COVID-19 pandemic in 2020 (Human Rights Watch

[HRW], 2020). For example, as the HRW describes, Russia's 2013 "gay propaganda" law – which targeted mental health services for LGBT youth and restricted information teaching about LGBT topics amidst hostile Russian societal attitudes towards LGBT people – was able to more effectively achieve its goals as a consequence of the various past laws that expanded the government's Internet regulation and censorship capacities. With its ever-expanding powers of Internet control through various legislation and employment of technologies such as Deep Packet Inspection (DPI) – which boosts surveillance capacities through analysis of citizens' Internet traffic –, the Russian government may appear to have absolute control over the Internet within its borders. Yet, for several years and especially within the past year, Russian citizens have been able to evade their government's grasp on the Internet to some degree.

Russian citizens have found Internet tools and digitally-literate solutions that counter many of the Russian government's methods of Internet surveillance and control, allowing them to communicate and access restricted information and thought. As previously described, Russia has taken action to restrict or block social media and communications platforms. Among these platforms is Telegram – a popular messaging app in Russia – which faced an attempt of blockage by Roskomnadzor in 2018 for refusing to provide its encryption keys to the Russian government in compliance with a Russian law (Petkova, 2018). The blocking of the app resulted in the opposite of its intended effect: Telegram usage increased following Roskomnadzor's actions. Russian citizens – along with Russian businesses that used Telegram for communication and were financially impacted by the ban – turned to using proxies and Virtual Private Networks (VPNs) to continue using the platform; these tools re-route users' Internet traffic through intermediate servers to avoid direct connections to Telegram, thus evading content surveillance and bans which often target direct connections to blocked websites and services. Proxies and VPNs are among the most popular tools of evading Internet regulation in Russia, especially as demonstrated in the weeks following the start of Russia's full-scale invasion of Ukraine on February 24th, 2022, a time during which Russia's government employed stricter Internet regulation and censorship of mass media to stifle opposition to the invasion. "During the week of February 28, Russian internet users downloaded the five leading VPN apps on Apple and Google's app stores a total of 2.7 million times, a nearly three-fold increase in demand compared to the week before, according to the market research firm SensorTower" (Fung, 2022). Another popular tool of evading Internet control is the Tor network, first developed by the U.S. government in the 1990s and released to the public in 2004. Like proxies and VPNs, Tor – which uses onion routing (i.e. layers of encryption for Internet traffic) to defeat Internet surveillance – saw greater traffic from Russia following February 24th, 2022. Yet another tool of escaping surveillance is Signal, an encrypted messaging app with focus on users' privacy, which likewise saw greater usage among Russian citizens in 2022.

The Internet solutions now widely used by Russian citizens, however, do not directly challenge the various laws that have expanded the Russian government's Internet control since 2011, only working around them. Among the only direct legal challenges to the Russian government in digital rights, privacy, and freedom of political expression on the Internet come from RosKomSvoboda, a Russian NGO founded in 2012 (RosKomSvoboda [Роскомсвобода], 2022). With its name a parody of the agency Roskomnadzor, the organization includes on its website information and resources for Russian citizens who wish to increase their Internet privacy and anonymity. Resources that Roskomnadzor provides on its website include: information about extensions for browsers such as Google Chrome and Mozilla Firefox that work to evade censorship; a registry that

contains data regarding the various websites and services that face blockage by the Russian government; and links to recommended VPN and email services for Russian citizens to use. The organization has taken past legal action in Russian courts to challenge expansions of Internet control by the Russian government, causing several laws to be appealed in Russian courts, and other measures such as hosting petitions for citizens to sign against the passage of several laws, with some petitions garnering tens of thousands of signatures from Russian citizens.

Despite numerous efforts by the Russian government to prevent them from doing so, Russian citizens manage to escape Internet regulation and surveillance to have access to restricted information and the unfiltered global Internet. These efforts of citizens, however, do not occur on a scale large enough to enact political reform alone or entirely challenge the political narratives of the Russian government; they face limitation due to the fact that the methods citizens employ require some degree of technical literacy to achieve and due to the presence of sources such as state-controlled media – one of the only sources of news or political information for Russian citizens without Internet access – from which the Russian government may reinforce its own political narrative. Russia's increasing hostility towards digital freedom and privacy, which pushes its citizens to hide their Internet activity from their government, represents the risks involved with providing institutions of power – such as governments, corporations, and militaries – monopolies on narratives and information, as does Joseph Heller's 1955 novel *Catch-22*. In the novel, the Air Force projects itself as incorruptible, protecting American ideals of freedom. Yet, as representative of the 1950s culture of McCarthyism, the Air Force traps the soldiers within it, preventing them from returning home and labeling those not completely loyal to the institution as Communists, exemplified during the Great Loyalty Oath Crusade. The absolute monopoly on narratives that the Air Force holds can backfire and even harm those who do not work against the institution, such as Doc Daneeka who met an undue fate as a result of the Air Force's unchecked power in its mistaken labeling of his death, with no individual having the power or incentive to challenge the mistakes of the institution, lest they too become its target. Russian Internet regulation and surveillance can backfire in a similar way: despite their claims of targeting only criminals and extremists and protecting children, such actions harm citizens at large, with all Russian citizens' freedoms of political expression now greatly eroded due to Internet regulation and their intimate lives under close scrutiny.

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Ads, Mascots, and Fast-food Consumerism

Shreya Math

“By this point in the ride Ariel was singing “Part of Your World” and every fiber in my sick being was saying ‘Yes. Yes, we are’” (O’Hagan). In his article, O’Hagan details the transformative experiences that places like Disneyland can have on a human, regardless of whether they are adults or children. The world that is created gives us an opportunity to escape from our lives leading us to indulge in the experience while overlooking any negative implications. Such worlds resemble those constructed by fast food companies with mascots like Ronald McDonald in McDonaldland. These figures then contribute to a culture of fast-food consumerism, which can have severely detrimental effects on health. Using the ideals of Postmodern art, I seek to create a piece that brings awareness to the power that mascots and, by proxy, how the companies they represent hold power over our health.

In order to fully understand the power that companies like McDonald’s have amassed, I first look to understand the impact of ads and mascots on consumers. Starting off with the article “How Food Mascots Convince You to Spend More,” the author, Angela Pagán, states that “As a species, we have a psychological tendency to attribute human characteristics to nonhuman things” (Pagán). Mascots tap into and exploit this instinct, and this anthropomorphization does not just stop with looks; rather, it goes into movements, personality, and emotions. As humans, we tend to gravitate to what we recognize the most, which is other humans, so adding eyes, mouths, arms, and legs to things like candy allows us to relate to these mascots. After all, if the mascots enjoy the food they represent, why wouldn’t we? This enables companies to deepen our connection to food. This idea is furthered by the article “It’s time for Ronald McDonald to hang up the red wig,” which states, “What the researchers found was children strongly preferred the taste of the food and drink they thought was from McDonalds, even though it was identical” (Jones). With the simple branding of McDonald’s, with the constant exposure to ads filled with fun, children’s minds have been corrupted to believe that this food with the logo on it is better. Furthermore, this is a phenomenon that is seen to continue throughout adulthood. The paper “How Childhood Advertising Exposure Can Create Biased Product Evaluations That Persist into Adulthood” states that “Study 2[, a study with McDonald’s and Kellogg’s Fruit Loops,] provides additional evidence that exposure to advertising in childhood leads to biased product evaluations in adulthood by ruling out affect toward consumption as the source of this effect” (Connell et al. 125). Regardless of stating things like “has a lot of sugar” or “has a lot of salt,” with the logos these were seen as positive things showing how a positive association in childhood leads to a similar positive association in adulthood. When the participants were exposed to the ads before the age of 13, they tended to view the fries and the sugary cereal as healthier. Also, they tended to resist changing their mind about the products featured in the ads showing how strong emotional bonds to mascots can affect the way in which we consume and interact with products.

As ads and mascots have been seen to attract consumers, I then looked at the impact of consuming such goods. This is seen in the study “Americans’ Perceptions about Fast Food and How They Associate with Its Consumption and Obesity Risk,” which states, “Multiple studies have found that frequent [fast food consumptions] is associated with elevated BMI and cholesterol, and increased risk for obesity, hypertension, and diabetes” (Min et al. 1) Many researchers and physicians have stated that avoiding frequent fast food consumption is critical to reducing what is now a global health crisis, obesity. Looking at the article, “Fast Food - Is it the Enemy?,” RD Sarah Muntel states,

“Choosing a typical fast food meal every day can lead to increased calories which can lead to weight gain and can lead to other health conditions like heart disease” (Muntel) Many fast food places tend to have the daily recommended caloric intake in one meal making them super unhealthy as they also lack necessary nutrition. The documentary *Super Size Me* shows a specific case revolving around McDonald's. Eating McDonald's for every meal for 30 days, Morgan Spurlock ate an average of 5,000 calories each day. He ended up gaining 24.5 pounds, a 13% body mass increase, an increase in cholesterol, and experienced mood swings, sexual dysfunction, and fat accumulation in the liver.

This leads into my own work, which takes inspiration from Gebhard Fugel's "Christi Himmelfahrt," a piece depicting the ascension of Jesus, to employ a mixing of high and popular cultures as well as art and everyday life that is characteristic of Postmodern art. The ascension of Christ is seen to be what establishes him as the reigning king over all powers. Taking inspiration from this painting, with the depiction of Ronald McDonald as the Jesus-type figure, I hope to show the impact that ads can have on consumers as the constant bombardment of them throughout all forms of media show how much they are ingrained into daily life. The figures depicted below, like Mickey Mouse and Snoopy, are also very commercialized and extremely popular among children while also being some of the most favorable happy meal toys, meals that have only worked to increase the popularity of McDonald's among children. By creating a parody of "Christi Himmelfahrt," I seek to make a connection to and increase awareness about how fast-food restaurants have become a reigning bureaucratic power based on a business model in which the health of consumers is ignored as their primary goal is their own profit while putting on a facade to create loyal demographic. This idea is also seen in the novel *Catch-22* with the character Milo especially with his note in the first-aid kit after stealing the morphine syringes that stated, "What's good for M & M Enterprises will be good for the country. Milo Minderbinder" (Heller 436).

Through my work, I aim to show a solution of creating campaigns to push back against fast-food restaurants and hope this pushback spreads to consumers, incentivizing fast-food companies to provide healthier alternatives. If the current branding switches to healthier food options, it may also help children make healthier food choices into adulthood. However, this switch would go against the reason that fast-food restaurants were created, the need for food to be fast and cheap. Oftentimes healthier alternatives tend to be more expensive, which can raise the cost of food. As seen in "Fast Food: Oppression Through Poor Nutrition," Andrea Freeman states, "Fast food has become a major source of nutrition in low-income, urban neighborhoods across the United States" (Freeman 1). As a result, it's critical to understand that a significant increase in the price of fast-food restaurants could lead to food insecurity for those who may be unable to afford other options.

Overall, obesity is a widespread healthcare crisis that must be solved, and one that has only gotten worse during a time of the popular culture of fast-food consumerism. It is a problem that lies deeply embedded within the media we consume as well as within economic divides and is a problem that requires quite complex solutions. However, the start to the solutions lies in awareness and recognition of this problem, which is what I hope to bring to light in my work.

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Big Cash: Slavery in the Pacific Bluefin Tuna Industry

Sarina Mayya

Popularly known as the ‘chicken of the sea’, the Pacific bluefin tuna is a large, predatory species of tuna found throughout the Pacific Ocean. Consumed across Asia, Europe, and North America, the Pacific bluefin tuna accounts for up to 60% of the world’s total tuna consumption, generating a market worth over \$22 billion as of 2016 (Business and Human Rights Resource Center). However, despite the profitability and global reach of this industry, the practice of slavery within supply chains of Pacific bluefin tuna remains alive and well on the high seas. Under global economic norms of capitalism, tuna distribution corporations are incentivized to pursue profitability within their supply chains over preserving the value of human lives; on the whole, consumers of Pacific bluefin tuna products remain ignorant and apathetic to these barbaric practices. Workers within the industry are thus dehumanized and stripped of their individual identities. Through my work, I aim to examine how capitalism enables and consequently obscures this modern-day slavery within the Pacific bluefin tuna industry, as well as present a critical reevaluation of how consumers and producers balance convenience and consciousness.

To understand how capitalistic systems promote the commodification and exploitation of workers within the Pacific bluefin tuna industry, we must first characterize the economic and political practices that have carried these brutal labor conditions into the 21st century. One dominant procedure is transshipment, where both illegal and legal fishing vessels transport their catch to a transport ship, which then periodically transfers the tuna to shore to be sold. The problems transshipment introduces are twofold; firstly, there is no way to track whether fish were caught legally, muddying supply chains. Secondly, transshipment enables fishing vessels to be kept at sea for extended periods of time, allowing workers to be held against their will and perform forced labor. As explored in *Potential ecological and social benefits of a moratorium on transshipment on the high seas*, the failure of Regional Fisheries Management Organizations to adequately enforce these bans on the high seas has led to the proliferation of slave labor for the purpose of increasing output and decreasing costs (Ewell et al.). Thus, the lack of economic and political enforcement surrounding tuna fisheries has led them to become hotspots for slavery, allowing them to become intensely lucrative laundering outposts for organized criminal networks. In her 2014 paper *Laundering Fish in the Global Undercurrents: Illegal, Unreported, and Unregulated Fishing and Transnational Organized Crime*, author Anastasia Telesetsky reports “the [Illegal, Unreported, and Unregulated] fishing market ranges between \$10 billion and \$23.5 billion a year” (Telesetsky). At a base level, even isolated from the actions of distributors, the bluefin tuna industry is deeply unethical in its practices; for the aim of earning a profit, workers are held in desolate conditions at sea and are grossly underpaid. However, despite this knowledge, the vast majority of canned tuna companies still continue to do little to no due diligence in ensuring they are sourcing tuna from ethical and legal fisheries. According to a 2019 report by the Business & Human Rights Resource Center, “only 4/35 [major canned tuna companies] report having due diligence policies and procedures that specifically address the risk of modern slavery in supply chains”. Furthermore, “only 3/35 companies cascaded modern slavery prohibitions throughout their entire supply chain” (Business & Human Rights Resource Center). Rather than expend the funds and energy to ensure that their supply chains are ethical, tuna companies choose the route incentivized under capitalism; to maximize profit, they must minimize

their spending, purchasing tuna from questionably ethical suppliers. As a system, capitalism prioritizes convenience over consciousness; the tuna company's intent may not be explicitly malicious, yet their actions perpetuate atrocities such as slavery in Southeast Asian countries.

Enslaved and trapped at sea, there is essentially no way for workers exploited under the Pacific bluefin tuna industry, and by extension capitalism, to retain their individuality. In an article in *The Guardian*, Steve Dow highlights the experiences of one Cambodian fisherman, Vannak Anan Prum, who spent 4 years enslaved at sea on a fishing vessel. Prum's background as a migrant worker who was tricked onto a ship is a common one; "an estimated 200,000 migrant workers from Cambodia, Myanmar, and Laos are prone to such exploitation" (Dow). Workers on these ships are treated as disposable; "ship captains use electric shock treatment, sleep deprivation and drugs to keep the laborers passive" (Dow). If a worker is unable to perform their physical duty, they are 'disappeared'; if they do not serve a profit-making purpose to the tuna fisheries and corporations at large, they are worthless. Many workers' statuses as migrants further strips them of any legal protection, leaving them untraceable. Essentially, once within the system the workers are no longer human; instead, they are merely cogs in a capitalistic, money-making machine. Ralph Ellison's 1952 work *Invisible Man* reflects this concept; within the opening prologue, the narrator states "I am invisible ... simply because people refuse to see me" (Ellison). The workers enslaved upon tuna fishing vessels in the Pacific can also be seen as "invisible men"; the world on the whole is blind to their plight. They are barred from achieving any actual self-determination due to the strength of the institutions which oppress them. Due to the way capitalism and the tuna industry are structured, a layer of abstraction is created between the end consumer and the worker, obscuring the worker from view. Fishing boats run on slave labor forward their catch to a larger vessel, which then sells the tuna to corporations; the corporations thus have a perceived excuse to turn a blind eye to the reality of the tuna fisheries they source from. This is forwarded to the consumer, who are so far disconnected that it seems far-fetched to consider the purchase of this tuna to be morally reprehensible. The worker as an individual simply does not exist in the eyes of the rest of the world. A close analogy can be drawn between the enslaved labor force on Pacific bluefin tuna ships and the satirized version of the American Air Force depicted in Joseph Heller's *Catch-22*. Yossarian, *Catch-22*'s protagonist, is fiercely individualistic and wants nothing to do with the war; however, various mechanisms are in place to ensure that he is unable to leave and to force him into submission. The soldiers in *Catch-22* are treated as entirely expendable; when some die, newer, younger recruits are brought in to take their place (Heller). This exploitative cycle of recruitment and replacement as well as the quashing of individualism are reminiscent of elements of the tuna industry. In the end, Yossarian is only able to gain his individualism back by leaving the system of the Air Force entirely, an option not present for those enslaved in the Pacific.

With profit as its driving motive, the capitalistic economic system is clearly incompatible with ensuring the ethical treatment of individual workers due to its enablement of slavery as a means of driving down costs and driving up profits. The 'layers of abstraction' created between the system of capitalism, consumers, distributors, producers, and workers make culpability difficult to definitively assign in this scenario; though all people would agree that the criminal organizations enslaving migrant workers on ships is morally abhorrent, is it reprehensible for consumers to buy such products? Just how much responsibility do corporations bear in this scenario? Postmodern art, with its emphasis upon subverting and challenging existing institutions, provides a viable avenue for confronting these questions. One of the most controversial postmodern artists alive today is Damien

Hirst, an English artist who rose to fame in the late 20th century. In many cases consisting of real animal corpses, Hirst's work is frequently shocking and visceral. Arguably his most famous work, *The Physical Impossibility of Death in the Mind of Someone Living*, is composed of a 14-foot tiger shark suspended in a glass tank filled with a blue formaldehyde solution (Hirst). Hirst's work is meant to shock the viewer, forcing them to confront their own mortality. However, Hirst's work can also be analyzed from a more cynical perspective; Andrew Price's 2015 critique "*Damien Hirst: post modernist or old colonialist?*" characterizes Hirst as "an old imperial archetype, a crazed trophy hunter and obsessive collector of sanitized death" (Price), highlighting the capitalistic features of Hirst's artwork such as impermanence, exploitation of death, and outsourcing of labor. Thus, I seek to analyze and parody Hirst's work on these two separate dimensions; one of the work's intended meaning and one of the underlying methodology behind the work. In imitation of Hirst's work, my work consists of an image of a Pacific bluefin tuna fish suspended in a formaldehyde tank set against a black background. Firstly, I sought to replicate the shock value of the original work. By presenting a mundane, commonly consumed fish in an isolated environment, I want the viewer, representative of a regular consumer, to consciously observe what they are consuming in excruciating detail. By doing so, I hope to etch at the thick 'layer of abstraction' between consumers and individual workers; seeing the tuna in such an unnatural environment, the consumer is forced to question the origin of the tuna and what is being omitted from their view. With this aspect of the project, I hope to challenge the apathy with which we consume goods under capitalism; we should not blindly seek what is most convenient to us in the moment, but carefully consider the individualistic consequences of our actions. Secondly, I sought to liken the apparent underlying capitalistic values of Hirst's work to the methods by which capitalism and the tuna industry exploit and erase the individuality of their workers through slavery. Hirst's work was and still is immensely profitable; though the work was initially unconventional, Hirst's subsequent plethora of similar works and sanitization of the initial work is reminiscent of the layer of abstraction placed over the tuna industry. Tuna is widely consumed and profitable throughout the world, yet is sourced from companies that rely upon exploitative slave labor. By failing to do due diligence upon their supply chains, tuna distributors enable and contribute to this obfuscation and sanitization. Hirst's work was also notably impermanent in nature, with the original shark rotting and being replaced a number of years past its initial installation. To Hirst, the individual shark is not what composes the artwork, but the composition of the tank and the shark together; the replaceability of the shark can be analogized to the commodification of workers in the tuna industry.



Addressing the crisis of slavery within the Pacific bluefin tuna industry requires a double-pronged approach. Realistically, it is not enough for consumers to simply become more conscious in their surface-level consumption, nor is it enough for tuna distribution companies to begin to regulate their

underlying supply chains more effectively. Instead, both of these approaches must occur simultaneously, as reflected in my work. The phrase “There is no ethical consumption under capitalism” is frequently addressed in modern discourse; as defined by Kiara Lewis in *Sunstroke Magazine*, it means that “it is inevitable that there will be victims due to the cyclical nature of this greedy system” (Lewis). Capitalism is an inherently flawed system; however, this is not a justification for complacency or apathy from distributors or consumers. In *Indonesia’s Practice in Combating Illegal Fishing: 2015–2016*, author Arie Afriansyah highlights how the Indonesian government has “announced that fisheries businesses must not comply with a ‘human right audit’” (Afriansyah) to earn a license, and Lucy Goodchild highlights in a Medium article how consumers have filed lawsuits and petitions against companies like Thai Union and Nestle with known human rights violations in their tuna supply chains (Goodchild). Though an idealized escape from the system of capitalism may seem ideal for the individual worker, it is entirely unrealistic; instead, working simultaneously to reform supply chains and raise consumer awareness will unobscure the issue and allow workers oppressed under slavery to finally emerge as individuals.

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Bratz, Breast Augmentation, and Beauvoir: A Feminist Analysis on the Modern Beauty Standard

Shivani Rajagopalan

Leonardo Da Vinci's Vitruvian Man was created to showcase the connections between the male physique and nature (Da Vinci). Over five centuries later, in 2001, Carter Bryant, a previous Barbie employee, created a new generation of children's dolls: Bratz (Armson). The prominent characteristics of these dolls include large eyes, lips, chest, and behind with a small nose and waist; these features reflect the beauty standards of this time. The concept of body image has long been an important issue in human history, with beauty standards and ideals changing over time. The rise of plastic surgery brings up the question, how has the ideal for the human physique changed as a result of social media promoting a certain look for women, such as the L.A. girl? Through examining the connections between Da Vinci's Vitruvian Man, Bratz dolls, plastic surgery, and the oversexualization of women, this art piece explores the ways in which popular culture and media have shaped society's body image, the repercussions of this standard, and a potential solution .

The piece reveals the connection between the "L.A. girl" look and need for plastic surgery through the illustration of plastic surgery lines on the doll. Ginsberg, in "NY Face, LA Face: The Secrets of Fashion's Extreme Makeovers" describes the details of the "LA girl look" as a combination of tanned skin, big hair, long eyelashes, full lips, and curvy body shape. According to the article, this look is often achieved through a combination of plastic surgery, hair extensions, spray tans, and makeup techniques. Ginsberg goes into detail about the specific procedures and treatments that are popular for achieving this look, including Botox, dermal fillers, lip injections, and breast augmentation. Additionally, the article notes that this look is heavily influenced by celebrity culture and media, with many individuals seeking to emulate the appearance of famous actresses and models (Ginsberg). In Holland's "From Ancient Egypt to Beverly Hills: A Brief History of Plastic Surgery," he claims that the desire for physical perfection and the use of plastic surgery procedures to achieve it is not a new phenomenon, but recently surgeries have become more popular for cosmetic reasons and not reconstructive surgery. The article says, "By 2005, the number of cosmetic surgery procedures performed in the US was almost double that of reconstructive procedures, according to data from the American Society of Plastic Surgeons, or ASPS," (Holland). This quote shows that plastic surgery, especially in Southern California, has become more cosmetic and grew immensely entering the 21st century. Both sources highlight the complex relationship between beauty and consumer culture. While the desire to look a certain way is not novel, the extent to which individuals are willing to go to achieve these standards has been amplified due to social, technological, and economic factors. The commodification of beauty and the body is not only a reflection of broader cultural values, but also a driver of social norms and behavior.

By utilizing Vitruvian Man, a standard for human bodies centuries ago, the piece shows how body image has shifted from praising the body's natural form to encouraging individuals to change their body. In "I Had Surgeries to Look Like a Bratz Doll — I'm Bruised, but Obsessed," Keller presents a vivid description of the dangers of extreme plastic surgery and the influence of unrealistic beauty standards. Keller explores the case of Hannah Elizabeth, a British woman who underwent multiple surgeries to resemble a Bratz doll, and the emotional and physical toll this took on her

(Keller). By highlighting the societal pressures and expectations that led Elizabeth to pursue this transformation, Keller underscores the problematic role of popular culture in shaping beauty norms and promoting cosmetic surgery. Furthermore, she argues that social media is a significant factor in shaping young women's perceptions of beauty and their desire for cosmetic surgery. To support this claim, Walker and their peers conducted a survey of 722 undergraduate women, examining their social media use, exposure to beauty norms, and desire for cosmetic surgery (Walker et al.). The findings reveal a strong correlation between social media use, exposure to appearance-related content, and the desire for cosmetic surgery. Specifically, women who spent more time on social media and were frequently exposed to beauty norms expressed a higher desire for cosmetic surgery. In *Rhinoceros* by Ionesco, the author explores the dangers of conformity and the importance of self-awareness. The play depicts a society in which individuals turn into rhinos without clear explanation, and those who love them support them and eventually become rhinos themselves (Ionesco). He presents radical thinking as the reason for this mindless conformity, emphasizing the importance of self-awareness and critical thinking in resisting the allure of conformity. The play's absurdity underscores the dangers of blindly following societal expectations and the importance of questioning and examining one's beliefs and values. These three sources present a compelling case for the dangers of conforming to societal norms and expectations. While Keller's article focuses on the risks of extreme plastic surgery and the influence of popular culture, Ionesco's play offers a broader commentary on the dangers of mindless conformity. The study's findings on the relationship between social media use, exposure to beauty norms, and desire for cosmetic surgery underscore the importance of critical thinking and self-awareness in navigating societal expectations and pressures. Together, these sources offer a nuanced and complex analysis of the dangers of conformity and the importance of resisting societal pressures to conform.

The oversexualization of women in recent times, especially perpetuated by the media, is revealed through this piece. By utilizing an unclothed doll for the artwork, the artist comments on the objectification of women and the expectation of physical beauty and obedience. Levesque and Michelle's analysis of the Bratz dolls highlights how the sexualized image of femininity promoted by the dolls can contribute to harmful gender stereotypes and body image issues among young girls. The authors argue that the dolls present a narrow and unrealistic view of femininity that emphasizes appearance over personality or achievement. They also suggest that the sexualized clothing and makeup worn by the dolls may promote premature sexualization and contribute to a culture of objectification. "The Bratz dolls provide a stylized and sexualized image of femininity that could promote potentially harmful gender stereotypes, body image issues, and a culture of objectification" (Levesque and Michelle). However, this phenomenon is not limited to the Bratz dolls, as Fisher and Espley argue. Rather, it is a broader feature of popular visual culture, where advertising campaigns and other forms of media regularly promote certain body types as ideal, and in doing so, shape our understanding of what is desirable or undesirable. This process is not just a matter of individual preference or choice, but is deeply embedded in cultural norms and values. "Aesthetics, as represented in popular visual culture, reflects and reinforces cultural norms and values, including those related to body image" (Fisher

and Espley). Simone de Beauvoir's *Second Sex* describes the over-sexualization of women and provides an even broader historical and sociological perspective on this issue. Beauvoir's analysis emphasizes that the patriarchal society has perpetuated the objectification of women, and that this has been reinforced through cultural and social institutions. The phenomenon highlighted by

Levesque and Michelle is not a new one, but rather part of a broader pattern of gender oppression that has existed for centuries. Beauvoir says, "Thus the necessity for the woman to beautify herself, to make herself object and prey, in short to feminize herself. Woman's beauty is a necessary complement to man's power, which he exercises over her" (Beauvoir). These sources suggest that addressing these issues requires not just an analysis of toys or advertising campaigns, but a general rethinking of the cultural values and norms that shape our understanding of beauty and gender roles.

Overall, the art piece reveals a deeper outlook on media influencing how body image has changed over time, the commodification of the body, and the oversexualization of women. In order to empower individuals from a young age to love and respect their body, dolls need to cater to a more diverse audience. In "Meet the New Wave of More 'Diverse' Barbie Dolls," Wu describes how in 2020, Barbie announced the release of a more diverse line of dolls. These dolls featured toys of different races, accessibility levels, and some with illnesses (Wu). Through dolls like this, we can begin changing the single beauty standard and encourage children to appreciate their own physique without plastic surgery involvement. However, in this lineup of dolls, Barbie has yet to include a plus size doll. Showing varying body types in terms of weight and built in dolls are crucial to begin changing the narrative of the beauty standard.

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“Together to Fight the Pandemic”; Authoritarianism and Bureaucracy

Claire Wu

Catch-22, an American war classic, follows the experience of Yossarian, a bombardier who desperately attempts to escape the military. Jonathon Heller portrays the military as an authoritarian system that imprisons and exploits its participants. What makes this system even more deadly however, is that there is no clear leader; instead, every individual officer or soldier is placed into a specific role, isolated from each other, and trained to reinforce the ultimate goals of the military. Yossarian is trapped, not because one single person is stopping him, but because the entire system strengthens itself by forcing individuals to conform. When high-ranking officials make mistakes, lower-ranking supporters are required to obey. Ultimately, Catch-22 argues that bureaucratic systems with supreme power are neither effective nor self-correcting, magnifying rather than eliminating problems. This concept applies most aptly to China's Zero Covid policy, a massive bureaucratic operation enforcing countless quarantine rules and regulations. Just as Catch 22's officials are only interested in personal benefit and public appearance, China's officials merely serve as echo-chambers for Xi Jinping. By forcing a policy to exemplify nationalist values, China's attempt to prove the superiority of authoritarianism over democracy ironically caused Western individualist ideals to influence domestic protests. Through my art piece, I seek to illustrate this ideological disparity, viewing modern political systems through a postmodern lens.

The respective Covid-responses of China and the United States have become crucial aspects of their reputations on the larger geopolitical stage. In the article “How China Confronts the United States”, Romi Jain finds that while North America's image of invulnerability has been significantly weakened by the United States' lackluster results, China has used its initial success to portray itself as a “global savior”(Jain). Jain further states, “Buoyed by its global influence in many realms (...), China's leadership has chosen to harness the catastrophe to showcase its resilience on the front of health, economy, and national morale”(Jain). Jain's article was released mid-2021, meaning that it sets a context for China's current precarious position regarding Covid-response. The beginning phases of its successful initiative has tired its citizens and exhausted its medical personnel, but because it has become a critical part of China's global image, China is unable to modify the policy to better suit the situation. Furthermore, the Chinese government has always portrayed itself as perfect and any contradicting evidence threatens their legitimacy; to admit any mistakes within the politically sensitive territory of Zero-Covid goes against the entire basis of China's government.

Because Zero Covid has huge influence on China's geopolitical status, China's success in Covid-response is weighed more importantly than the good of Chinese citizens. As Jain stated previously in “How China Confronts the United States”, China has a personal stake in the race for Covid vaccines: “Sinopharm has launched COVID-19 vaccine production facility in Serbia to produce 30 million vaccine doses annually for supply to Serbia and other countries in Europe”(Jain). Clearly, China seeks to use vaccine production and Covid-response as a way to bolster their foreign relations, attempting to become a “superpower” that can dominate the United States. However, through multiple studies, Western mRNA vaccines have proven to be more effective against Omicron variants--yet “China has not approved any foreign Covid vaccines, opting for those produced domestically” (“China's Xi Jinping 'Unwilling' to Accept”). By prioritizing China's economic and political stakes above what is best for public health has placed Zero-Covid policy in a precarious

position; they can not retreat without admitting inferiority against Western powers. This aligns with the perspective that Zero Covid policy has been weakened by nationalist sentiments due to the damage this does to Chinese citizens. Although China does not have any widespread anti-vaxxer movements and Chinese populations have been largely compliant with vaccinations, the use of inferior vaccines means that even vaccinated populations are at stake. In an analysis of potential repercussions for Chinese citizens after Zero Covid policy, Emanuel and Osterholm conclude “For those who become infected, China has limited outpatient medical facilities or home care. Many of those who fall ill will not be able to call a primary care physician, go to an urgent care center or get care at home (...) hospitals will rapidly be overwhelmed” (Emanuel and Osterholm). This analysis provides a more sympathetic view of Zero Covid: despite its harms, Zero Covid has resulted in keeping infections low and deaths manageable. Thus, China is left at an impasse: while proceeding with the policy is deeply costly, abandoning the policy would mean deadly consequences for China’s population. While Emanuel and Osterholm credit Zero Covid with some success, “China’s Xi Jinping ‘Unwilling’ to Accept” implies that China would not be suffering from this predicament if they had not let international goals overtake protecting their own citizens.

Ultimately, China’s authoritarian government prevents any self-correcting measure from modifying or adapting Zero Covid to suit the needs of the people. Before 2022’s Covid-19 protests began, the Chinese government had always followed the wishes of a singular individual, from Mao Zedong to Deng Xiaoping and now Xi Jinping. To speak out against this all-powerful figure would only bring disadvantage to themselves; to support this figure would only lead to political reward. As Applebaum argues in the essay *History Will Judge the Complicit*, conformity is easy: “Almost everyone was a collaborator; 99 percent of East Germans collaborated”(Applebaum). Even after numerous protests began to pressure many officials to give in to popular demands, yet officials are still unwilling to fully disobey Xi Jinping’s orders. “no senior Chinese official had publicly stated that the zero-tolerance approach is being fully abandoned (...) With little direction from above, local governments have been adopting widely different policies” (Pei). Similar to how in *Catch 22*, where randomly assigned officials are either incompetent or unable to change injustices, Chinese officials and local governments are made completely useless in the face of disturbance. Moreover, China actively seeks to destroy productive discourse through online means. In a study of suspicious online activity during the height of Covid-19, Thomas found that multiple pages with a lack of followers or following have been created to politicize Covid responses--implying that many of these are inauthentic, powered by China’s political goals. Within the pages themselves, topics range from “The US’s Covid-19 crisis (...) as a consequence of the political failures of the US(...) the US 2020 presidential election, protests and riots in the US, and the failings of the Trump administration”. Moreover, many pages and videos promoted collectivism in the face of the Covid crisis, combining nationalist sentiments with group conformity. This article was released before widespread problems with Zero-Covid policy became well known amongst the global public. With the rise of online protests, especially when protest material overwhelms censorship algorithms, these online phenomena become more relevant as tools to suppress mass dissent.

Considering how the failures of Zero Covid policy were almost entirely created by the base ideology of the Chinese government, the 2022 Covid-19 protests sought Western individualist ideals as a way to combat this oppression. In the article, “Reversing Zero Covid”, Jonathan Wolfe remarks that Chinese citizens have a relatively pessimistic view on individual rights; “in exchange for democratic freedoms, the people would enjoy steady economic growth and the chance at a better life”

(Wolfe). The impetus behind the protests was that because of Zero Covid, Chinese citizens lost both democratic freedoms and economic prosperity. This also influences the type of protest they undertake. Henry David Thoreau, in his essay “Civil Disobedience” states “In fact, I quietly declare war with the State, after my fashion, though I will still make use and get what advantages of her I can, as is usual in such cases” (Thoreau). Thoreau differentiates civil disobedience from typical forms of protest by specifying it as peaceful. Peaceful resistance provides a relative escape from abusive systems of power; by absolutely resisting to participate, their actions can not be manipulated to take sides. Forms of protest against Zero-Covid policy have largely remained peaceful, not just because they fear retribution from the government, but also because peaceful protest allows their message to become untainted by bias. Instead of inflammatory phrases or speeches, protestors use white paper as protest, something that is hard to twist into a narrative.

With this ideological shift in mind, I start my art piece with an iconic Chinese propaganda poster as a base. This poster, portraying Mao ZeDong in a larger than life portrait above a sea of loyal Chinese citizens emphasizes his cult of personality; each of the Chinese model citizens hold up Mao’s Red Book, a collection of Mao ZeDong’s most important quotes. My piece takes this design and replaces each of the Red Books with a white poster, referencing the blank posters used during protest, and inverts the color scheme of the poster to reflect American colors of independence and freedom. This stark contrast in art medium and style is meant to reflect the clashing of ideological differences, ultimately melting into each other just as the 2022 Covid-19 protests combined Chinese cultural values with Western ideals. A solution for this issue can be found in the Covid responses from other Asian countries in relatively close areas. According to a study completed by Lewis and Meyer, while several Asian countries used China’s strict guidelines as precedent, most successful nations in subduing the pandemic, such as Japan or Hong Kong, have generally listened to citizen feedback as a way to scale back quarantine requirements. Hong Kong in particular, under Western influence, was able to meld together a unique approach. This ultimately makes a potential solution for China’s predicament; a complete reformation of government authority could foster a self-correcting capability. However, this would also ultimately displace Xi Jinping’s authoritative power, as well as going against the “perfect” image of the Chinese government, thus being unlikely to occur.

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When Human is Made No Longer Human: An Analysis of Hannah Arendt's The Banality of Evil

Jacob Xu

The current media and popular culture have often portrayed evil as a profound wickedness embodied by greedy, pathological, sadistic villains. We are thus accustomed to the notion that those who committed evil deeds must have evil intentions, reassuring ourselves that since we don't have evil motives, we must not be villains. Believing this idea, people were shocked when they saw Adolf Eichmann, a Nazi official who contributed greatly to the Holocaust but was found to be terrifyingly banal during his trial (Bernstein, "Are Arendt's Reflections"). Analyzing Eichmann's trial, political philosopher Hannah Arendt introduced the idea of the banality of evil in her famous work *Eichmann in Jerusalem: A Report on the Banality of Evil*. This essay will analyze the concept of the banality of evil with a connection to the diffusion of responsibility in modern society, therefore reflecting on the application of this concept today.

As a frequently misinterpreted concept, the phrase "the banality of evil" must be understood correctly. When Eichmann was brought on trial in Jerusalem and accused of being a major organizer of the Holocaust, he did not exhibit any trait of a villain people might think of, and he was found to be an extremely mundane person, despite the effort of the prosecutors to portray him as a pathological, sadistic monster. He was such an ordinary individual to the extent that Arendt describes him as "a new type of criminal who commits his crimes in circumstances that make it well-nigh impossible to know or feel that he is doing wrong" (Arendt). It was obvious that what Eichmann committed was truly unforgivable and he must be hanged, but the effort to verify his evil intentions in order to prove his guilt seemed to be in vain. Hence, the banality suggested by the banality of evil is not about Eichmann's evil deeds but his evil intentions. In Richard Bernstein's essay "Are Arendt's Reflections on Evil Still Relevant?", he concludes the primary lesson of the banality of evil, writing: "One does not have to be a monster, a sadist, or a vicious person to commit horrendously evil deeds. Normal people in their everyday lives, 'decent citizens,' even respectable political leaders, who are convinced of the righteousness of their cause, can commit monstrous deeds" (Bernstein, "Are Arendt"). Through his interpretation of the idea, Bernstein emphasizes the importance of the banality of evil in modern society.

The concept of the banality of evil is not new. Eugène Ionesco's famous play *Rhinoceros*, written two years before the trial of Eichmann, portrays a similar phenomenon. The play tells the story of a small town in France, where people begin to transform into rhinoceroses and become aggressive and dangerous. The audience follows the perspective of the character Berenger, who watches everyone else turning into rhinoceros except himself. In the end, grasping firmly on his individuality, Berenger becomes the only one left to remain human. Meant as a commentary on the rise of fascism in Europe during the early 20th century, the play discusses how a dangerous ideology can spread through conformity. It is worth noting in the play that people who transform into rhinoceroses are ordinary residents of the town. In the play, a character named Daisy has a sentence: "everyone has a close relative or a friend among them [the rhinoceroses], and that would make it even more difficult" (Ionesco). The fact that they are neighbors, colleagues, and friends to the protagonist echoes the concept of the banality of evil. All in all, people who transform into

rhinoceroses in the play share the same trait as Adolf Eichmann — they are all unthinking, and therefore unaware of the immorality of the catastrophe.

But what resulted in their thoughtlessness? Many previous studies have evaluated theories on conformity and obedience, but one must not ignore the effect of diffusion of responsibility. In psychology, diffusion of responsibility is the concept that individuals feel more responsible for actions carried out alone than for behaviors engaged in jointly with others (Feldman & Fred). In addition to individuals' differing feelings of responsibility is the differing judgment on the individuals' accountability. In a research conducted by Feldman and Fred analyzing three studies on the differing judgments on the accountability of criminals committing alone and in a group, the researchers conclude that "criminals acting alone received significantly longer sentences than perpetrators who had committed a similar crime, but who had acted with others" (Feldman & Fred). In the case of Eichmann, his lack of feeling of guilt when committing the atrocity can be explained by the nature of the Holocaust as systematic violence. If Eichmann was the sole gunman to execute the Jewish, meaning that he shall take all responsibility for the men dead, he might as well be filled with horror when taking the lives of people in front of him, questioning the morality of his actions. However, in reality, Eichmann was a desk murderer. He was a bureaucrat of a "bureaucracy on genocide." He was a thoughtless cog in an immoral machine. It was the mindset of being a cog that made many Nazi officers continue their work since a cog should not be taken responsible for the wrongdoings of the machine. The division of labor when carrying out the Holocaust segments the sense of responsibility into trivial pieces to the extent that many perpetrators didn't feel responsible for the tragedy, pleading not guilty with the "just following orders" defense when held on trial after the war. But the diffused responsibility does not mean that the individual should not be held responsible. Concerning mass atrocities like the Holocaust, Arendt writes: "For these crimes were committed en masse, ... the extent to which any one of the many criminals was close to or remote from the actual killer of the victim means nothing, as far as the measure of his responsibility is concerned" (Arendt). The history confirmed this as well. Principle IV of Principles of International Law Recognized in the Charter of the Nürnberg Tribunal and in the Judgment of the Tribunal states "The fact that a person acted pursuant to order of his Government or of a superior does not relieve him from responsibility under international law, provided a moral choice was in fact possible to him" (United Nations). Ultimately, one has to be held accountable for his crime regardless of being a cog or not.

Analyzing evil, Arendt marks that modern society, driven by the imperatives of productivity and efficiency, encourages the process of what she calls "making human beings as human beings superfluous" (Arendt). Reflecting on what Arendt meant by "superfluous," Bernstein concludes that by reducing human beings to a mere means to an end, people are valued primarily for their ability to perform labor or produce goods, rather than for their capacity for political engagement (Bernstein, "Are Arendt"). Another article by the same author titled "REFLECTIONS ON RADICAL EVIL: Arendt and Kant" examines the theme of superfluous further. Bernstein writes "... [the ultimate stage] involves the extraordinary attempt to transform human beings, to destroy any vestige of human individuality and spontaneity - and, consequently, any vestige of human freedom" (Bernstein, "REFLECTIONS"). He indicates that the ultimate stage of Arendt's logic of "making human beings as human beings superfluous" is the destruction of what makes human beings human: the capacity to initiate that Arendt took to be the quintessence of human freedom. This process ultimately dehumanizes the individual and makes him superfluous, eventually leading to his thoughtlessness.

Instead of being an active participant with spontaneous thinking and political engagement, Eichmann was reduced to a means to an end, a cog within a machine. Hence, he lacked the opportunity, and more importantly, the will to express and act on his suppressed morality.

Since the banality of evil is a phenomenon catalyzed by modern society, it can only be more relevant now. The Internet, for example, with its increasing complexity, has become a breeding bed for the banality of evil in modern times. For the purpose to gather more users, social media companies have made their products more inclusive and accessible to everyone. With a click of a mouse, one can spread an idea to millions of others using the same platform. While the Internet indeed brings convenience in communication, providing the platform for many grassroots movements, it is problematic in that it diffuses the responsibility of individuals. For example, one New York Times article titled “When the O.K. Sign Is No Longer O.K.” recounts the incident of the O.K. sign’s transformation into a sign of white power. The incident began in early 2017 as a hoax by some users of an anonymous and unrestricted online message board called 4chan, who tried to trick the rest of the Internet into believing that the innocuous gesture was actually a clandestine symbol of white power. The prank was so successful that it stopped being a joke: White supremacists, Neo-Nazis, and members of the Ku Klux Klan started making the hand gesture in public to indicate their presence and identify potential allies and new members (Swales). The influence even extended to people unaware of the incident. People were attacked on the Internet for making the O.K. sign, not knowing that it had become a sign of white power. Like Eichmann, who was aware of the massacre of the Jews during the Holocaust, the 4chan users who spread the hoax were also conscious of the potential aftermath of actions. However, since the operation required only a few simple clicks of the mouse, and the hoax was carried out by many, individual perpetrators feel little responsibility for their actions, eventually leading to this tragedy.

The recent Kahramanmaraş earthquake in Turkey and Syria reveals another way the banality of evil can exist today — through increasingly complex bureaucratic processes. The 7.8-magnitude quake on Feb. 6 caused widespread destruction in 10 provinces in southern Turkey as well as in northern Syria. In just a week after the catastrophic earthquake, the death toll in Turkey reached 30,000 (Kirby & Jen). According to an article by the New York Times titled “Amnesty in Turkey for Construction Violations Is Scrutinized After Quake,” the high casualty is largely due to construction violations that resulted in buildings built with poor safety measures (Hubbard et al.). Though the Turkish government has responded by arresting building contractors with ties to collapsed buildings, as reported by the article, construction experts tell that “the builders could not have completed their projects without approvals from a range of officials who have so far escaped scrutiny for possibly signing off on subpar work” (Hubbard et al.). As an effort to boost the economy, construction has been a major part of Turkish president Recep Tayyip Erdoğan’s economic development policy. It is revealed that during this process, the buildings’ safety was often compromised through the government’s issuing of construction amnesty, allowing buildings to be certified even if they did not meet the standards. Another article titled “Better buildings could have saved lives in Turkey’s earthquakes. Are contractors really to blame?” examines the problem in detail. According to the article, aside from being essential to the nation’s economy, construction was also “a source of political power for Erdoğan and the AKP, as major Turkish construction companies enriched themselves with government contracts and cozied up to the regime” (Kirby & Jen). Commenting on the tragedy, Kemal Kilicdaroglu, head of Turkey’s largest opposition party, said: “One should ask, did they listen to their conscience while issuing construction amnesty?” Looking at the debris of the city, the answer

is obviously no. Through the complicated bureaucratic processes, the responsibility for the collapse of the buildings has been cut into pieces. Hence, individuals within the process — construction workers, contractors, government officials, and voters — had been discouraged to act on their conscious to provide safety to the people.

In Adolf Eichmann, 4chan perpetrators, and individuals responsible for the failed constructions in Turkey, we see the banality of evil — the horrendous aftermath of their actions are not due to their evil intentions but their failure to feel responsible and act according to their conscious. Though there is an effort to punish those accountable, the banality of evil in the modern age cannot be avoided completely due to its close tie to the nature of modern society. If a solution is to be offered, I would like to consider the work titled “This is Water” by David Foster Wallace. Reflecting on people’s unconscious mindset when going through adult life, Wallace presents the thought that “The really important kind of freedom involves attention and awareness and discipline, and being able truly to care about other people and to sacrifice for them over and over in myriad petty, unsexy ways every day” (Wallace). Since the banality of evil emerges from the thoughtlessness of the mass, why don’t we embrace the existential solution offered by David Foster Wallace to become conscious again?

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Mickey Mouse's Clubhouse: Disney's Authoritarian Rule

Ava Yu

Powered by iconic characters like Micky Mouse and populated by numerous films like Frozen, The Walt Disney Company has grown into a media corporation that has dominated the 21st century. Founded in 1929 by the Disney brothers, what started as an animation studio quickly became an empire. The company has moved from the film industry into building parks, rides, and selling merchandise like "Disneyland", effectively expanding its already doubling empire. "The Happiness Project" by Andrew O'Hagan talks about the magical land of Disneyland, where a commercial sense of happiness is produced due to the whimsical architecture, food, and merchandise. O'Hagan discusses his experience visiting Disneyland, describing the sense of fantasy he received when going on the Little Mermaid ride and seeing Star Wars land. Disney is able to commercialize people like O'Hagan with the illusion that Disneyland is "the happiest place on earth." Maintaining this falsity is hard work, and the Disney corporation has abused its authority to keep up this image. This begs the question: How has Disney exercised its institutional power over others? Through research, I have found that the Disney corporation is a system of power and exercises authoritarianism by having poor employee practices, harsh censorship and trademarks, and cultural appropriation.

Disney prioritizes profit and power over the fair wages and decent working conditions of their employees. "Disney Is Not the Greatest Place on Earth to Work" by Peter Dreier focuses on Disney's employee practices. Over the past few years under CEO Bob Iger, the top executives at Disney have seen enormous paydays, Iger's "annual compensation was 1,424 times what the median Disney worker earned—one of the widest CEO-worker gaps of any American corporation" (Dreier). Dreier further emphasizes the mistreatment of employees by highlighting their anti-union efforts and how Disney overworks students and part-time workers while barely paying them minimum wage. This power imbalance between the executives and lower-level employees at Disney illustrates how Disney is a system of power. In another study, Peter Dreier teams up with Daniel Flaming in "Working for the Mouse: Inequality at Disneyland" to interview Disneyland employees regarding their rights and pay wages. 17,339 employees from over 11 different unions were surveyed. It was found that 73% of those surveyed did not have enough income to pay for basic living expenses, 68% were food insecure, and 65% were concerned about being evicted from their homes (Dreier and Flaming). This report emphasizes the terrible living conditions of employees at Disney, specifically Disneyland. Although both works have Peter Dreier as a contributor, "Working for the Mouse" consisted of a comprehensive study of the employees, while "Disney Is Not the Greatest Place" focuses more on CEO Bob Iger—illustrating two very different sides of Disney and their workers. The difference between higher-level and lower-level employees at Disney demonstrates Disney's system of power and how they exploit workers for the benefit of those at the top.

Another way that Disney has exercised their rule is through the copyrights and trademarks for their characters, restricting how people portray "Disney" as a brand and gaining a monopoly over certain characters and events. Kaitlyn Hennessey conducts an analysis of the character Mickey Mouse's trademark and copyright laws. In the study, Hennessey states that using the "Mickey Mouse Protection Act" and other copyright laws, "Disney has consistently used the court system and its political influence to extend the term of copyright protection for its works." Disney has a history of limiting individual content creators and controlling all negative intellectual property involving their

characters. For example, Hennessey mentions how artists have been sued over drawings that used Disney characters in unauthorized ways or portrayed characters in a negative light. Many content creators are not able to have free expression regarding Disney and the characters in their work. This suppression of free will through legal means contributes to Disneyland's authoritarianism. Additionally, Disney has utilized their trademarks to try and commercialize holidays. In 2013, CNN reported on Disney's attempt to trademark the phrase "Dia de los Muertos" for an upcoming animated movie. The article quotes Lalo Alcaraz, a Mexican-American cartoonist, who called Disney's move "a blatant attempt to culturally misappropriate a Mexican tradition." Although, Disney abandoned the trademark application, stating that they wanted to "focus on the production of the film and the experiences that will be created for all types of families," the greedy and disrespectful behavior they exhibited was not overlooked (CNN). Disney was abusing their power as a large corporate institution to trademark a Latin American holiday for their own commercial gain, demonstrating a toxic system of power. Hennessey and CNN both discuss Disney's greedy monopoly; however, Hennessey's discussion of Mickey Mouse illuminates the way Disney stifles artists' creativity and controls their brand while CNN's report focuses on Disney's attempt at owning a Latin American holiday. Disney's legal actions only emphasize its authoritarian rule.

Disney's suppression of artists and attempts at trademarking demonstrate similarities to Joseph Heller's *Catch-22*. This novel shows the inner workings of systems of power and provides a warning for unchecked institutional greed, which can be seen in Doc Daneeka's character. Doc Daneeka is listed as being on a mission, even though he is physically present and has never left the base. This "catch-22" situation is due to an administrative error, which has led to his name being included on the official list of deceased soldiers. When Doc Daneeka attempts to protest his own death, he is met with resistance and threats from the military bureaucracy. The military is unwilling to acknowledge the mistake, and as a result, Daneeka is "disappeared." Doc Daneeka's situation is parallel to Disney copyrighting individual artists because they didn't like how Disney was portrayed. Both Disney and the military are systems of power and enjoy silencing those below them when it doesn't match their "brand." Additionally, these parallel situations both demonstrate an individual's struggle against a system of power, and how they are easily silenced.

Disney continues to exploit marginalized communities in their films, whether it's under the guise of being "inclusionary" or outright commercializing their culture. Angelique Jackson and Adam Vary discuss a letter that Disney employees have addressed to Disney regarding their censorship of same-sex relationships in films in Pixar films. The letter detailed multiple instances in which same-sex affection was censored or excluded from Pixar films, including in the film "Onward," which featured a brief reference to a lesbian relationship that was edited out for international releases. This type of censorship is harmful as it sends a message that LGBTQ+ relationships are shameful. Disney's censorship of marginalized communities illuminates the inner workings of their system of power; they want to maintain a fantasy-like image in order to maintain their power and wealth, and supporting LGBTQ+ films might diminish this. In addition to Disney trying to trademark "Dia de los Muertos," in "Unmasking the Mouse: Cultural Appropriation in Disney Films," Rebecca Domas discusses the harmful implications of Disney's films, *The Three Cabelllos* and *Coco*, and how they have damaged Latin American culture. The popularity of the films is problematic as it creates a Disneyfied version of the culture that is desirable and consumable to a wide demographic of people, like Americans. In *Coco*, the Day of the Dead of "Dia de los Muertos" is depicted; Domas cites that Disney has "commercialized traditions like those of Dia de los Muertos." Additionally, she claims that

“the products are no longer authentic to the culture, and while that may not be the mission for Disney to create true representations, the audiences it reaches may perceive it as fact” (Domas). Once again, Disney has commercialized and profited off of other cultures’ traditions. Although Jackson and Vary, and Domas discuss two different communities that have been harmed by Disney, the implication that Disney has no regard for their audience and only focuses on their profit is clear.

In the face of these injustices, many workers have attempted revolts or unionizing in order to pressure Disney to give them greater rights. According to an article published on MyNews13.com, Disney and union workers are continuing contract negotiations. The article reports that the two sides have been negotiating since last year but have yet to reach an agreement. While there have been some deals, like one raising the minimum wage by \$1, the progress for union workers is slow. While having unions could eventually lead to change, it is not the quick, large-scale change that is needed; as a corporation, Disney has shown a history of not caring about unions, and there will need to be other supporters in addition to union workers. In Albert Camus’ *The Plague*, he asserts that the Existentialist resolution in the face of a crisis is to form small, like-minded communities and contribute to society. Unions are a modern-day example of Camus’ claim; however, fighting an omniscient plague and a corporation are two different scenarios. The top-level executives at Disney are not threatened by the unions, so as shown by the rest of Disney’s negotiations with unions, they will have no trouble stringing employees along and offering false promises.

The optimal solution is to have media exposure that sheds light on Disney’s harsh practices. Since Disney has a lot of control within the media, it’s crucial to dismantle its absolute monopoly over the entertainment industry. One example of such exposure is when protestors and activists brought Disney’s attention to their ride Splash Mountain, which is themed after *The Song of the South*. This an extremely racist movie, romanticizing the Reconstruction period after the Civil War; this movie has long been removed from all entertainment and streaming platforms. In the Reuters article “Disney to revamp Splash Mountain ride to remove controversial theme” it was seen that protestors have garnered over 20,000 signatures, bringing newfound attention to this controversy. Disney has decided to remove all of *The Song of the South* elements and redesign Splash Mountain to be *The Princess and the Frog* theme; this newly designed ride will come back to Disneyland next year. This is one successful example of people coming together through the media and implementing real change on one of Disney’s problematic aspects. One possible limitation that this solution will have is the unpredictable audience. Many people will be skeptical and doubt the validity of the media. Additionally, there has also been a lot of backlash surrounding the redesigning of Splash Mountain. Many people are unhappy that the ride has closed, stating that *The Song of the South* elements of the ride is staple pieces to Disneyland; with every movement and change, there will be people who mourn the lack of traditionality and shun progress.

Disney’s authoritarian rule and the corporation’s system of power are shown through their exploitation of marginalized communities, legal actions, and harsh employee rights. In today’s world, it’s important to recognize these companies’ immense control over certain industries and products. One of the most harmful implications regarding these institutions of power is the diversity and free will they destroy. With Disney monopolizing the media industry, smaller indie film companies need to work twice as hard to produce entertainment for less than half the payoff. This gives little incentive to deviate from Disney; it is much easier to submit and work for Pixar or Disney, essentially squashing alternative media options. This phenomenon can be seen in companies like Coca-Cola, where almost every soda or drink company has been bought to exist under Coca-Cola. Recognizing

the place of large systems of power in society and its implications can create a more self-aware society.

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